



Ohio Administrative Code

Rule 3745-21-01 Definitions and incorporation by reference.

Effective: [March 27, 2022](#)

[Comment: For dates and availability of non-regulatory government publications, publications of recognized organizations and associations, federal rules, and federal statutory provisions referenced in this rule, see paragraph (JJ) of this rule titled "referenced materials."]

(A) Except as otherwise provided in this rule, the definitions in rule 3745-15-01 of the Administrative Code apply to this chapter.

(B) As used in this chapter:

(1) "AAMA" means the American architectural manufacturer association.

(2) "ASTM" means the American society for testing and materials also known as ASTM international.

(3) "Btu" means British thermal unit.

(4) "Btu per hour-foot-degree-Fahrenheit" means British thermal unit per hour-foot-degree-Fahrenheit.

(5) "CTG" means control technique guideline. A CTG is a USEPA guidance document that triggers a responsibility under Section 182(b)(2) of the Clean Air Act for states to submit reasonably available control technology (RACT) rules for stationary sources of VOC emissions as part of their state implementation plans. Each CTG contains a presumptive norm for RACT for a specific category, based on USEPA's evaluation of that category. The following rules promulgated by the Ohio EPA cover categories for which USEPA has issued a CTG:

(a) Paragraphs (C) to (R), (T), (U) to (Z), (BB) to (EE), (DDD) and (EEE) of rule 3745-21-09 of the Administrative Code.



(b) Rules 3745-21-13, 3745-21-15, 3745-21-19, 3745-21-20, 3745-21-22, 3745-21-23, 3745-21-24, and 3745-21-26 to 3745-21-29 of the Administrative Code.

(6) "DC" means direct current.

(7) "Day" means a period of twenty-four consecutive hours beginning at twelve a.m., or beginning at a time consistent with a facility's operating schedule.

(8) "Exempt solvent" means any of the compounds which are specifically identified as not being volatile organic compounds, as defined in this rule.

(9) "Lb per mmBtu" or "lb/mmBtu" means pound per million British thermal units.

(10) "Incinerator" means a combustion apparatus designed for high temperature operation in which solid, semisolid, liquid, or gaseous combustible wastes are ignited and burned.

(11) "Non-CTG" means all other stationary sources of VOC emissions for which the USEPA has not developed a control technique guideline document.

(12) "Ohio EPA" means Ohio environmental protection agency.

(13) "Organic compound" means any chemical compound containing carbon excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides, metallic carbonates, ammonium carbonate, methane (except methane from landfill gases), and ethane.

(14) "Permit-to-install and operate" or "PTIO" means a permit-to-install and a permit-to-operate applicable to air contaminant sources not located at facilities subject to Chapter 3745-77 of the Administrative Code.

(15) "Potential to emit" means the maximum capacity of a facility or stationary source to emit an organic compound or VOC under physical and operational design. Any physical or operational limitation on the capacity of the facility or stationary source to emit an organic compound or VOC,



including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, shall be treated as part of the design if the limitation or the effect it would have on emissions is federally enforceable.

(16) "USEPA" means United States environmental protection agency.

(17) "Volatile organic compound" or "VOC" means any organic compound which participates in atmospheric photochemical reactions. (This includes any organic compound other than the compounds listed in the following table and any class of perfluorocarbon compounds that consists of (a) cyclic, branched, or linear, completely fluorinated alkanes, (b) cyclic, branched, or linear, completely fluorinated ethers with no unsaturations, (c) cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations, or (d) sulfur-containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine. These compounds have been determined to have negligible photochemical reactivity. For purposes of determining compliance with emission limits, VOC will be measured by the approved test methods. Where such a method also inadvertently measures compounds with negligible photochemical reactivity, an owner or operator may exclude these negligibly reactive compounds when determining compliance with an emission standard.)

methane	HFC 43-10mee (1,1,1,2,3,4,4,5,5,5-decafluoropentane)
ethane	HFC-32 (difluoromethane)
methyl chloroform (1,1,1-trichloroethane)	HFC-161 (ethylefluoride)
CFC-113 (1,1,2-trichloro-1,2,2-trifluoroethane)	HFC-236fa (1,1,1,3,3,3-hexafluoropropane)
methylene chloride	HFC-245ca (1,1,2,2,3-pentafluoropropane)
CFC-11 (trichlorofluoromethane)	HFC-245ea (1,1,2,3,3-pentafluoropropane)
CFC-12 (dichlorodifluoromethane)	HFC-245eb (1,1,1,2,3-pentafluoropropane)
HCFC-22 (chlorodifluoromethane)	HFC-245fa (1,1,1,3,3-pentafluoropropane)
HFC-23 (trifluoromethane)	HFC-236ea (1,1,1,2,3,3-hexafluoropropane)
CFC-114 (1,2-dichloro-1,1,2,2-tetrafluoroethane)	HFC-365mfc (1,1,1,3,3-pentafluorobutane)
CFC-115 (chloropentafluoroethane)	HCFC-31 (chlorofluoromethane)
HCFC-123 (1,1,1-trifluoro-2,2-dichloroethane)	HCFC-151a (1-chloro-1-fluoroethane)



HFC-134a (1,1,1,2-tetrafluoroethane)	HCFC-123a (1,2-dichloro-1,1,2-trifluoroethane)
HCFC-141b (1,1-dichloro-1-fluoroethane)	C ₄ F ₉ OCH ₃ or HFE-7100 (1,1,1,2,2,3,3,4,4-nonafluoro-4-methoxy-butane)
HCFC-142b (1-chloro-1,1-difluoroethane)	(CF ₃) ₂ CFCH ₂ OCH ₃ (2-(difluoromethoxy methyl)-1,1,1,2,3,3,3-heptafluoropropane)
HCFC-124 (2-chloro-1,1,1,2-tetrafluoroethane)	C ₄ F ₉ OC ₂ H ₅ or HFE-7200 (1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluorobutane)
HFC-125 (pentafluoroethane)	(CF ₃) ₂ CFCH ₂ OC ₂ H ₅ (2-(ethoxydifluoro methyl)-1,1,1,2,3,3,3-heptafluoropropane)
HFC-134 (1,1,2,2-tetrafluoroethane)	methyl acetate
HFC-143a (1,1,1-trifluoroethane)	n-C ₃ F ₇ OCH ₃ or HFE-7000 (1,1,1,2,2,3,3-heptafluoro-3-methoxy-propane)
HFC-152a (1,1-difluoroethane)	HFE-7500 (3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-(trifluoromethyl) hexane)
PCBTf (parachlorobenzotrifluoride)	HFC 227ea (1,1,1,2,3,3,3-heptafluoropropane)
cyclic, branched, or linear completely methylated siloxanes	methyl formate
acetone	t-butyl acetate
perchloroethylene (tetrachloroethylene)	dimethyl carbonate
HCFC-225ca (3,3-dichloro-1,1,1,2,2-pentafluoropropane)	propylene carbonate
HCFC-225cb (1,3-dichloro-1,1,2,2,3-pentafluoropropane)	any organic compound listed in 40 CFR 51.100(s)(1) or (s)(5)

(C) As used in rule 3745-21-07 of the Administrative Code (pertaining to the control of emissions of organic materials from stationary sources):

(1) [Reserved.]

(2) "Effluent water separator" means any tank, box, sump, or other container in which any volatile photochemically reactive material floating on or entrained or contained in water entering such tank, box, sump, or other container is physically separated and removed from such water prior to outfall, drainage, or recovery of such water.

(3) "Liquid organic material" means any organic material which is a liquid at standard conditions.

(4) "Organic material" means any chemical compound containing carbon, excluding carbon



monoxide, carbon dioxide, carbonic acid, metallic carbides, metallic carbonates, and ammonium carbonate.

(5) "Photochemically reactive material" means any liquid organic material with an aggregate of more than twenty per cent of its total volume composed of the chemical compounds classified below or which exceed any of the following individual percentage composition limitations, referred to the total volume of liquid:

(a) A combination of hydrocarbons, alcohols, aldehydes, esters, ethers or ketones having an olefinic or cyclo-olefinic type of unsaturation except perchloroethylene: five per cent.

(b) A combination of aromatic hydrocarbons with eight or more carbon atoms to the molecule except ethylbenzene: eight per cent.

(c) A combination of ethylbenzene, ketones having branched hydrocarbon structures, trichloroethylene or toluene: twenty per cent.

Any organic material or any constituent of an organic material that may be classified from its chemical structure into more than one of the above groups of organic compounds, is considered as a member of the most reactive chemical group, that is, that group having the least allowable per cent of the total volume of liquid.

(6) "Submerged fill pipe" means any fill pipe with the discharge opening entirely submerged when the liquid level is six inches above the bottom of the tank; or when applied to a tank which is loaded from the side, means any fill pipe with the discharge opening entirely submerged when the liquid level is eighteen inches above the bottom of the tank.

(7) "Volatile photochemically reactive material" means any photochemically reactive material which has a vapor pressure of 1.5 pounds per square inch absolute or greater under actual storage conditions.

(D) As used in paragraphs (B) to (K), (S), (U), (Y), (FF), (HH), (II), and (PP) of rule 3745-21-09 of the Administrative Code (pertaining to coating lines and printing lines) and in rules 3745-21-04,



3745-21-10, 3745-21-18, 3745-21-26, and 3745-21-29 of the Administrative Code:

(1) "Adhesion primer" means the following:

(a) For the purpose of paragraph (HH) of rule 3745-21-09 of the Administrative Code, a coating used to promote adhesion of a topcoat on surfaces such as trim moldings, door locks and door sills, where sanding is impractical.

(b) For the purpose of rule 3745-21-26 of the Administrative Code, a coating that is applied to a polyolefin part to promote the adhesion of a subsequent coating. An adhesion primer is clearly identified as an adhesion primer or adhesion promoter on its accompanying material safety data sheet.

(2) "Adhesive" means any chemical substance that is applied for the purpose of bonding two surfaces together other than by mechanical means.

(3) "Air dried coating" means a coating that is dried by the use of air or forced warm air at temperatures up to one hundred ninety-four degrees Fahrenheit.

(4) "Airless spray" means a spray coating method in which the coating is atomized by being forced through a small nozzle opening at high pressure. The coating is not mixed with air before exiting from the nozzle opening.

(5) "Anti-chip coating" means a coating designed to reduce stone chipping damage. Anti-chip coatings may be applied to broad areas of the vehicle or to selected vehicle surfaces that are most vulnerable to impingement by stones and other road debris (e.g., rocker panels, the bottom edges of doors and fenders, and the leading edge of the roof). Anti-chip coatings are typically applied after the electrodeposition primer and before the topcoat and are considered primer-surfacer coatings.

(6) "Antifoulant coating" means any coating that is applied to the underwater portion of a boat specifically to prevent or reduce the attachment of biological organisms and that is registered with USEPA as a pesticide under the Federal Insecticide, Fungicide, and Rodenticide Act contained in 7 USC 136 to 136y.



- (7) "Antique motor vehicle" means a motor vehicle, but not a reproduction thereof, manufactured more than twenty five years prior to the current year which has been maintained in or restored to a condition which is substantially in conformance with manufacturer specifications.
- (8) "Aqueous coating" means a water-based surface coating applied directly over ink on a printed substrate for the purpose of enhancing or protecting the printed surface.
- (9) "As applied" means the formulation of a coating during the application on or impregnation into a substrate, including any dilution solvents or thinners added at the source before application of the coating.
- (10) "Automobile" means a passenger car or passenger car derivative capable of seating not more than twelve passengers.
- (11) "Automobile and light-duty truck adhesive" means an adhesive, including glass bonding adhesive, used at an automobile or light-duty truck assembly coating facility, applied for the purpose of bonding two vehicle surfaces together without regard to the substrates involved.
- (12) "Automobile or light-duty truck assembly plant" means a facility where automobile or light-duty truck bodies, frames and associated parts, are assembled for eventual inclusion into a finished product ready for sale to vehicle dealers. Customizers, body shops and other repainters are excluded from this definition.
- (13) "Automobile and light-duty truck bedliner" means a multi-component coating, used at an automobile or light-duty truck assembly coating facility, applied to a cargo bed after the application of topcoat and outside of the topcoat operation to provide additional durability and chip resistance.
- (14) "Automobile and light-duty truck cavity wax" means a coating, used at an automobile or light-duty truck assembly coating facility, applied into the cavities of the vehicle primarily for the purpose of enhancing corrosion protection.
- (15) "Automobile and light-duty truck deadener" means a coating, used at an automobile or light-



duty truck assembly coating facility, applied to selected vehicle surfaces primarily for the purpose of reducing the sound of road noise in the passenger compartment.

(16) "Automobile and light-duty truck gasket/gasket sealing material" means a fluid, used at an automobile or light-duty truck assembly coating facility, applied to coat a gasket or replace and perform the same function as a gasket. Automobile and light-duty truck gasket/gasket sealing material includes room temperature vulcanization (RTV) seal material.

(17) "Automobile and light-duty truck glass bonding primer" means a primer, used at an automobile or light-duty truck assembly coating facility, applied to windshield or other glass, or to body openings, to prepare the glass or body opening for the application of glass bonding adhesives or the installation of adhesive bonded glass. Automobile and light-duty truck glass bonding primer includes glass bonding/cleaning primers that perform both functions (cleaning and priming of the windshield or other glass, or body openings) prior to the application of adhesive or the installation of adhesive bonded glass.

(18) "Automobile and light-duty truck lubricating wax/compound" means a protective lubricating material, used at an automobile or light-duty truck assembly coating facility, applied to vehicle hubs and hinges.

(19) "Automobile and light-duty truck sealer" means a high viscosity material, used at an automobile or light-duty truck assembly coating facility, generally, but not always, applied in the paint shop after the body has received an electrodeposition primer coating and before the application of subsequent coatings (e.g., primer-surfacer). The primary purpose of automobile and light-duty truck sealer is to fill body joints completely so that there is no intrusion of water, gases or corrosive materials into the passenger area of the body compartment. Such materials are also referred to as sealant, sealant primer, or caulk.

(20) "Automobile and light-duty truck trunk interior coating" means a coating, used at an automobile or light-duty truck assembly coating facility outside of the primer-surfacer and topcoat operations, applied to the trunk interior to provide chip protection.

(21) "Automobile and light-duty truck underbody coating" means a coating, used at an automobile or



light-duty truck assembly coating facility, applied to the undercarriage or firewall to prevent corrosion or provide chip protection.

(22) "Automobile and light-duty truck weatherstrip adhesive" means an adhesive, used at an automobile or light-duty truck assembly coating facility, applied to weatherstripping materials for the purpose of bonding the weatherstrip material to the surface of the vehicle.

(23) "Automotive elastomeric coating" means a coating designed for application over surfaces of flexible mobile equipment and mobile equipment components, such as elastomeric bumpers.

(24) "Automotive impact-resistant coating" means a coating designed to resist chipping caused by road debris.

(25) "Automotive jambing clearcoat" means a fast-drying, ready-to-spray clearcoat applied to surfaces such as door jambs and trunk and hood edges to allow for quick closure.

(26) "Automotive lacquer" means a thermoplastic coating applied directly to bare metal surfaces of mobile equipment and mobile equipment components which dries primarily by solvent evaporation, and which is resolvable in its original solvent.

(27) "Automotive low-gloss coating" means a coating which exhibits a gloss reading less than or equal to twenty-five on a sixty-degree-glossmeter.

(28) "Automotive multi-colored topcoat" means a topcoat that exhibits more than one color, is packaged in a single container, and camouflages surface defects on areas of heavy use, such as cargo beds and other surfaces of trucks and other utility vehicles.

(29) "Automotive pretreatment" means a primer that contains a minimum of 0.5 per cent acid, by weight, that is applied directly to bare metal surfaces of mobile equipment and mobile equipment components to provide corrosion resistance and to promote adhesion of subsequent coatings.

(30) "Automotive primer-sealer" means a coating applied to mobile equipment and mobile equipment components prior to the application of a topcoat for the purpose of providing corrosion



resistance, promoting adhesion of subsequent coatings, promoting color uniformity, and promoting the ability of the undercoat to resist penetration by the topcoat.

(31) "Automotive primer-surfacer" means a coating applied to mobile equipment and mobile equipment components prior to the application of topcoat for the purpose of filling surface imperfections in the substrate; providing corrosion resistance; or promoting adhesion of subsequent coatings.

(32) "Automotive specialty coating" means coatings including, but not limited to, elastomeric coatings, adhesion promoters, low gloss coatings, bright metal trim repair coatings, jambing clearcoats, impact resistant coatings, rubberized asphaltic underbody coatings, uniform finish blenders, weld-through primers applied to automotive surfaces and lacquer topcoats applied to a classic motor vehicle or to an antique motor vehicle.

(33) "Automotive topcoat" means a coating or series of coatings applied over an automotive primer-surfacer, automotive primer-sealer or existing finish on the surface of mobile equipment and mobile equipment components for the purpose of protection or beautification.

(34) "Automotive touch up repair" means the application of automotive topcoat finish materials to cover minor finishing imperfections equal to or less than one inch in diameter.

(35) "Automotive/transportation plastic parts" means the interior and exterior plastic components of automobiles, trucks, tractors, lawnmowers, and other like mobile equipment intended for primary use on land, with the exception of the following: plastic parts coated on the main (body) paint line in automobile and light duty truck assembly plants and truck assembly plants, and plastic parts coated during the refinishing or final repair of automobiles, trucks, tractors, lawnmowers and other like mobile equipment.

(36) "Baked coating" means a coating that is cured at a temperature at or above one hundred ninety-four degrees Fahrenheit.

(37) "Basecoat" means, for can coating lines, the exterior base coating of a two-piece can or the exterior and interior base coating of a three-piece can or three-piece can end; and basecoat means, for



automotive/transportation plastic parts coating lines, the highly pigmented, often metallic first coating in a two-step topcoat system which is followed by a clearcoat, resulting in a finish with high-gloss characteristics.

(38) "Basecoat/clearcoat system" means a topcoat system applied to exterior and selected interior vehicle surfaces primarily to provide an aesthetically pleasing appearance and acceptable durability performance. It consists of a layer of pigmented basecoat color coating, followed directly by a layer of a clear or semitransparent coating. It may include multiple layers of color coats or tinted clear materials.

(39) "Black automotive coating" means a coating which meets both of the following criteria:

(a) Maximum lightness: twenty-three units.

(b) Saturation: less than 2.8, where saturation equals the square root of $A^2 + B^2$.

These criteria are based on Cielab color space, 0/45 geometry. For spherical geometry, specular included, maximum lightness is thirty-three units.

(40) "Body part" means exterior parts of motor vehicles such as hoods, fenders, doors, roof, quarter panels, decklids, tail gates, and cargo beds. Body parts were traditionally made of sheet metal, but now are also made of plastic. Bumpers, fascia, and cladding are not body parts.

(41) "Business machine" means a device that uses electronic or mechanical methods to process information, perform calculations, print or copy information or convert sound into electrical impulses for transmission, including devices listed in standard industrial classification numbers 3572, 3573, 3574, 3579, and 3661 and photocopy machines, a subcategory of standard industrial classification number 3861.

(42) "Business machine plastic parts" means the plastic housings and other exterior plastic components of electronic office equipment and musical equipment, including, but not limited to the following: computers, monitors, printers and keyboards, facsimile machines, copiers, microfiche readers, cellular and standard phones, and pencil sharpeners. This definition excludes internal



electrical components of business machines.

(43) "Camouflage coating" means a coating, used principally by the military, to conceal equipment from detection.

(44) "Can" means a single walled metal container constructed wholly of tin plate, terne plate, black plate (including tin-free steel), waste plate, aluminum sheet, or impact extrusions designed for packaging products. It excludes "steel pails" defined as single walled shipping containers having capacities of one gallon or greater and which are cylindrically constructed of steel of twenty-nine-gauge or heavier.

(45) "Capture system" means all equipment, including but not limited to hoods, ducts, fans, ovens and dryers, used to contain, collect, and route VOC vapors released from a coating line or printing line.

(46) "Classic motor vehicle" means a motor vehicle, but not a reproduction thereof, manufactured at least fifteen years prior to the current year which has been maintained in or restored to a condition which is substantially in conformity with manufacturer specifications and appearance.

(47) "Cleaning material" means a solvent used to remove contaminants and other materials such as dirt, grease, oil, and dried (e.g., depainting) or wet coating from a substrate before or after coating application; or from equipment associated with a coating operation, such as spray booths, spray guns, tanks, and hangers. Thus, it includes any cleaning material used on substrates or equipment or both.

(48) "Clearcoat" means a transparent coating usually applied over a colored, opaque coat to improve gloss and provide protection to the colorcoat below.

(49) "Clear coating" means a coating which contains binders and may contain dissolved dyes, but no pigment, and is formulated to form a transparent film.

(50) "Coating or surface coating" means a material applied onto or saturated within a substrate for decorative, protective or functional purposes. Such materials include, but are not limited to, paints, varnishes, sealers, adhesives and inks.



(51) "Coating applicator" means an apparatus used to apply a surface coating.

(52) "Coating line" means an operation consisting of a series of one or more coating applicators and any associated flash-off areas, drying areas and ovens wherein a surface coating is applied, dried, or cured. The coating line does not have to include an oven, or flash-off area, or drying area in order to be included within this definition.

(53) "Coating of plastic parts of automobiles and trucks" means the coating of any plastic part that is or will be assembled with other parts to form an automobile or truck.

(54) "Coating of plastic parts of business machines" means the coating of any plastic part that is or will be assembled with other parts to form a business machine.

(55) "Coil" means a flat metal sheet or strip that is packaged in a roll and that has a thickness of 0.006 inch or more.

(56) "Commercial motor vehicle and mobile equipment refinishing operation" means any company or individual, other than the original manufacturer, that applies a coating containing a VOC as a pretreatment, primer, sealant, basecoat, clear coat, or topcoat to mobile equipment for commercial purposes.

(57) "Continuously monitor" means to measure data values of a parameter at least once every fifteen minutes and to record either each measured data value or block average values for a fifteen-minute or shorter time period. A block average value is the average of all measured data values during the time period; or if data values are measured more frequently than once per minute, the average of measured data values taken at least once per minute during the time period.

(58) "Control system" means any device or combination of devices designed to recover or incinerate VOC vapors received from a capture system.

(59) "Dip coating" means a method of applying coatings to a substrate by submersion into and removal from a coating bath.



(60) "Drum" means any cylindrical metal shipping container larger than twelve gallons but no larger than one hundred ten gallons in capacity.

(61) "Electrostatic application" means a method of applying coating particles or coating droplets to a grounded substrate by electrically charging them.

(62) "Electric-dissipating coating" means a coating that rapidly dissipates a high-voltage electric charge.

(63) "Electric-insulating and thermal-conducting coating" means a coating that displays an electrical insulation of at least one thousand volts DC per mil on a flat test plate and an average thermal conductivity of at least 0.27 Btu per hour-foot-degree-Fahrenheit.

(64) "Electric-insulating varnish" or "electric-insulating coating" means a non-convertible-type coating applied to electric motors, components of electric motors, or power transformers, to provide electrical, mechanical, and environmental protection or resistance.

(65) "Electrodeposition" or "EDP" means the application of a surface coating to an object by immersing the object into a water bath containing the surface coating material and inducing an electric potential between the object and the bath.

(66) "Electrodeposition primer" or "EDP primer" means a process of applying a protective, corrosion-resistant waterborne primer on exterior and interior surfaces that provides thorough coverage of recessed areas. It is a dip coating method that uses an electrical field to apply or deposit the conductive coating onto the part. The object being painted acts as an electrode that is oppositely charged from the particles of paint in the dip tank. Also referred to as E-coat, Uni- Prime, and ELPO primer.

(67) "Electromagnetic interference/radio frequency interference shielding coating" or "EMI/RFI shielding coating" means a coating used on electrical or electronic equipment to provide shielding against electromagnetic interference, radio frequency interference, or static discharge.



(68) "Electrostatic preparation coating" means a coating that is applied to a plastic part solely to provide conductivity for the subsequent application of a prime, a topcoat, or other coating through the use of electrostatic application methods. An electrostatic prep coat is clearly identified as an electrostatic prep coat on its accompanying material safety data sheet.

(69) "Enamel" means a type of surface coating in which drying occurs by evaporation of the solvent and polymerization of the pigmented drying oils.

(70) "End sealing compound" means a synthetic rubber or plastic compound which is applied onto can ends and which functions as a gasket when the end is assembled on the can.

(71) "Etching filler coating" means coating that contains less than twenty-three per cent solids by weight and at least one-half per cent acid by weight, and is used instead of applying a pretreatment coating followed by a primer.

(72) "Excluding water" means subtracting the volume of water and other volatile materials which are not VOC.

(73) "Exterior base coating" means a coating applied to the exterior of a can to provide exterior protection to the metal or to provide background for the lithographic or printing operation.

(74) "Exterior bottom end" means the outside surface of the bottom side of a two-piece can.

(75) "Extreme high-gloss coating" means the following:

(a) For the surface coating of metal furniture, a coating which, when tested by ASTM D523, shows a reflectance of seventy-five or more on a sixty degree meter.

(b) For the surface coating of miscellaneous metal or plastic parts, a coating which, when tested by ASTM D523, shows a reflectance of ninety or more on a sixty degree meter.

(76) "Extreme performance coating" means the following:



(a) For the surface coating of metal furniture, a coating designed for exposure to any of the following: year-round outdoor weather, temperatures consistently above two hundred three degrees Fahrenheit, detergents, scouring, solvents, corrosive materials, corrosive atmospheres or similar harsh conditions.

(b) For the surface coating of miscellaneous metal or plastic parts, a coating used on a metal or plastic surface where the coated surface is, in its intended use, subject to any of the following:

(i) Chronic exposure to corrosive, caustic or acidic agents, chemicals, chemical fumes, chemical mixtures or solutions.

(ii) Repeated exposure to temperatures in excess of two hundred and fifty degrees Fahrenheit.

(iii) Repeated heavy abrasion, including mechanical wear and repeated scrubbing with industrial grade solvents, cleansers or scouring agents.

Extreme performance coatings include, but are not limited to, coatings applied to locomotives, railroad cars, farm machinery, and heavy duty trucks.

(77) "Extrusion coater" means an apparatus in which a coating material is applied by means of a slotted die to a moving substrate, which is fed from an unwinding roll.

(78) "Fabric coating" means a coating applied to a textile substrate by dipping or by means of a knife or roll coater.

(79) "Final repair" means the operations performed and coatings applied to completely-assembled motor vehicles or to parts that are not yet on a completely assembled vehicle to correct damage or imperfections in the coating. The curing of the coatings applied in these operations is accomplished at a lower temperature than that used for curing primer-surfacer and topcoat. This lower temperature cure avoids the need to send parts that are not yet on a completely assembled vehicle through the same type of curing process used for primer-surfacer and topcoat and is necessary to protect heat sensitive components on completely assembled vehicles.



(80) "Finish primer/surfacer coating" means a coating applied with a wet film thickness of less than ten mils prior to the application of a topcoat for purposes of providing corrosion resistance, adhesion of subsequent coatings, a moisture barrier, or promotion of a uniform surface necessary for filling in surface imperfections.

(81) "Flashoff area" means the area of a facility through which coated materials travel from the coating applicator to the oven.

(82) "Flexible coating" means any coating with the ability to withstand dimensional changes that is required to comply with engineering specifications for impact resistance, mandrel bend, or elongation as defined by the original equipment manufacturer.

(83) "Flexographic packaging printing line" means a means a flexographic printing line in which surface coatings are applied to paper, paperboard, metal foil, plastic film, or other substrates which are subsequently formed into packaging products or labels for articles.

(84) "Flexographic printing line" means a printing line in which each roll printer uses a roll with raised areas for applying an image to the substrate. The image carrier on the roll is made of rubber or other flexible elastomeric material.

(85) "Flow coat" means a non-atomized technique of applying coatings to a substrate with a fluid nozzle in a fan pattern with no air supplied to the nozzle.

(86) "Fog coating" means a coating is applied to a plastic part for the purpose of color matching without masking a molded-in texture and that is not applied at a thickness of more than 0.5 mils of coating solids.

(87) "Food can ends" means can ends used for cans that store food products other than soft drinks or alcoholic beverages.

(88) "Fountain solution" means a surface coating applied to the plate roll of an offset lithographic printing line for the purpose of wetting only the nonimage areas so that they are not ink receptive.



(89) "Glossreducer" means the following:

(a) For miscellaneous metal and plastic parts glossreducer means a low gloss coating formulated to eliminate glare for safety purposes on interior surfaces of a vehicle, as specified under United States department of transportation motor vehicle safety standards.

(b) For miscellaneous industrial adhesives and sealants glossreducer means a coating that is applied at a thickness of no more than 0.5 mils of coating solids to a plastic part solely to reduce the shine of the part.

(90) "Guidecoat" means a surface coating applied to the body of an automobile or light-duty truck between the electrodeposition prime coat and the topcoat.

(91) "Hand application methods" means the application of coatings by manually held non-mechanically operated equipment. Such equipment includes paintbrushes, hand rollers, caulking guns, trowels, spatulas, syringe daubers, rags, and sponges.

(92) "Heat-resistant coating" means a coating that must withstand a temperature of at least four hundred degrees Fahrenheit during normal use.

(93) "Heavier vehicle" means a self-propelled vehicle designed for transporting persons or property on a street or highway that has a gross vehicle weight rating over eighty-five hundred pounds.

(94) "Heavier vehicle assembly facility" means a facility where heavier vehicle bodies, frames and associated parts, are assembled for eventual inclusion into a finished product ready for sale to vehicle dealers. Customizers, body shops and other repainters are excluded from this definition.

(95) "High-bake coating" means a coating designed to cure at temperatures above one hundred ninety-four degrees Fahrenheit.

(96) "High-build primer/surfacer coating" means a coating applied with a wet film thickness of ten mils or more prior to the application of a topcoat for purposes of providing corrosion resistance, adhesion of subsequent coatings, or a moisture barrier, or promoting a uniform surface necessary for



filling in surface imperfections.

(97) "High-gloss coating" means any coating which shows a reflectance of eighty-five on a sixty degree meter when tested by ASTM D523.

(98) "High-performance architectural coating" means a coating used to protect architectural subsections and meets AAMA 2604 "Voluntary specification, performance requirements and test procedures for high performance organic coatings on aluminum extrusions and panels" or AAMA 2605 "Voluntary specification, performance requirements and test procedures for superior performing organic coatings on aluminum extrusions and panels."

(99) "High-performance architectural aluminum coating" means a coating that is applied to aluminum used in architectural subsections and meets AAMA 2605, "Voluntary specification, performance requirements and test procedures for superior performing organic coatings on aluminum extrusions and panels."

(100) "High-temperature coating" means a coating that is certified to with stand a temperature of one thousand degrees Fahrenheit for twenty-four hours.

(101) "High volume, low pressure sprayer" or "HVLP sprayer" means an air atomized sprayer that operates at a maximum air pressure of ten pounds per square inch gauge (psig) as measured at the nozzle.

(102) "Ink" means a coating applied by a roll printer.

(103) "In-line repair" means the operation performed and coating applied to correct damage or imperfections in the topcoat on parts that are not yet on a completely assembled vehicle. The curing of the coatings applied in these operations is accomplished at essentially the same temperature as that used for curing the previously applied topcoat. Also referred to as high bake repair or high bake reprocess. In-line repair is considered part of the topcoat operation.

(104) "Interior base coating" means a coating applied to the interior of a can.



(105) "Interior body coating" means a coating applied subsequent to the application of an interior base coating to the interior of a can body.

(106) "Knife coater" means an apparatus in which a coating material is applied to a moving substrate, which is fed from an unwinding roll, by drawing the substrate beneath a knife (blade) that is designed to spread the coating evenly over the width of the substrate.

(107) "Lacquer" means a type of surface coating in which drying occurs by evaporation of the solvent and deposition of the resin and any pigment.

(108) "Large appliance" means door, case, lid, panel, interior part, or interior support part of a residential or commercial washer, dryer, range, refrigerator, freezer, water heater, dishwasher, trash compactor, air conditioner, ovens, microwave ovens, or other similar product.

(109) "Light-duty truck" means a motor vehicle rated at eight thousand five hundred pounds gross weight or less which is designed primarily for highway use and for the transportation of property, or is a derivative of such vehicle.

(110) "Line" means the same as "coating line."

(111) "Lithographic printing line" means a printing line, except that the substrate is not necessarily fed from an unwinding roll, in which each roll printer uses a roll where both the image and nonimage areas are essentially in the same plane (planographic).

(112) "Low-bake coatings" means coatings designed to cure at temperatures below one hundred ninety-four degrees Fahrenheit.

(113) "Magnet wire coating" means a coating of electrically insulating varnish or enamel which is applied to aluminum or copper wire prior to formation into an electromagnetic coil.

(114) "Magnetic data storage disk coating" mean a coating used on a metal disk which stores data magnetically.



(115) "Mask coating" means a thin film coating applied through a template to coat a small portion of a substrate.

(116) "Metal furniture" means any metal part of household, business, institutional or office furniture, excluding hardware. Such furniture includes, but is not limited to, cabinets, cases, desks, chairs, tables, partitions, shelving, lockers, storage racks, indoor waste receptacles and fixtures.

(117) "Metallic coating" means a coating which contains more than five grams of metal particles per liter of coating, as applied. Metal particles are pieces of a pure elemental metal or a combination of elemental metals.

(118) "Military specification coating" means a coating which has a formulation approved by a United States military agency for use on military equipment.

(119) "Miscellaneous metal part or product" means any metal part or metal product except the following: cans, coils, metal furniture, large appliances, and aluminum or copper wire prior to formation into an electromagnetic coil.

(120) "Mobile equipment" means any equipment that may be drawn or is capable of being driven on a roadway, including, but not limited to, automobiles, trucks, truck bodies, truck trailers, cargo vaults, utility bodies, camper shells, construction equipment, farming equipment, and motorcycles.

(121) "Mold-seal coating" means the initial coating applied to a new mold or repaired mold to provide a smooth surface which, when coated with a mold release coating, prevents products from sticking to the mold.

(122) "Motor vehicle bedliner" means a multi-component coating, used at a facility that is not an automobile or light-duty truck assembly coating facility, applied to a cargo bed after the application of topcoat to provide additional durability and chip resistance.

(123) "Motor vehicle cavity wax" means a coating, used at a facility that is not an automobile or light-duty truck assembly coating facility, applied into the cavities of the vehicle primarily for the purpose of enhancing corrosion protection.



(124) "Motor vehicle deadener" means a coating, used at a facility that is not an automobile or light-duty truck assembly coating facility, applied to selected vehicle surfaces primarily for the purpose of reducing the sound of road noise in the passenger compartment.

(125) "Motor vehicle gasket/gasket sealing material" means a fluid, used at a facility that is not an automobile or light-duty truck assembly coating facility, applied to coat a gasket or replace and perform the same function as a gasket. Automobile and light-duty truck gasket/gasket sealing material includes room temperature vulcanization (RTV) seal material.

(126) "Motor vehicle lubricating wax/compound" means a protective lubricating material, used at a facility that is not an automobile or light-duty truck assembly coating facility, applied to vehicle hubs and hinges.

(127) "Motor vehicle sealer" means a high viscosity material, used at a facility that is not an automobile or light-duty truck assembly coating facility, generally, but not always, applied in the paint shop after the body has received an electrodeposition primer coating and before the application of subsequent coatings (e.g., primer-surfacer). The primary purpose of automobile and light-duty truck sealer is to fill body joints completely so that there is no intrusion of water, gases or corrosive materials into the passenger area of the body compartment. Such materials are also referred to as sealant, sealant primer, or caulk.

(128) "Motor vehicle trunk interior coating" means a coating, used at a facility that is not an automobile or light-duty truck assembly coating facility, applied to the trunk interior to provide chip protection.

(129) "Motor vehicle underbody coating" means a coating, used at a facility that is not an automobile or light-duty truck assembly coating facility, applied to the undercarriage or firewall to prevent corrosion or provide chip protection.

(130) "Multi-colored coating" means a coating which exhibits more than one color when applied, and which is packaged in a single container and applied in a single coat.



(131) "Multi-component coating" means a coating requiring the addition of a separate reactive resin, commonly known as a catalyst or hardener, before application to form an acceptable dry film.

(132) "Non-flexible coating" means any coating without the ability to withstand dimensional changes that is not required to comply with engineering specifications for impact resistance, mandrel bend, or elongation as defined by the original equipment manufacturer.

(133) "Offset lithographic printing line" means a lithographic printing line where the image is applied from a plate roll to an intermediate (blanket) roll and then transferred onto the substrate.

(134) "One-component coating" means a coating that is ready for application as the coating comes out of the container to form an acceptable dry film. A thinner, necessary to reduce the viscosity, is not considered a component.

(135) "Optical coating" means a coating applied to an optical lens.

(136) "Oven" means a chamber within which heat is used for one or more of the following purposes: dry, bake, cure or polymerize a surface coating or ink.

(137) "Overvarnish" means a surface coating applied directly over ink on the exterior of a can.

(138) "Packaging rotogravure printing line" means a rotogravure printing line in which surface coatings are applied to paper, paperboard, metal foil, plastic film, or other substrates which are subsequently formed into packaging products or labels for articles.

(139) "Pan backing coating" means a coating applied to the surface of pots, pans, or other cooking implements that are exposed directly to a flame or other heating elements.

(140) "Paper coating" means a coating applied by dipping or by means of a knife, roll or extrusion coater to paper, paperboard, pressure sensitive tapes or labels, plastic film, or metal foil. Excluded from this definition are coatings used in substrate formation within a papermaking system and coatings applied within a printing line which is in compliance with the emission requirements contained in paragraph (Y) of rule 3745-21-09 of the Administrative Code.



(141) "Papermaking system" means all equipment used to convert pulp into paper, paperboard or market pulp, including the stock storage and preparation systems, the paper or paperboard machines, and the paper machine white water system, broke recovery systems, and the systems involved in calendering, drying, on-machine coating, slitting, winding and cutting.

(142) "Paper treater" means a coating line in which a uniform layer of phenolic or melamine resin is applied by dipping a continuously moving paper substrate into the resin and then using rollers to squeeze the excess resin from the paper.

(143) "Plastic or composites molding facility" means a facility where the purchase cost of capital equipment used for plastic or composites molding, including presses, tooling, and associated material processing and handling equipment, is greater than the purchase cost of capital equipment used for the surface coating of new automobile, new light-duty truck, or new heavier vehicle bodies or body parts for new automobiles, new light-duty trucks, or new heavier vehicles.

(144) "Plastic part" means a product, or piece of a product, made from a substance that has been formed from resin through the application of pressure or heat.

(145) "Pleasure craft" means vessels which are manufactured or operated primarily for recreational purposes, or leased, rented, or chartered to a person or business for recreational purposes and certified by the owner or operator of such vessel that the intended use is for recreational purposes.

(146) "Pleasure craft surface coating" means any marine coating, except unsaturated polyester resin (fiberglass) coatings, applied by brush, spray, roller, or other means to a pleasure craft.

(147) "Prefabricated architectural component coating" means a coating applied to metal parts and products which are to be used as an architectural structure.

(148) "Pretreatment coating" means a coating which contains no more than twelve per cent solids by weight, and at least one-half per cent acid, by weight, is used to provide surface etching, and is applied directly to metal surfaces to provide corrosion resistance, adhesion, and ease of stripping.



- (149) "Pretreatment wash primer coating" means a coating which meets the following:
- (a) No more than twelve per cent solids, by weight, and at least one-half per cent acids, by weight.
 - (b) Is used to provide surface etching.
 - (c) Is applied directly to fiberglass and metal surfaces to provide corrosion resistance and adhesion of subsequent coatings.
- (150) "Primary coating" means electrodeposition primer, primer-surfacer (including anti-chip coatings), topcoat (basecoat and clearcoat) and final repair.
- (151) "Prime coat" means a surface coating which is used to aid the adhesion of a topcoat to a surface or prevent corrosion of the metal being coated. For the purpose of emission limitations, guidecoat and surfacer are included in the definition of prime coat.
- (152) "Primer" means any coating formulated and applied to a substrate to provide a firm bond between the substrate and subsequent coats.
- (153) "Primer-surfacer" means an intermediate protective coating applied over the electrodeposition primer and under the topcoat. Primer-surfacer provides adhesion, protection, and appearance properties to the total finish. Primer-surfacer may also be called guidecoat or surfacer. Primer-surfacer operations may include other coatings (e.g., anti-chip, lower-body anti-chip, chip-resistant edge primer, spot primer, blackout, deadener, interior color, basecoat replacement coating, etc.) that are applied in the same spray booth.
- (154) "Printing line" means an operation consisting of a series of one or more roll printers and any associated in-line roll coaters, in-line extrusion coaters, drying areas and ovens wherein one or more surface coatings are applied, dried, or cured. An operation does not need to have an oven or drying area in order to be included within this definition.
- (155) "Publication rotogravure printing line" means a rotogravure printing line in which surface coatings are applied to paper which is subsequently formed into books, catalogues, brochures,



directories, newspaper supplements or other types of printed materials.

(156) "Reactive adhesive" means an adhesive system composed, in part, of volatile monomers that react during the adhesive curing reaction, and, as a result, do not evolve from the film during use. These volatile components instead become integral parts of the adhesive through chemical reaction. At least seventy per cent of the liquid components of the system, excluding water, react during the process.

(157) "Red coating" means a coating which meets all of the following criteria:

(a) Yellow limit: the hue of hostaperm scarlet.

(b) Blue limit: the hue of monastral red-violet.

(c) Lightness limit for metallics: thirty-five per cent aluminum flake.

(d) Lightness limit for solids: fifty per cent titanium dioxide white.

(e) Solid reds: hue angle of negative eleven to positive thirty-eight degrees and maximum lightness of twenty-three to forty-five units.

(f) Metallic reds: hue angle of negative sixteen to positive thirty-five degrees and maximum lightness of twenty-eight to forty-five units.

These criteria are based on Cielab color space, 0/45 geometry. For spherical geometry, specular included, the upper limit is forty-nine units. The maximum lightness varies as the hue moves from violet to orange. This is a natural consequence of the strength of the colorants, and real colors show this effect.

(158) "Repair coating" means a coating used to re-coat portions of a previously coated product which has sustained mechanical damage to the coating following normal painting operations.

(159) "Resist coating" means a coating that is applied to a plastic part before metallic plating to



prevent deposits of metal on portions of the plastic part.

(160) "Roll coat" means a coating method using a machine that applies coating to a substrate by continuously transferring coating through a pair or set of oppositely rotating rollers.

(161) "Roll coater" means an apparatus in which a uniform layer of coating material is applied by means of a roll or rolls across the entire width of a moving substrate, which is fed from an unwinding roll.

(162) "Roll printer" means an apparatus in which a surface coating is applied by means of a roll or rolls with only partial coverage across the width of a moving substrate, which is fed from an unwinding roll. The partial coverage results in the formation of words, designs or pictures on the substrate.

(163) "Rotogravure printing line" means a printing line in which each roll printer uses a roll with recessed areas for applying an image to the substrate.

(164) "Safety-indicating coating" means a coating which changes physical characteristics, such as color, to indicate unsafe conditions.

(165) "Shock-free coating" means a coating applied to electrical components to protect the user from electric shock. The coating has characteristics of being of low capacitance and high resistance, and having resistance to breaking down under high voltage.

(166) "Silicone-release coating" means any coating which contains silicone resin and is intended to prevent food from sticking to metal surfaces such as baking pans.

(167) "Single coat" means a single film of coating applied directly to the substrate omitting the primer application.

(168) "Side-seam" means the welded, cemented, or soldered seam of a three-piece can.

(169) "Soft coat" means any coating that provides a soft tactile feel similar to leather and a rich



leather like appearance when applied to plastic interior automotive parts and exterior business machine parts.

(170) "Solar-absorbent coating" means a coating which has as its prime purpose the absorption of solar radiation.

(171) "Solid-film lubricant" means a very thin coating consisting of a binder system containing as its chief pigment material one or more of molybdenum disulfide, graphite, polytetrafluoroethylene (PTFE) or other solids that act as a dry lubricant between faying surfaces.

(172) "Solids turnover ratio" means the ratio of total volume of coating solids that is added to the EDP system in a calendar month divided by the total volume design capacity of the EDP system.

(173) "Sound-proofing material" means a surface coating applied for the primary purpose of reducing the transmission of noise into or through the coated object.

(174) "Steel pail or drum" means any single walled shipping container which has a capacity of one gallon or greater and which is cylindrically constructed of steel of twenty-nine gauge or heavier.

(175) "Stencil coating" means the following:

(a) For the surface coating of miscellaneous metal and plastic parts, an ink or a pigmented coating which is rolled or brushed onto a template or stamp in order to add identifying letters, symbols or numbers.

(b) For the surface coating of automotive/transportation and business machine plastic parts, a coating that is applied over a stencil to a plastic part at a thickness of one mil or less of coating solids. Stencil coats are most frequently letters, numbers, or decorative designs.

(176) "Surfacer" means a surface coating applied to the body of an automobile or light-duty truck between the electrodeposition prime coat and the topcoat.

(177) "Texture coat" or "texture coating" means a coating applied to a plastic part which, when



finished, consists of discrete raised spots of coating.

(178) "Topcoat" means the following:

(a) One or more surface coatings, excluding final repair, which are applied after the prime coat for desired aesthetic effects.

(b) For an automobile or light-duty truck assembly facility and a heavier vehicle assembly facility, the final coating system applied to provide the final color or a protective finish. The topcoat may be a monocoat color or basecoat/clearcoat system. In-line repair and two-tone are part of topcoat. Topcoat operations may include other coatings (e.g., blackout, interior color, etc.) that are applied in the same spray booths.

(c) For a pleasure craft, the final coating applied to the interior or exterior of the craft.

(179) "Touch-up coating" means a coating used to cover minor coating imperfections appearing after the main coating operation.

(180) "Transfer efficiency" means the percentage of total coating solids employed by a coating applicator which adheres to the object being coated.

(181) "Translucent coating" means a coating which contains binders and pigment, and is formulated to form a colored, but not opaque, film.

(182) "Two-component coating" means a coating requiring the addition of a separate reactive resin, commonly known as a catalyst, before application to form an acceptable dry film.

(183) "Vacuum metallizing" means a process whereby metal is vaporized and deposited on a substrate in a vacuum chamber.

(184) "Vacuum metallizing coating" means the following:

(a) For the surface coating of miscellaneous metal and plastic parts, the undercoat applied to the



substrate on which the metal is deposited or the overcoat applied directly to the metal film. Vacuum metallizing/physical vapor deposition (PVD) is the process whereby metal is vaporized and deposited on a substrate in a vacuum chamber.

(b) For the surface coating of automotive/transportation and business machine plastic parts, a topcoat or basecoat that is used in the vacuum metallizing process.

(185) "Varnish coating" means an oil-based surface coating applied directly over ink on a printed substrate for the purpose of enhancing or protecting the printed surface.

(186) "Vinyl coating" means a coating or ink, not including organisol or plastisol coatings, applied to the surface of vinyl coated fabric, vinyl sheets, or other vinyl products by means of a knife coater, roll coater, or roll printer.

(187) "Zinc rich primer coating" means any coating which contains primarily zinc pigment on a weight basis, which is applied as a prime coat to a metal part or product prior to assembly, and which is dried at ambient or in-plant temperature.

(E) As used in paragraphs (L), (M), (T) and (Z) of rule 3745-21-09 of the Administrative Code (pertaining to storage tanks and to petroleum refinery equipment) and in rules 3745-21-04, 3745-21-10 and 3745-21-21 of the Administrative Code:

(1) "Component" means any piece of equipment which has the potential to leak organic compounds into the atmosphere. Such equipment includes, but is not limited to, pump seals, compressor seals, seal oil degassing vents, pipeline valves, pressure relief devices, process drains and open ended pipes.

(2) "Condensate" means any organic compound separated from natural gas which condenses due to changes in the temperature or pressure and remains liquid at standard conditions.

(3) "Crude oil" means a naturally occurring mixture which consists of hydrocarbons or sulfur, nitrogen or oxygen derivatives of hydrocarbons and which is a liquid at standard conditions.



- (4) "Custody transfer" means the transfer of produced crude oil or condensate, after processing or treating in the producing operations, from storage tanks or automatic transfer facilities to pipelines or any other forms of transportation.
- (5) "External floating roof tank" means an open top storage vessel with a cover, consisting of a double deck or pontoon single deck, which rests upon and is supported by the contained liquid and which is equipped with a closure seal or seals to close the space between the roof edge and tank wall.
- (6) "Firebox" means the chamber or compartment of a boiler or furnace in which materials are burned, but does not mean the combustion chamber of an incinerator.
- (7) "Fixed roof tank" means a steel cylindrical shell with a permanently affixed roof.
- (8) "Flexible wiper primary seal" means a continuous sealing device mounted on the floating roof and equipped with an elastomeric blade which contacts the tank wall. It uses its own stiffness or other mechanical means to maintain contact with the tank wall.
- (9) "Gas service" means equipment which processes, transfers or contains an organic compound or mixture of organic compounds in the gaseous phase.
- (10) "Internal floating roof" means a cover or roof in a fixed roof tank which rests upon and is supported by the petroleum liquid being contained and is equipped with a closure seal or seals to close the space between the roof edge and tank shell.
- (11) "Liquid-mounted primary seal" means a seal constructed of an elastomeric coated fabric envelope and mounted onto the floating roof in such a manner that it touches the surface of the stored liquid.
- (12) "Liquid service" means equipment which processes, transfers or contains an organic compound or mixture of organic compounds in the liquid phase.
- (13) "Maximum true vapor pressure" means the equilibrium partial pressure exerted by the stored VOL, at the temperature equal to the highest calendar-month average of the VOL storage



temperature for VOL's stored above or below the ambient temperature or at the local maximum monthly average temperature as reported by the national weather service for VOL's stored at the ambient temperature, as determined by one of the following:

(a) In accordance with methods described in API MPMS Chapter 19.2 "Evaporative loss from external floating-roof tanks."

(b) As obtained from standard reference texts.

(c) By ASTM D2879.

(d) Any other method approved by the Ohio EPA.

(14) "Mechanical shoe primary seal" means a seal constructed of metal sheets (shoes) which are joined together to form a ring, springs or levers which attach the shoes to the floating roof and hold the shoes against the tank wall, and a coated fabric which is suspended from the shoes to the floating roof.

(15) "Petroleum liquids" means crude oil, condensate, and any finished or intermediate products manufactured or extracted in a petroleum refinery.

(16) "Petroleum refinery" means any facility engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, lubricants, or other products through distillation of crude oil, or through redistillation, cracking, extraction, or reforming of unfinished crude oil derivatives.

(17) "Process unit turnaround" means a work practice or operational procedure that stops production from a refinery unit or part of a refinery unit. An unscheduled work practice or operational procedure that stops production from a refinery unit or part of a refinery unit for less than twenty-four hours is not a process unit turnaround. The use of spare equipment and technically feasible bypassing of equipment without stopping production are not process unit turnarounds.

(18) "Refinery fuel gas" means any gas which is generated by a petroleum refinery process unit and which is combusted, including any gaseous mixture of natural gas and fuel gas.



- (19) "Refinery unit" means equipment assembled to produce intermediate or final products from crude oil, unfinished crude oil derivatives, or other intermediates. A refinery unit can operate independently if supplied with sufficient feed or raw materials and sufficient storage facilities for the product.
- (20) "Rim-mounted secondary seal" means a continuous sealing device located over the primary seal, mounted on the floating roof and extended to the tank wall. This device is not a weather shield.
- (21) "Shoe-mounted secondary seal" means a continuous sealing device extending from the top of the shoe (see the definition of mechanical shoe primary seal) to the tank wall.
- (22) "True vapor pressure" means the equilibrium partial pressure exerted by a petroleum liquid as determined in accordance with methods described in API MPMS Chapter 19.2 "Evaporative loss from external floating-roof tanks."
- (23) "Vacuum producing system" means any reciprocating, rotary, or centrifugal blower or compressor, or any jet ejector or device that takes suction from a pressure below atmospheric and discharges against atmospheric pressure.
- (24) "Valves not externally regulated" means valves that have no external controls, such as in-line valves.
- (25) "Vapor-mounted primary seal" means a seal constructed of an elastomeric coated fabric envelope and mounted onto the floating roof in such a manner that it does not touch the surface of the stored liquid.
- (26) "Volatile organic liquid" or "VOL" means any organic liquid which can emit VOCs as defined in this rule.
- (27) "Wastewater separator" means a device in which oil- contaminated water is skimmed to remove the floating oil prior to the discharge or further treatment of the water.



(28) "Weather shield" means a device which is attached to a floating roof to protect the fabric of a liquid-mounted or vapor-mounted primary seal from weather and debris, thereby generally providing a longer primary seal life. The device is usually of leaf-type construction and has numerous radial joints to allow for roof movement or irregularities in the tank wall.

(F) As used in paragraph (N) of rule 3745-21-09 of the Administrative Code (pertaining to the use of cutback asphalts and emulsified asphalts in road construction and maintenance) and in rule 3745-21-04 of the Administrative Code:

(1) "Asphalt" means a dark brown to black cement-like material (solid, semisolid, or liquid in consistency) in which the predominating constituents are bitumens which occur in nature as such or which are obtained as residue in refining petroleum.

(2) "Asphalt paving mixture" means a mixture of mineral aggregate and cutback asphalt, emulsified asphalt, or other asphaltic material.

(3) "Cutback asphalt" means a mixture of asphalt and petroleum solvents (distillates), produced by blending those materials or by distilling petroleum.

(4) "Dense-graded mix" means an asphalt paving mixture in which the air voids are less than ten per cent when compacted, as determined by ASTM D3203.

(5) "Emulsified asphalt" means an emulsion of water and asphalt which may also contain emulsifying agents, special additives, and petroleum solvents (distillates).

(6) "Maintenance mix" means an asphalt paving mixture for patching holes, depressions, and distressed areas in existing pavements.

(7) "Open-graded mix" means an asphalt paving mixture in which the air voids are equal to or greater than ten per cent when compacted, as determined by ASTM D3203.

(8) "Prime coat" means an application of low-viscosity cutback asphalt or emulsified asphalt to an absorptive surface, designed to penetrate, bond and stabilize the existing surface and to promote



adhesion between it and the construction course that follows.

(G) As used in paragraph (O) of rule 3745-21-09 of the Administrative Code (pertaining to solvent metal cleaning) and in rules 3745-21-04 and 3745-21-10 of the Administrative Code:

(1) "Cold cleaner" means a batch-operated device that employs a solvent for cleaning and removing soils from metal surfaces by spraying, brushing, flushing, agitation or immersion while maintaining the solvent below its boiling point. Wipe cleaning is not included in this definition.

(2) "Conveyorized degreaser" means a continuous-operated device for cleaning and removing soils from metal surfaces by the use of either non-vaporized or vaporized solvents.

(3) "Electronic component" means all portions of an electronic assembly, including, but not limited to, circuit board assemblies, printed wire assemblies, printed circuit boards, soldered joints, ground wires, bus bars, and associated electronic component manufacturing equipment such as screens and filters.

(4) "Freeboard height" means the following:

(a) For a cold cleaner, the distance from the solvent surface to the top edge of the degreaser tank.

(b) For an open top vapor degreaser, the distance from the top of the vapor zone to the top of the degreaser tank.

(5) "Freeboard ratio" means the freeboard height divided by the width of the degreaser air/solvent area. The same units of measurement should be used for all dimensions.

(6) "Open top vapor degreaser" means a batch-operated device for cleaning and removing soils from metal surfaces by condensing hot solvent vapor on the colder metal parts.

(7) "Solvent" means any VOC which is liquid at standard conditions and which is used as a cleaning agent.



(8) "Solvent metal cleaning" means a process that employs a solvent for cleaning and removing soils from metal surfaces.

(H) As used in paragraphs (P) to (R), (V), (GG), and (DDD) of rule 3745-21-09 of the Administrative Code (pertaining to bulk gasoline plants, bulk gasoline terminals, gasoline dispensing facilities, and gasoline tank trucks) and in rules 3745-21-04 and 3745-21-10 of the Administrative Code:

(1) "Bottom filling" means the filling of a delivery vessel through an opening that is flush with the bottom of the delivery vessel's compartment.

(2) "Bulk gasoline plant" means a gasoline storage and distribution facility which receives gasoline primarily via delivery vessel, stores the gasoline in one or more stationary tanks, and subsequently dispenses the gasoline via delivery vessel.

(3) "Bulk gasoline terminal" means a gasoline storage and distribution facility which meets the following:

(a) Receives gasoline primarily via pipeline, ship, or barge.

(b) Stores the gasoline in one or more stationary tanks.

(c) Subsequently dispenses the gasoline primarily via delivery vessel.

(4) "CARB certification" and "CARB certified" means the following:

(a) Subject to executive orders, approval letters, equipment advisories, and equivalent test procedures issued by California air resources board for phase I and phase II vapor control systems, parts, components, and test procedures used at gasoline dispensing facilities as follows:

(i) Issued on or before March 31, 2001 under pre-enhanced vapor recovery (pre-EVR) standards and certification procedures and issued after March 31, 2001 as a correction or revision, not related to enhanced vapor recovery (EVR) standards, of phase I and phase II vapor control systems, parts,



components, and test procedures previously approved under pre-EVR standards, however, gasoline dispensing facilities in Ohio are not subject to any provision or statement that specifies an expiration or decertification due to EVR standards and certification procedures; or

(ii) Issued after March 31, 2001 under EVR standards and certification procedures for parts and components to be used in conjunction with pre-EVR systems, however, gasoline dispensing facilities in Ohio are not subject to any provision or statement that specifies an expiration or decertification due to EVR standards and certification procedures.

Additionally, where an owner or operator of a gasoline dispensing facility elects to use phase I or phase II vapor control systems, parts, components, or test procedures subject to executive orders, approval letters, equipment advisories, and equivalent test procedures issued by California air resources board under EVR standards and certification procedures, "CARB certification" and "CARB certified" also means such executive orders, approval letters, equipment advisories, and equivalent test procedures issued by California air resources board under EVR standards and certification procedures. (Executive orders that begin with "G" generally refer to pre-EVR systems, but may include provisions or statements on expiration or decertification due to EVR standards. Executive orders that begin with "VR" generally refer to EVR systems.)

(b) Subject to executive orders, approval letters, equipment advisories, and equivalent test procedures issued by California air resource board that become effective for portable fuel containers and spouts on or after July 1, 2007.

(5) "E85" means a fuel blend nominally consisting of eighty five per cent ethanol and fifteen per cent gasoline that meets the requirements of ASTM D5798 for fuel ethanol.

(6) "Delivery vessel" means a tank truck, a tank equipped trailer, a railroad tank car, or other mobile source, except ship or barge, equipped with a storage tank used for the transport of gasoline from a source of supply to stationary tanks at a gasoline dispensing facility or bulk gasoline plant.

(7) "External floating roof" means a storage vessel cover in an open top tank consisting of a double deck or pontoon single deck which rests upon and is supported by the petroleum liquid being contained and is equipped with a closure seal or seals to close the space between the roof edge and



tank shell.

(8) "Gasoline" means any petroleum distillate which is used as a motor fuel and has a Reid vapor pressure of 4.0 pounds or greater.

(9) "Gasoline dispensing facility" means any site where gasoline is dispensed to motor vehicle gasoline tanks from stationary storage tanks.

(10) "Gasoline dispensing pump" means an individual unit at a gasoline dispensing facility with a dispensing nozzle where a specific grade of gasoline is dispensed to motor vehicle gasoline tanks.

(11) "Gasoline tank truck" means any truck or trailer equipped with a storage tank which is used for the transport of gasoline to a stationary storage tank at a gasoline dispensing facility, bulk gasoline plant or bulk gasoline terminal.

(12) "Independent small business marketer" means any owner of a gasoline dispensing facility engaged in the marketing of gasoline who would be required to pay for procurement and installation of a vapor control system pursuant to paragraph (DDD) of rule 3745-21-09 of the Administrative Code, except as any of the following:

(a) The owner is a refiner.

(b) The owner controls, is controlled by, or is under common control with a refiner.

(c) The owner is otherwise directly or indirectly affiliated (as determined under the regulations of the USEPA) with a refiner or with a person who controls, is controlled by, or is under a common control with a refiner (unless the sole affiliation referred to herein is by means of a supply contract or an agreement or contract to use as a trademark, trade name, service mark, or other identifying symbol or name owned by such refiner or any such person).

(d) The owner receives less than fifty per cent of the owner's annual income from refining or marketing of gasoline.



For purposes of this definition, "refiner" means any refiner whose total refinery capacity (including the refinery capacity of any person who controls, is controlled by, or is under common control with, such refiner) exceeds sixty-five thousand barrels per day, and the term "control" of a corporation means ownership of more than fifty per cent of the corporation's stock.

(13) "Internal floating roof" means a cover or roof in a fixed roof tank which rests upon and is supported by the petroleum liquid being contained and is equipped with a closure seal or seals to close the space between the roof edge and tank shell.

(14) "Low permeation hoses" means hoses that meet UL 330.

(15) "Reid vapor pressure" means the absolute vapor pressure of volatile crude oil and volatile nonviscous petroleum liquids except liquefied petroleum gases as determined by ASTM D6897.

(16) "Submerged fill pipe" means any fill pipe the discharge opening of which is entirely submerged when the liquid level is six inches above the bottom of the tank, or when applied to a tank which is loaded from the side, means any fill pipe the discharge opening of which is entirely submerged when the liquid level is eighteen inches above the bottom of the tank.

(17) "Top submerged filling" means the filling of a delivery vessel by means of a fill pipe which descends through an open hatch on the top of the delivery vessel to within six inches of the bottom of the delivery vessel's compartment.

(18) "Topping off" means attempting to pump additional gasoline into a motor vehicle fuel tank after the dispensing nozzle has shut off automatically because the tank is full.

(19) "Ullage" means the maximum storage tank capacity, in gallons, minus the gallons of gasoline present in the tank.

(20) "Vapor balance system" means a combination of pipes or hoses which create a closed system between the vapor spaces of an unloading tank and a receiving tank such that vapors displaced from the receiving tank are transferred to the tank being unloaded.



(21) "Vapor collection system" means a vapor transport system which forces vapors from a delivery vessel or storage tank into a vapor control system.

(22) "Vapor control system" means control equipment designed to recover or incinerate organic compounds received from the vapor collection system.

(23) "Vapor tight" means free of any vapor leaks to the extent possible based upon good engineering design and practice.

(I) As used in paragraph (W) of rule 3745-21-09 of the Administrative Code (pertaining to synthesized pharmaceutical manufacturing facilities) and in rule 3745-21-04 of the Administrative Code:

(1) "Production equipment exhaust system" means a device for collecting and directing out of the work area any fugitive emissions of organic compounds from openings on reactors, centrifuges and other vessels for the purpose of protecting workers from excessive exposure to such emissions.

(2) "Surface condenser" means a device which cools a gas stream to a temperature at which vapors are removed by means of condensation, where the coolant does not directly contact the condensed vapors.

(3) "Synthesized pharmaceutical manufacturing facility" means a facility in which drugs are produced by means of chemical synthesis.

(J) As used in paragraph (X) of rule 3745-21-09 of the Administrative Code (pertaining to rubber tire manufacturing facilities) and in rules 3745-21-04 and 3745-21-10 of the Administrative Code:

(1) "Bead dipping" means the dipping of an assembled tire bead into a solvent based cement.

(2) "Capture system" means any device or combination of devices designed to contain, collect, and route VOC vapors released from an operation at a rubber tire manufacturing facility.

(3) "Control system" means any device or combination of devices designed to recover or incinerate



VOC vapors received from a capture system.

(4) "Green tires" means assembled tires before molding and curing have occurred.

(5) "Green tire spraying" means the spraying of green tires, both inside and outside, with release compounds which help remove air from the tire during molding and prevent the tire from sticking to the mold after curing.

(6) "Recapped tread stock" means vulcanized or unvulcanized rubber which is used for recapping tire carcasses and which is delivered to a recapping facility with a cement coating on one side.

(7) "Rubber tire manufacturing facility" means a facility in which rubber tires or recapped tread stock are manufactured on a mass production basis.

(8) "Tread end cementing" means the application of a solvent based cement to the tire tread ends.

(9) "Undertread cementing" means the application of a solvent based cement to the underside of a tire tread.

(K) As used in paragraphs (AA) and (BB) of rule 3745-21-09 of the Administrative Code (pertaining to dry cleaning facilities) and in rules 3745-21-04 and 3745-21-10 of the Administrative Code:

(1) "Cartridge filter" means a discrete filter unit containing one or more disposable cartridges that contain both filter paper and activated carbon which trap and remove contaminants from the cleaning solvent.

(2) "Dry cleaning facility" means a facility engaged in the cleaning of articles of fabric in an essentially nonaqueous cleaning solvent by means of one or more washes in solvent, extraction of excess solvent by spinning, and drying by tumbling in an air stream. The facility includes, but is not limited to, washers, dryers, filtration and purification systems, waste disposal systems, holding tanks, pumps, and attendant piping and ductwork.

(3) "Dryer" means a machine used to remove cleaning solvent from articles, after washing and



removing of excess cleaning solvent.

(4) "Manufacturer's rated capacity" means the capacity per load that is typically found on the manufacturer's name plate located on the equipment or in the manufacturer's equipment specifications.

(5) "Perchloroethylene dry cleaning facility" means a dry cleaning facility that uses perchloroethylene as the cleaning solvent.

(6) "Petroleum dry cleaning facility" means a dry cleaning facility that uses petroleum solvent as the cleaning solvent.

(7) "Petroleum solvent" means a material that is produced by petroleum distillation, that is composed mainly of hydrocarbons having a range of eight to twelve carbon atoms per molecule, and that exists as a liquid under standard conditions.

(8) "Solvent filter" means a discrete filter unit containing a porous medium that traps and removes contaminants from the cleaning solvent.

(9) "Solvent recovery dryer" means a class of dryers that employ a condenser to condense and recover solvent vapors evaporated in a closed-loop stream of heated air.

(L) As used in paragraph (CC) of rule 3745-21-09 of the Administrative Code (pertaining to continuous, polystyrene resin manufacturing process) and in rule 3745-21-04 of the Administrative Code:

(1) "Continuous, polystyrene resin manufacturing process" means a process unit in which polystyrene resin is produced by the continuous polymerization or co-polymerization of styrene monomer.

(2) "Material recovery section" means the section of the continuous, polystyrene resin manufacturing process that includes the vacuum devolatilizer and its associated condenser and vacuum system, and the styrene recovery distillation column and its associated condenser and vacuum system.



(3) "Styrene recovery distillation column" means a distillation column used to separate and recover styrene monomer from the vacuum devolatilizer stream containing unreacted styrene monomer and byproducts.

(4) "Vacuum devolatilizer" means a device in which the products from a polystyrene reactor are separated into a stream containing unreacted styrene monomer and byproducts and a stream containing molten polystyrene.

(M) As used in paragraph (DD) of rule 3745-21-09 of the Administrative Code (pertaining to leaks from process units that produce organic chemicals) and in rules 3745-21-04 and 3745-21-10 of the Administrative Code:

(1) "Btu/scf" means British thermal unit per standard cubic feet.

(2) "Closed vent system" means a system that is not open to the atmosphere and that is composed of piping, connections, and if necessary, flow inducting devices that transport gas or vapor from a piece or pieces of equipment to control equipment.

(3) "Connector" means a flanged, screwed, welded, or other joined fitting used to connect two pipelines or a pipeline and a piece of process equipment.

(4) "Distance piece" means an open or enclosed casing through which the piston rod travels, separating the compressor cylinder from the crankcase.

(5) "Double block and bleed system" means two block valves connected in series with a bleed valve or line that can vent the line between the two block valves.

(6) "Equipment" means a pump, compressor, pressure relief device, sampling connection system, opened valve or line, valve, flange, connector, closed vent system, and any other device or system within a process unit.

(7) "First attempt at repair" means to take rapid action for the purpose of stopping or reducing



leakage from equipment.

(8) [Reserved.]

(9) "In gas/vapor service" means that the piece of equipment contains or contacts process fluid that is in the gaseous state at the operating conditions.

(10) "In heavy liquid service" means that the piece of equipment is not in gas/vapor service or in light liquid service.

(11) "In light liquid service" means that the piece of equipment contains or contacts process fluid that meets the conditions specified in paragraph (O) of rule 3745-21-10 of the Administrative Code.

(12) "Insitu sampling system" means a nonextractive sampler or an in-line sampler.

(13) "In vacuum service" means that the piece of equipment is operating at an internal pressure that is at least 0.7 pound per square inch below ambient pressure.

(14) "In VOC service" means that the piece of equipment contains or contacts a process fluid that is at least ten per cent VOC by weight.

(15) "Liquids dripping" means any visible leakage from the seal including spraying, misting, clouding, and ice formation.

(16) "Open-ended valve or line" means any valve having one side of the valve seat in contact with the process fluid and one side open to the atmosphere, either directly or through open piping, but excluding any pressure relief valve.

(17) "Ppmv" means parts per million by volume.

(18) "Pressure release" means the emission of materials resulting from system pressure being greater than set pressure of the pressure relief device.



(19) "Pressure relief device" means a pressure relief valve or a rupture disk.

(20) "Pressure relief valve" means any valve designed to open when the process pressure exceeds a set pressure, allowing the release of vapors or liquids until the process pressure is reduced to the normal operating level.

(21) "Process unit" means equipment assembled to produce, as intermediate or final products, one or more organic chemicals. A process unit can operate independently if supplied with sufficient feed or raw materials and sufficient storage facilities for the product.

(22) "Process unit shutdown" means a work practice or operational procedure that stops production for a process unit or part of a process unit. An unscheduled work practice or operational procedure that stops production from a process unit or part of a process unit for less than twenty-four hours is not a process unit shutdown. The use of spare equipment and technically feasible bypassing of equipment without stopping production are not process unit shutdowns.

(23) "Repaired" means that leaking equipment are successfully adjusted, or otherwise altered, in order to eliminate the leak.

(24) "Rupture disk" means a disk made of a material that ruptures when the process pressure exceeds a set pressure, allowing the release of vapors or liquids until the process pressure is reduced to ambient pressure.

(25) "Sensor" means a device that measures a physical quantity or the change in a physical quantity such as temperature, flow rate, "pH," or liquid level.

(N) As used in paragraph (EE) of rule 3745-21-09 of the Administrative Code (pertaining to air oxidation processes that produce organic chemicals) and in rule 3745-21-04 of the Administrative Code:

(1) "Air oxidation process" means a unit operation or process wherein organic chemicals are produced by reacting one or more compounds with oxygen which is supplied as air or air enriched with oxygen.



(2) "Process vent stream" means any gas stream within the air oxidation process that vents to the ambient air.

(O) [Reserved.]

(P) As used in paragraph (LL) of rule 3745-21-09 of the Administrative Code (pertaining to "The Lubrizol Corporation," facility ID 0243000024):

(1) "Air-bearing vent stream" means a process vent stream that contains a mixture of air and organic vapors.

(2) "Reactor process" means reactor vessel equipment and associated material recovery equipment that are assembled to produce an organic chemical.

(3) "Reactor process vent stream" means any gas stream within the reactor process that is vented to the ambient air, an enclosed combustion device, or a flare.

(4) "Wastewater separator" means a device in which contaminated water is skimmed to remove the floating organic materials prior to the discharge or further treatment of the water.

(Q) As used in paragraph (MM) of rule 3745-21-09 of the Administrative Code (pertaining to "PPG Industries, Inc.," facility ID 1318000101):

(1) "Control system" means any device or combination of devices designed to recover or incinerate VOC vapors received from a capture system.

(2) "Grinding mill" means a device used to grind or disperse pigment throughout a paint.

(3) "Paint manufacturing facility" means a facility engaged in the production of paints and includes, but is not limited to, mixing tanks, paint transfer equipment, grinding mills, equipment cleaning stations, and process tanks for paint tinting and thinning.



(R) As used in paragraph (NN) of rule 3745-21-09 of the Administrative Code (pertaining to "Von Roll Isola USA, Inc., facility ID 1318002663):

(1) "Mica coating or laminating line" means a series of one or more coating applicators and any associated flash-off areas, drying areas, and ovens wherein an adhesive coating or binder is applied to mica.

(2) "Oven" means a chamber within which heat is used for one or more of the following purposes: dry, bake, cure or polymerize an adhesive coating or binder.

(S) As used in paragraph (OO) of rule 3745-21-09 of the Administrative Code (pertaining to "AK Steel Corporation," facility ID 1409010006):

(1) "Aluminum coating operation" means an operation wherein a layer of aluminum is applied to the surface of metal coil by immersion into a bath of molten aluminum.

(2) "Anti-galling material" means a coating material applied directly to metal coil for the purpose of protecting the surface of the coil from damage during shipment.

(3) "Metal coil treatment operation" means any operation where coating materials are applied directly to metal coil for the purpose of lubrication, rust prevention, or galling prevention.

(4) "Rolling oil" means a coating material which is applied directly to metal coil, for the purpose of lubrication, prior to processing at any temper mill.

(5) "Rust preventive oil" means a coating material which is applied directly to metal coil after processing at any temper mill or shear.

(T) As used in paragraph (YY) of rule 3745-21-09 of the Administrative Code (pertaining to "PMC Specialties Group," facility ID 1431390137), paragraph (ZZ) of rule 3745-21-09 of the Administrative Code (pertaining to "Firestone Polymers," facility ID 1677010000), and paragraph (BBB) of rule 3745-21-09 of the Administrative Code (pertaining to "Emerald Performance Materials LLC," facility ID 1677010029):



(1) "Air-bearing vent stream" means a process vent stream that contains a mixture of air and organic vapors.

(2) "Reactor process" means reactor vessel equipment and associated material recovery equipment that are employed to produce an organic chemical.

(3) "Reactor process vent stream" means any gas stream within the reactor process that is vented to control equipment or to the ambient air.

(U) As used in rule 3745-21-12 of the Administrative Code:

Except as otherwise provided in this paragraph, the definitions in rule 3745-15-01 of the Administrative Code and paragraph (B) of rule 3745-21-01 of the Administrative Code apply to rule 3745-21-12 of the Administrative Code (pertaining to control of volatile organic compound emissions from commercial bakery oven facilities).

(1) "Baker's per cent" means, for a given ingredient, the weight of that ingredient per one hundred pounds of flour, expressed as a percentage.

(2) "Bakery oven" means an oven which bakes yeast-leavened products.

(3) "Commercial bakery oven facility" means an establishment that is primarily engaged in the manufacture, for sale at wholesale or retail, of fresh or frozen bread, bread-type rolls, or dry bakery products, including biscuits, crackers, or cookies, in which the products are made using yeast leavening.

(4) "Purge stack" means a bakery oven stack used only for exhausting residual gases from the bakery oven during burner ignition.

(5) "Spike yeast" means any yeast added to the dough beyond the initial yeast added to the dough.

(6) "Spiking time" means the elapsed time between the addition of the spike yeast to the dough and



the placement of the dough into the oven.

(7) "Subject to this rule" means the commercial bakery oven facility has met the applicability criteria of paragraph (A)(1) of rule 3745-21-12 of the Administrative Code and is subject to paragraphs (D) to (I) of rule 3745-21-12 of the Administrative Code.

(8) "Total uncontrolled potential to emit" means the capability at maximum capacity of a commercial bakery oven facility to emit VOC under the commercial bakery oven facility's physical and operational design, excluding air pollution control equipment. Any physical or operational limitation on the capacity of the commercial bakery oven facility to emit VOC, including restrictions on the hours of operation or on the type or amount of material processed, but not including restrictions pertaining to air pollution control equipment, are treated as part of the physical and operational design if the limitation or the effect the limitation would have on VOC emissions is federally enforceable.

(9) "Uncontrolled bakery oven" means a bakery oven in which the oven's VOC emissions are not vented to a VOC emission control device.

(10) "Yeast action time" means the elapsed time between the initial addition of the yeast and the placement of the dough into the oven.

(V) As used in rule 3745-21-13 of the Administrative Code:

Except as otherwise provided in this paragraph, the definitions in rule 3745-15-01 of the Administrative Code and paragraph (B) of this rule apply to rule 3745-21-13 of the Administrative Code (pertaining to control of volatile organic compound emissions from reactors and distillation units employed in SOCFI chemical production).

(1) "Batch operation" means a noncontinuous operation in which a discrete quantity or batch of feed is charged into a unit operation within a process unit and distilled or reacted at one time. Batch operation includes noncontinuous operations in which the equipment is fed intermittently or discontinuously. Addition of raw material and withdrawal of product do not occur simultaneously in a batch operation. After each batch operation, the equipment is generally emptied before a fresh



batch is started.

(2) "Boiler" means any enclosed combustion device that extracts useful energy in the form of steam and is not an incinerator or a process heater.

(3) "Btu" means British thermal unit.

(4) "Car-seal" means a seal that is placed on a device that is used to change the position of a valve (e.g., from opened to closed) in such a way that the position of the valve cannot be changed without breaking the seal.

(5) "Combustion device" means an individual unit of equipment, such as an incinerator, flare, boiler, or process heater, used for combustion of a vent stream discharged from the process vent.

(6) "Compliance test" means the collection of data resulting from the execution of a test method used to demonstrate compliance with an emission limit or control requirement based on the average of three runs.

(7) "Continuous record" means documentation, either in hard copy or computer readable form, of data values measured at least once every fifteen minutes and recorded as any of the following:

(a) Each measured value.

(b) Block average values for fifteen-minute or shorter periods calculated from all measured data values during each period or at least one measured data value per minute if measured more frequently than once per minute.

(c) Values under an alternative recordkeeping that is implemented in accordance with paragraph (H)(8) of rule 3745-21-13 of the Administrative Code.

(8) "Continuous recorder" means a data recording device that either records an instantaneous data value at least once every fifteen minutes or records fifteen-minute or more frequent block average values.



(9) "Control device" means any combustion device or recapture device. A recovery device is not considered a control device.

(10) "Distillation operation" means an operation separating one or more feed stream into two or more exit streams, each exit stream having component concentrations different from those in the feed stream. The separation is achieved by the redistribution of the components between the liquid and vapor-phase as they approach equilibrium within the distillation unit.

(11) "Distillation unit" means a device or vessel in which distillation operations occur, including all associated internals (such as trays or packing) and accessories (such as reboiler, condenser, vacuum pump, steam jet, etc.), plus any associated recovery system.

(12) "Engineering assessment" means best estimate of a vent stream parameter (e.g., flow rate, VOC concentration, VOC emission rate, net heating value, etc.) that includes, but is not limited to, the following:

(a) Previous test results provided the tests are representative of current operating practices at the process unit.

(b) Bench-scale or pilot-scale test data representative of the process under representative operating conditions.

(c) Maximum flow rate, VOC emission rate limit, VOC concentration limit, or net heating value limit specified or implied within a permit applicable to the process vent.

(d) Design analysis based on accepted chemical engineering principles, measurable process parameters, or physical or chemical laws or properties. Examples of analytical methods include, but are not limited to the following:

(i) Use of material balances based on process stoichiometry to estimate maximum VOC concentrations.



- (ii) Estimation of maximum flow rate based on physical equipment design such as pump or blower capacities.
- (iii) Estimation of VOC concentrations based on saturation conditions.
- (iv) Estimation of maximum expected net heating value based on the vent stream concentration of each organic compound or, alternatively, as if all organic compounds in the vent stream were the organic compound with the highest heating value.
- (13) "Flame zone" means the portion of the combustion chamber in a boiler or process heater occupied by the flame envelope.
- (14) "Flow indicator" means a device that indicates whether gas flow is present in a vent stream.
- (15) "Fuel gas system" means the off-site and on-site piping and flow and pressure control system that gathers gaseous streams generated by on-site operations, may blend them with other sources of gas, and transports the gaseous stream for use as fuel gas in combustion devices or in-process combustion equipment such as furnaces and gas turbines either singly or in combination.
- (16) "Group 1 process vent" means a process vent for which a control device is required due to the TRE index value being less than or equal to 1.0. Also, monitoring of the control device is required, except when the control device is a boiler or process heater specified under paragraph (F)(1)(b) or (F)(1)(c) of rule 3745-21-13 of the Administrative Code.
- (17) "Group 2A process vent" means a process vent from a recovery system for which monitoring of the recovery system is required due to the TRE index value being less than or equal to 4.0, but a control device is not required due to the TRE index value being greater than 1.0.
- (18) "Group 2B process vent" means a process vent for which a control device and monitoring are not required due to any of the following:
- (a) The VOC concentration is less than five hundred ppmv.



- (b) The flow rate is less than 0.30 scfm.
- (c) The TRE index value is greater than 1.0 for a vent stream not from a recovery system.
- (d) The TRE index value is greater than 4.0 for a vent stream from a recovery system.
- (19) "Halogenated vent stream" means a vent stream determined to have a mass emission rate of halogen atoms contained in organic compounds equal to or greater than 0.99 pound per hour.
- (20) "Halogens and hydrogen halides" means hydrogen chloride (HCl), chlorine (Cl₂), hydrogen bromide (HBr), bromine (Br₂), and hydrogen fluoride (HF).
- (21) "Incinerator" means an enclosed combustion device that is used for destroying organic compounds. Auxiliary fuel may be used to heat waste gas to combustion temperatures. Any energy recovery section present is not physically formed into one manufactured or assembled unit with the combustion section; rather, the energy recovery section is a separate section following the combustion section and the two are joined by ducts or connections carrying flue gas. The above energy recovery section limitation does not apply to an energy recovery section used solely to preheat the incoming vent stream or combustion air.
- (22) "Monitoring device" means the total equipment used to measure and record (if applicable) process parameters.
- (23) "Nonhalogenated vent stream" means a vent stream that is not a halogenated vent stream.
- (24) "Organic monitoring device" means a device used to indicate the concentration level of organic compounds based on a detection principle such as infrared, photoionization, or thermal conductivity.
- (25) "Permit" means a permit issued by the director pursuant to Chapter 3745-31 or 3745-77 of the Administrative Code.
- (26) "Ppmv" means parts per million by volume.



(27) "Primary fuel" mean the fuel that provides the principal heat input to the device. To be considered primary, the fuel must be able to sustain operation without the addition of other fuels.

(28) "Process heater" means a device that transfers heat liberated by burning fuel to fluids contained in tubes, including all fluids except water that is heated to produce steam.

(29) "Process unit" means equipment assembled and connected by pipes or ducts to produce, as a product (by-product, co-product, intermediate, or final product), one or more SOCOMI chemicals. A process unit can operate independently if supplied with sufficient feed or raw materials and sufficient product storage facilities.

(30) "Process vent" means the point of discharge to the atmosphere (or the point of entry into a control device, if any) of a gas stream from a distillation unit or reactor. Gas streams excluded from this definition are the following:

(a) A relief valve discharge.

(b) A leak from any device or equipment within a reactor or distillation unit (e.g., a leak from a pump, compressor, relief valve, or sampling system).

(c) A gas stream going to a fuel gas system.

(d) A gas stream exiting a control device used to comply with rule 3745-21-13 of the Administrative Code.

(e) A gas stream transferred to other processes (on-site or off-site) for reaction or other use in another process (i.e., for chemical value as a product, isolated intermediate, by-product, or co-product, or for heat value).

(f) A gas stream transferred for fuel value (i.e., net positive heating value), use, reuse, or for sale for fuel value, use, or reuse.

(g) A gas stream exiting an analyzer.



- (31) "Product" means any SOCFI chemical which is produced for sale as a final product as that chemical, or for use in the production of other chemicals or compounds. By-products, co-products, and intermediates are considered to be products.
- (32) "Reactor" means a device or vessel in which reactor processes occur, including the product separator, any associated vacuum pump or steam jet, and any associated recovery system.
- (33) "Reactor process" means a process in which one or more chemicals, or reactants other than air, are combined or decomposed in such a way that their molecular structures are altered and one or more new organic compounds are formed.
- (34) "Recapture device" means an individual unit of equipment capable of and used for recovering chemicals from a gas stream, but not normally or primarily for use, reuse, or sale. For example, a recapture device may recover chemicals primarily for disposal or for air pollution control. Recapture devices include, but are not limited to, absorbers, carbon adsorbers, and condensers.
- (35) "Recovery device" means an individual unit of equipment, such as an absorber, carbon adsorber, or condenser, capable of and used for the purpose of recovering chemicals from a gas stream for fuel value (i.e., net positive heating value), use, reuse, or for sale for fuel value, use, or reuse.
- (36) "Recovery system" means an individual recovery device or series of such devices applied to the same vent stream.
- (37) "Relief valve" means a valve used only to release an unplanned, nonroutine discharge. A relief valve discharge results from an operator error, a malfunction such as a power failure or equipment failure, or other unexpected cause that requires immediate venting of gas from process equipment in order to avoid safety hazards or equipment damage.
- (38) "Run" means the net period of time during which an emission sample is collected or a test method is conducted.
- (39) "Scfm" means standard cubic feet per minute.



(40) "Sensor" means a device that measures a physical quantity or the change in a physical quantity, such as temperature, pressure, flow rate, pH, or liquid level.

(41) "Shutdown" means for purposes including, but not limited to, periodic maintenance, replacement of equipment, or repair, the cessation of operation of a reactor, distillation unit, or equipment required or used to comply with rule 3745-21-13 of the Administrative Code.

(42) "SOCMI chemical" means a chemical listed in control of volatile organic compound emissions from reactor processes and distillation operations processes in the synthetic organic chemical manufacturing industry, appendix A, list of synthetic organic chemical manufacturing industry chemicals, Table A-1, list of synthetic organic chemical manufacturing industry chemicals, in the column titled reactor and distillation, EPA-450/4-91-031.

(43) "Specific gravity monitoring device" means a unit of equipment used to monitor specific gravity and having a minimum accuracy of plus or minus 0.02 specific gravity units.

(44) "Start-up" means the setting into operation of a reactor, distillation unit, or equipment required or used to comply with this rule. Start-up includes initial start-up, operation solely for testing equipment, and transitional conditions due to changes in product.

(45) "Steam jet ejector" means a steam nozzle that discharges a high-velocity jet across a suction chamber that is connected to the equipment to be evacuated.

(46) "Subject to this rule" means the reactor or distillation unit has met the applicability criteria of paragraph (A)(1) of rule 3745-21-13 of the Administrative Code.

(47) "Temperature monitoring device" means a unit of equipment used to monitor temperature and having a minimum accuracy of plus or minus one per cent of the temperature being monitored expressed in degrees Celsius or plus or minus 0.5 degree Celsius, whichever is greater.

(48) "Total organic compounds" or "TOC" means those compounds measured according to the procedures of USEPA method 18.



(49) "Total resource effectiveness index value" or "TRE index value" means a measure of the supplemental total resource requirement per unit reduction of VOC associated with a vent stream, based on vent stream flow rate, emission rate of VOC, net heating value, and corrosion properties (whether or not the vent stream contains halogenated compounds) as determined using the equation in paragraph (E)(8)(a) of rule 3745-21-13 of the Administrative Code. The TRE index is a decision tool used to determine if the annual cost of controlling a given gas stream is reasonable when considering the emissions reduction achieved.

(50) "TRE determination test" means the collection of data resulting from the execution of test methods used to demonstrate process vent flow rate and concentration, that are used to determine the process vent flow rate, net heating value, emission rates of TOC, VOC, and halogen atoms, each based on the average of three runs, for the determination of the TRE index value of a process vent.

(51) "Vent stream" means the gas stream flowing through the process vent.

(52) "Visible emission" means the observation of an emission of opacity or optical density above the threshold of vision.

(W) As used in rule 3745-21-14 of the Administrative Code:

Except as otherwise provided in this paragraph, the definitions in rule 3745-15-01 of the Administrative Code and paragraph (B) of this rule apply to rule 3745-21-14 of the Administrative Code (pertaining to control of volatile organic compound emissions from process vents in batch operations).

(1) "Aggregate" means the summation of all process vents containing VOC within a process.

(2) "Batch operation" means a noncontinuous operation in which a discrete quantity or batch of feed is charged into a unit operation within a batch process train and processed at one time. Batch operation includes noncontinuous operations in which the equipment is fed intermittently or discontinuously. Addition of raw material and withdrawal of product do not occur simultaneously in a batch operation. After each batch operation, the equipment is generally emptied before a fresh



batch is started.

(3) "Batch cycle" means a manufacturing event of an intermediate or product from start to finish in a batch process train.

(4) "Batch process train" means the collection of equipment (e.g., reactors, filters, dryers, distillation columns, extractors, crystallizers, blend tanks, neutralizer tanks, digesters, surge tanks and product separators) configured to produce a specific product or intermediate by a batch operation. A batch process train terminates at the point of storage or product handling of the product or intermediate being produced in the batch process train. Irrespective of the product being produced, a batch process train which is independent of other processes is considered a single batch process train for purposes of this definition.

(5) "Boiler" means any enclosed combustion device that extracts useful energy in the form of steam.

(6) "Continuous recorder" means a data recording device that either records an instantaneous data value at least once every fifteen minutes or records fifteen-minute or more frequent block average values.

(7) "Control device" means any device or combination of devices designed to recover or destroy VOC vapors received from the process vents. A recovery device which is a required part of the process, for example, but not limited to, condensers operating under reflux conditions, is not a control device.

(8) "Emission event" means a discrete period of venting that is associated with a unit operation, for example, a displacement of vapor resulting from the charging of a unit operation with VOC resulting in a discrete emission event lasting the duration of the charge and having an average flow rate equal to the rate of the charge. The expulsion of expanded unit operation vapor space when the vessel is heated is also an emission event. Both of these examples of emission events and others may occur in the same unit operation during the course of the batch cycle. If the flow rate measurement for any discrete period of venting is zero, then such event is not an emission event for purposes of rule 3745-21-14 of the Administrative Code.



(9) "Flame zone" means the portion of the combustion chamber in a boiler occupied by the flame envelope.

(10) "Incinerator" means any enclosed combustion device that is used for destroying organic compounds. Auxiliary fuel may be used to heat waste gas to combustion temperatures. Any energy recovery section present is not physically formed into one section; rather, the energy recovery system is a separate section following the combustion section and the two are joined by ducting or connections that carry fuel gas.

(11) "MmHg" means millimeters of mercury.

(12) "Permit" means a permit issued by the director pursuant to Chapter 3745-31 or 3745-77 of the Administrative Code.

(13) "Ppmv" means parts per million by volume.

(14) "Process vent" means a vent gas stream that is discharged from a unit operation or multiple unit operations within the same batch process train that are manifolded together into a common header. A process vent begins at the inlet to the control device prior to mixing with vent gas streams from other process trains or unrelated operations, or in the absence of a control device, at the point of discharge to the atmosphere. Not included in this definition are exhaust streams from exhaust hood and building ventilation fans which are used to provide ventilation for workers and not to collect and discharge emissions from specific unit operations. Process vents exclude relief valve discharges, leaks from equipment, vents from storage tanks, vents from transfer or loading operations, and vents from wastewater.

(15) "Recovery device" means an individual unit of equipment, such as an absorber, carbon adsorber, or condenser, capable of and used for the purpose of recovering chemicals for use, reuse, or sale.

(16) "Recovery system" means an individual recovery device or series of such devices applied to the same vent stream.

(17) "Standard industrial classification code" or "SIC code" means a series of four-digit codes



devised by the office of management and budget (OMB) of the federal government to classify establishments according to the type of economic activity in which they are engaged.

(18) "Scfm" means standard cubic feet per minute.

(19) "Subject to this rule" means either the facility or the batch process train has met the applicability criteria of paragraph (A)(1) of rule 3745-21-14 of the Administrative Code.

(20) "Unit operation" means one or more pieces of process equipment used to make a single change to the physical or chemical characteristics of one or more process streams. Equipment used for these purposes includes, but is not limited to, reactors, filters, dryers, distillation columns, extractors, crystallizers, blend tanks, neutralizer tanks, digesters, surge tanks, and product separators.

(X) As used in rule 3745-21-15 of the Administrative Code:

Except as otherwise provided in this paragraph, the definitions in rule 3745-15-01 of the Administrative Code and paragraph (B) of this rule apply to rule 3745-21-15 of the Administrative Code (pertaining to control of volatile organic compound emissions from wood furniture manufacturing operations).

(1) "Adhesive" means any chemical substance that is applied for the purpose of bonding two surfaces together other than by mechanical means but does not include products used on humans and animals, adhesive tape, contact paper, or any other product with an adhesive incorporated onto or in an inert substrate .

(2) "Aerosol adhesive" means an adhesive that is dispensed from a pressurized container as a suspension of fine solid or liquid particles in gas.

(3) "As applied" means the VOC and solids content of the coating that is actually used for coating the substrate. This includes the contribution of materials used for in-house dilution of the coating.

(4) "Basecoat" means a coat of colored material, usually opaque, that is applied before graining inks, glazing coats, or other opaque finishing materials, and is usually topcoated for protection.



(5) "Capture device" means a hood, enclosed room, floor sweep, or other means of collecting solvent emissions or other pollutants into a duct so that the pollutant can be directed to a control device such as an incinerator or carbon adsorber.

(6) "Capture efficiency" means the fraction of all organic vapors generated by a process that are directed to a control device.

(7) "Capture system" means one or more capture devices intended to collect emissions generated by a finishing operation in the use of finishing materials, both at the point of application and at subsequent points where emissions from the finishing materials occur, such as flashoff, drying, or curing. Multiple capture devices that collect emissions generated by a finishing operation are considered a single capture system.

(8) "Car-seal" means a seal that is placed on a device that is used to change the position of a valve (e.g., from opened to closed) in such a way that the position of the valve cannot be changed without breaking the seal.

(9) "Certified product data sheet" or "CPDS" means documentation furnished by a coating supplier or an outside laboratory that provides the VOC content in percent by weight, the solids content in percent by weight, other contents that may be of interest in percent by weight, and the density of a coating (finishing material or strippable spray booth material) or solvent, based on formulation data or measurement methods. For data based on a measurement method, the measurement method should be identified within the CPDS. The purpose of the CPDS is to assist the facility in demonstrating compliance with the emission limitations presented in paragraphs (D) and (E) of rule 3745-21-15 of the Administrative Code. Therefore, the VOC content should represent the maximum VOC emission potential of the coating or solvent. A CPDS includes, but is not limited to, technical data sheets, material specification sheets, material safety data sheets, and laboratory test reports pertaining to a coating or solvent.

(10) "Cleaning operations" means operations in which organic solvent is used to remove coating materials from equipment used in wood furniture manufacturing operations.



(11) "Coating" means a protective, decorative, or functional film applied in a thin layer to a surface. Such materials include, but are not limited to, paints, topcoats, varnishes, sealers, stains, washcoats, basecoats, enamels, inks, and temporary protective coatings. Aerosol spray paints used for touch-up and repair are not considered coatings under rule 3745-21-15 of the Administrative Code.

(12) "Coating operation" means those activities in which a coating is applied to a substrate and is subsequently air-dried, cured in an oven, or cured by radiation.

(13) "Compliant coating" means a finishing material or strippable spray booth material that meets the VOC content limits specified in paragraphs (D) and (E) of rule 3745-21-15 of the Administrative Code.

(14) "Continuous coater" means a finishing system that continuously applies finishing materials onto furniture parts moving along a conveyor. Finishing materials that are not transferred to the part are recycled to a reservoir. Several types of application methods can be used with a continuous coater including spraying, curtain coating, roll coating, dip coating, and flow coating.

(15) "Continuous compliance" means that the affected source is meeting the emission limitations and other requirements of the rule at all times and is fulfilling all monitoring and recordkeeping provisions of the rule in order to demonstrate compliance.

(16) "Continuous recorder" means a data recording device that either records an instantaneous data value at least once every fifteen minutes or records fifteen-minute or more frequent block average values.

(17) "Control device" means any equipment that reduces the quantity of an air pollutant that is emitted to the air. The device may destroy or secure the pollutant for subsequent recovery and includes, but is not limited to, thermal oxidizers, catalytic oxidizers, regenerative carbon adsorbers, and concentrators.

(18) "Control device efficiency" means the ratio of the pollutant released by a control device and the pollutant introduced to the control device.



(19) "Conventional air spray" means a spray coating method in which the coating is atomized by mixing it with compressed air and applied at an air pressure greater than ten pounds per square inch (gauge) at the point of atomization. Airless and air assisted airless spray technologies are not conventional air spray because the coating is not atomized by mixing it with compressed air. Electrostatic spray technology is also not considered conventional air spray because an electrostatic charge is employed to attract the coating to the workpiece.

(20) [Reserved.]

(21) "Dip coater" means a finishing operation that applies finishing materials by means of dip coating onto furniture parts.

(22) "Emission" means the release or discharge, whether directly or indirectly, of VOC into the ambient air.

(23) "Enamel" means a coat of colored material, usually opaque, that is applied as a protective topcoat over a basecoat, primer, or previously applied enamel coat. In some cases, another finishing material may be applied as a topcoat over the enamel. Under rule 3745-21-15 of the Administrative Code, an enamel is a topcoat.

(24) "Finishing material" means a coating used in the wood furniture manufacturing industry. Such materials include, but are not limited to, stains, basecoats, washcoats, enamels, sealers, and topcoats except that adhesives and nonpermanent final finish materials are not included under rule 3745-21-15 of the Administrative Code.

(25) "Finishing operation" means those operations in which a finishing material is applied to a substrate and is subsequently air-dried, cured in an oven, or cured by radiation.

(26) "Flow indicator" means a device that indicates whether gas flow is present in a vent stream.

(27) "Gluing operation" means those operations in which adhesives are used to join components, for example, to apply a laminate to a wood substrate or foam to fabric.



(28) "Monitoring device" means the total equipment used to measure and record (if applicable) process parameters.

(29) "Natural draft opening" means any opening in a room, building, or total enclosure that remains open during operation of the finishing operation and that is not connected to a duct in which a fan is installed. The rate and direction of the natural draft across such an opening is a consequence of the difference in pressures on either side of the wall or barrier containing the opening.

(30) "Noncompliant coating" means a finishing material or strippable spray booth material that has a VOC content greater than the VOC content limit specified in paragraphs (D) and (E) of rule 3745-21-15 of the Administrative Code.

(31) "Nonpermanent final finish material" means a material such as a wax, polish, nonoxidizing oil, or similar substance that must be periodically reapplied to a surface over its lifetime to maintain or restore the reapplied material's intended effect.

(32) "Operating parameter value" means a minimum or maximum value established for a control device, capture system, or process parameter that, if achieved by itself or in combination with one or more other operating parameter values, determines that an owner or operator has complied with an applicable emission limit.

(33) "Organic monitoring device" means a device used to indicate the concentration level of organic compounds based on a detection principle such as infrared, photoionization, or thermal conductivity.

(34) "Overall control efficiency" means the efficiency of a VOC emission control system, calculated as the product of the capture system and control device efficiencies, expressed as a percentage.

(35) "Permanent total enclosure" or "PTE" means a permanently installed enclosure that meets the criteria for a PTE in accordance with USEPA method 204 specified within paragraph (C)(3)(c) of rule 3745-21-10 of the Administrative Code, and that directs all the exhaust gases from the enclosure to a control device.

(36) "Permit" means a permit issued by the director pursuant to Chapter 3745-31 or 3745-77 of the



Administrative Code.

(37) "Responsible official" has the same meaning as in rule 3745-77-01 of the Administrative Code.

(38) "Sealer" means a finishing material used to seal the pores of a wood substrate before additional coats of finishing material are applied. Special purpose finishing materials that are used in some finishing systems to optimize aesthetics are not sealers.

(39) "Solids" means the nonvolatile portion of the coating that makes up the dry film.

(40) "Solvent" means a liquid used in a coating to dissolve or disperse constituents or to adjust viscosity. A solvent evaporates during drying and does not become a part of the dried film.

(41) "Stain" means any color coat having a solids content by weight of no more than 8.0 per cent that is applied in single or multiple coats directly to the substrate. A stain includes, but is not limited to, nongrain raising stains, equalizer stains, prestains, sap stains, body stains, no-wipe stains, penetrating stains, and toners.

(42) "Strippable spray booth material" means a coating that meets the following:

(a) Is applied to a spray booth wall to provide a protective film to receive over spray during finishing operations.

(b) Is subsequently peeled off and disposed.

(c) Reduces or eliminates the need to use VOC solvents to clean spray booth walls due to achieving paragraphs (X)(42)(a) and (X)(42)(b) of this rule.

(43) "Subject to this rule" means the facility has met the applicability criteria of paragraph (A) of rule 3745-21-15 of the Administrative Code.

(44) "Substrate" means the surface onto which a coating is applied (or into which a coating is impregnated).



(45) "Temperature monitoring device" means a unit of equipment used to monitor temperature and having a minimum accuracy of plus or minus one per cent of the temperature being monitored expressed in degrees Celsius or plus or minus 0.5 degree Celsius, whichever is greater.

(46) "Thinner" means a volatile liquid that is used to dilute coatings (to reduce viscosity, color strength, and solids, or to modify drying conditions).

(47) "Topcoat" means the last film-building finishing material that is applied in a finishing system. Nonpermanent final finishes are not topcoats.

(48) "Touchup and repair" means the application of finishing materials to cover minor finishing imperfections.

(49) "VOC emission control system" means the combination of capture and control devices used to reduce VOC emissions to the atmosphere.

(50) "VOC solvent" means a VOC liquid used for dissolving or dispersing constituents in a coating, adjusting the viscosity of a coating, or cleaning equipment. When used in a coating, the VOC solvent evaporates during drying and does not become a part of the dried film.

(51) "Washcoat" means a transparent special purpose finishing material having a solids content by weight of 12.0 per cent by weight or less. Washcoats are applied over initial stains to protect, to control color, and to stiffen the wood fibers in order to aid sanding.

(52) "Washoff operations" means those operations in which VOC solvent is used to remove coating from wood furniture or a wood furniture component.

(53) "Wood furniture" means any product made of wood, a wood product such as rattan or wicker, or an engineered wood product such as particleboard that is manufactured under any of the following standard industrial classification (SIC) codes: 2434, 2511, 2512, 2517, 2519, 2521, 2531, 2541, 2599, or 5712.



(54) "Wood furniture component" means any part that is used in the manufacture of wood furniture. Examples include, but are not limited to, drawer sides, cabinet doors, seat cushions, and laminated tops. However, foam seat cushions manufactured and fabricated at a facility that does not engage in any other wood furniture or wood furniture component manufacturing operation are excluded from this definition.

(55) "Wood furniture manufacturing operations" means the finishing, gluing, cleaning, and washoff operations associated with the production of wood furniture or wood furniture components.

(Y) As used in rule 3745-21-16 of the Administrative Code:

Except as otherwise provided in this paragraph, the definitions in rule 3745-15-01 of the Administrative Code and paragraph (B) of this rule apply to rule 3745-21-16 of the Administrative Code (pertaining to control of volatile organic compound emissions from industrial wastewater).

(1) "Affected industrial category" means any of the following industrial categories:

(a) Organic chemicals, plastics, and synthetic fibers manufacturing industry under standard industrial classification (SIC) codes 2821, 2823, 2824, 2865, and 2869.

(b) Pesticides manufacturing industry under SIC code 2879.

(c) Pharmaceutical manufacturing industry under SIC codes 2833, 2834, and 2836.

(d) Hazardous waste treatment, storage, and disposal facilities industry under SIC codes 4952, 4953, and 4959.

(2) "Affected residual" means a residual that is removed from an affected VOC wastewater stream.

(3) "Affected VOC" means VOC with a Henry's Law Constant greater than or equal to 1.8×10^{-6} atmosphere-cubic meter/mole ($\text{atm} \cdot \text{m}^3 / \text{mole}$) (0.1 y/x) at twenty-five degrees Celsius.

(4) "Affected VOC wastewater stream" means a process wastewater stream from a process unit at an



affected industrial category with either an annual average concentration of affected VOC greater than or equal to ten thousand parts per million by weight (ppmw) or an annual average concentration of affected VOC greater than or equal to one thousand ppmw and an annual average flow rate greater than or equal to 10.0 liters per minute (2.64 gallons per minute), as determined in accordance with paragraph (I) of rule 3745-21-16 of the Administrative Code (relating to "Determination of wastewater characteristics"). The following are excluded from this definition:

- (a) Maintenance wastewaters.
 - (b) Stormwater from segregated sewers.
 - (c) Water from fire-fighting and deluge systems, including testing of such systems.
 - (d) Spills.
 - (e) Water from safety showers.
 - (f) Samples of a size not greater than reasonably necessary for the method of analysis that is used.
 - (g) Equipment leaks.
 - (h) Wastewater drips from procedures such as disconnecting hoses after cleaning lines.
 - (i) Noncontact cooling water.
- (5) "Annual average concentration" means the flow-weighted annual average concentration, as determined according to the procedures specified 40 CFR 60.782(b).
- (6) "Annual average flow rate" means the annual average flow rate, as determined according to the procedures specified in paragraph (I) of rule 3745-21-16 of the Administrative Code.
- (7) "Closed biological treatment process" means a tank or surface impoundment where biological treatment occurs and VOC emissions from the treatment process are routed either to a control device



by means of a closed vent system or to a fuel gas system by means of hard-piping. The tank or surface impoundment has a fixed roof, as defined in this rule, or a floating flexible membrane cover that meets the requirements specified in paragraph (I) of rule 3745-21-16 of the Administrative Code.

(8) "Closed-vent system" means a system that is not open to the atmosphere and is composed of hard-piping, ductwork, connections, and, if necessary, flow inducing devices that transport gas or vapor from an emission point to a control device.

(9) "Combustion device" means an individual unit of equipment, such as a flare, incinerator, process heater, or boiler, used for the combustion of volatile organic compound emissions.

(10) "Continuous seal" means a seal that forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the floating roof. A continuous seal may be a vapor-mounted, liquid-mounted, or metallic shoe seal. A continuous seal may be constructed of fastened segments so as to form a continuous seal.

(11) "Continuously monitor and record" means to measure data values of a parameter at least once every fifteen minutes and to record either each measured data value or block average values for a fifteen-minute or shorter time period. A block average value is the average of all measured data values during the time period; or if data values are measured more frequently than once per minute, the average of measured data values taken at least once per minute during the time period.

(12) "Control device means" any combustion device, recovery device for vapor vents, or recapture device. Such equipment includes, but is not limited to, absorbers, carbon adsorbers, condensers, incinerators, flares, boilers, and process heaters. For a steam stripper, a primary condenser is not considered a control device.

(13) "Cover" means a device or system which is placed on or over a waste management unit containing wastewater or residuals so that the entire surface area is enclosed to minimize air VOC emissions. A cover may have openings necessary for operation, inspection, and maintenance of the waste management unit such as access hatches, sampling ports, and gauge wells provided that each opening is closed when not in use. Examples of covers include a fixed roof installed on a wastewater



tank, a lid installed on a container, and an air-supported enclosure installed over a waste management unit.

(14) "Ductwork" means a conveyance system such as those commonly used for heating and ventilation systems. Ductwork is often made of sheet metal and often has sections connected by screws or crimping. Hard-piping is not ductwork.

(15) "Enhanced biological treatment process" means an aerated, thoroughly mixed treatment unit that contains biomass suspended in water followed by a clarifier that removes biomass from the treated water and recycles recovered biomass to the aeration unit. The mixed liquor volatile suspended solids (biomass) is greater than one kilogram per cubic meter throughout each aeration unit. The biomass is suspended and aerated in the water of the aeration unit by either submerged air flow or mechanical agitation. A thoroughly mixed treatment unit is a unit that is designed and operated to approach or achieve uniform biomass distribution and organic compound concentration throughout the aeration unit by quickly dispersing the recycled biomass and the wastewater entering the unit.

(16) "External floating roof" means a pontoon-type or double-deck-type cover that rests on the liquid surface in a storage vessel or waste management unit with no fixed roof.

(17) "Fixed roof" means a cover that is mounted on a waste management unit or storage vessel in a stationary manner and that does not move with fluctuations in liquid level.

(18) "Floating roof" means a cover consisting of a double deck, pontoon single deck, internal floating cover or covered floating roof, which rests upon and is supported by the liquid being contained, and is equipped with a closure seal or seals to close the space between the roof edge and waste management unit.

(19) "Fbio" means site-specific fraction of VOC biodegraded, unitless.

(20) "Fe" means fraction emitted value, unitless.

(21) "Fm" means compound-specific fraction measured factor, unitless.



(22) "Fr" means fraction removed value for VOC, unitless.

(23) "Fuel gas system" means the off-site and on-site piping and control system that gathers gaseous stream generated by on-site operations, may blend them with other sources of gas, and transports the gaseous stream for use as fuel gas in combustion devices or in in-process combustion equipment such as furnaces and gas turbines, either singly or in combination.

(24) "Hard-piping" means pipe or tubing that is manufactured and properly installed using good engineering judgment and standards, such as ANSI B31-3.

(25) "Incinerator" means an enclosed combustion device that is used for destroying organic compounds. Auxiliary fuel may be used to heat waste gas to combustion temperatures. Any energy recovery section present is not physically formed into one manufactured or assembled unit with the combustion section; rather, the energy recovery section is a separate section following the combustion section and the two are joined by ducts or connections carrying flue gas. The above energy recovery section limitation does not apply to an energy recovery section used solely to preheat the incoming vent stream or combustion air.

(26) "Individual drain system" means the stationary system used to convey wastewater streams or residuals to a waste management unit or to discharge or disposal. The term includes hard-piping, all process drains and junction boxes, together with their associated sewer lines and other junction boxes, manholes, sumps, and lift stations, conveying wastewater streams or residuals. A segregated storm water sewer system, which is a drain and collection system designed and operated for the sole purpose of collecting rainfall-runoff at a facility, and which is segregated from all other individual drain systems, is excluded from this definition.

(27) "Internal floating roof" means a cover that rests or floats on the liquid surface (but not necessarily in complete contact with the liquid surface) inside a waste management unit that has a fixed roof.

(28) "Junction box" means a manhole or a lift station, or access point to a wastewater sewer line.

(29) "Liquid-mounted seal" means a foam or liquid-filled seal mounted in contact with the liquid



between the wall of the storage vessel or waste management unit and the floating roof. The seal is mounted continuously around the circumference of the vessel or unit.

(30) "Maintenance wastewater" means wastewater generated by the draining of process fluid from components in the process unit into an individual drain system prior to or during maintenance activities. Maintenance wastewater can be generated during planned and unplanned shutdowns and during periods not associated with a shutdown. Any generation of wastewater that is routine or is generated by designed manufacturing processes is not maintenance wastewater. Examples of activities that can generate maintenance wastewaters include descaling heat exchanger tubing bundles, cleaning of distillation column traps, draining of low legs and high point bleeds, draining of pumps into an individual drain system and draining of portions of the process unit for repair.

(31) "Maximum true vapor pressure" means the equilibrium partial pressure exerted by the organics in the stored or transferred liquid at the temperature equal to the highest calendar-month average of the liquid storage or transfer temperature for liquids stored or transferred above or below the ambient temperature or at the local maximum monthly average temperature as reported by the national weather service for liquids stored or transferred at the ambient temperature, as determined by any of the following:

- (a) In accordance with methods described in API MPMS Chapter 19.2 "Evaporative loss from external floating-roof tanks."
- (b) As obtained from standard reference texts.
- (c) As determined by ASTM D2879.
- (d) Any other method approved by the director.

(32) "Mechanical shoe seal" means metal sheets that are held vertically against the wall of the storage vessel by springs, weighted levers, or other mechanisms and connected to the floating roof by braces or other means. A flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof.



(33) "Oil-water separator" or "organic-water separator" means a waste management unit, used to separate oil or organics from water. An oil-water or organic-water separator consists of not only the separation unit but also the forebay and other separator basins, skimmers, weirs, grit chambers, sludge hoppers, and bar screens that are located directly after the individual drain system and prior to additional treatment units such as an air flotation unit, clarifier, or biological treatment unit.

Examples of an oil-water or organic-water separator include, but are not limited to, an American Petroleum Institute separator, parallel-plate interceptor, and corrugated-plate interceptor with the associated ancillary equipment.

(34) "Open biological treatment process" means a biological treatment process that is not a closed biological treatment process as defined in this rule.

(35) "Plant" means the same as facility.

(36) "Point of generation" means the location where process wastewater exits a process unit.

(37) "Point of determination" means each point where process wastewater exits a process unit.

(38) "Pressure relief valve" means a valve used only to release an unplanned, non-routine discharge. A relief valve discharge can result from an operator error, a malfunction such as a power failure or equipment failure, or other unexpected cause that requires immediate venting of gas from process equipment in order to avoid safety hazards or equipment damage.

(39) "Process drain" means any opening (including a covered or controlled opening) that is installed or used to receive or convey wastewater into the wastewater system.

(40) "Process unit" means the smallest set of process equipment that can operate independently and includes all operations necessary to achieve the process objective.

(41) "Process wastewater" means wastewater which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, by-product, or waste product. Examples are product tank drawdown or feed tank drawdown; water formed during a chemical reaction or used as a reactant; water used to wash



impurities from organic products or reactants; water used to cool or quench organic vapor streams through direct contact; and condensed steam from jet ejector systems pulling vacuum on vessels containing organics.

(42) "RCRA" means the Resource Conservation and Recovery Act.

(43) "Recapture device" means an individual unit of equipment capable of and used for the purpose of recovering chemicals, but not normally for use, reuse, or sale. For example, a recapture device may recover chemicals primarily for disposal. Recapture devices include, but are not limited to, absorbers, carbon adsorbers, and condensers.

(44) "Recovery device" means an individual unit of equipment capable of and normally used for the purpose of recovering chemicals for fuel value (i.e., net positive heating value), use, reuse or for sale for fuel value, use, or reuse. Examples of equipment that may be recovery devices include absorbers, carbon adsorbers, condensers, oil-water separators or organic-water separators, or organic removal devices such as decanters, strippers, or thin-film evaporation units. For purposes of the monitoring, recordkeeping, and reporting requirements of this subpart, recapture devices are considered recovery devices.

(45) "Residual" means any liquid or solid material containing VOC that is removed from a wastewater stream by a waste management unit or treatment process that does not destroy organic compounds (nondestructive unit). Examples of residuals from nondestructive wastewater management units are: the organic layer and bottom residue removed by a decanter or organic-water separator and the overheads from a steam stripper or air stripper. Examples of materials which are not residuals are: silt; mud; leaves; bottoms from a steam stripper or air stripper; and sludges, ash, or other materials removed from wastewater being treated by destructive devices such as biological treatment units and incinerators.

(46) "Sewer line" means a lateral, trunk line, branch line, or other conduit including, but not limited to, grates and trenches, used to convey wastewater streams or residuals to a downstream waste management unit.

(47) "Single-seal system" means a floating roof having one continuous seal that completely covers



the space between the wall of the storage vessel and the edge of the floating roof. This seal may be a vapor-mounted, liquid-mounted, or metallic shoe seal.

(48) "Steam jet ejector" means a steam nozzle which discharges a high-velocity jet across a suction chamber that is connected to the equipment to be evacuated.

(49) "Steam stripper" means a column (including associated stripper feed tanks, condensers, or heat exchangers) used to remove compounds from wastewater.

(50) "Surface impoundment" means a waste management unit which is a natural topographic depression, manmade excavation, or diked area formed primarily of earthen materials (although it may be lined with manmade materials), which is designed to hold an accumulation of liquid wastes or waste containing free liquids. A surface impoundment is used for the purpose of treating, storing, or disposing of wastewater or residuals, and is not an injection well. Examples of surface impoundments are equalization, settling, and aeration pits, ponds, and lagoons.

(51) "Tank drawdown" means any material or mixture of materials discharged from a product tank, feed tank, or intermediate tank for the purpose of removing water or other contaminants from the tank.

(52) "Temperature monitoring device" means a unit of equipment used to monitor temperature and having a minimum accuracy of (a) plus or minus one per cent of the temperature being monitored expressed in degrees Celsius or (b) plus or minus 0.5 degree Celsius, whichever number is greater (i.e., has the highest absolute value).

(53) "Treatment process" means a specific technique that removes or destroys the organics in a wastewater or residual stream such as a steam stripping unit (steam stripper), thin-film evaporation unit, waste incinerator, biological treatment unit, or any other process applied to wastewater streams or residuals to comply with paragraph (D)(8) or (E) of rule 3745-21-16 of the Administrative Code. Most treatment processes are conducted in tanks. Treatment processes are a subset of waste management units.

(54) "Vapor-mounted seal" means a continuous seal that completely covers the annular space



between the wall of the storage vessel or waste management unit and the edge of the floating roof and is mounted such that there is a vapor space between the stored liquid and the bottom of the seal.

(55) "Waste management unit" means the equipment, structure, or device used to convey, store, treat, or dispose of wastewater streams or residuals. Examples of waste management units include: wastewater tanks, surface impoundments, individual drain systems, and biological wastewater treatment units. Examples of equipment that may be waste management units include containers, air flotation units, oil-water separators or organic-water separators, or organic removal devices such as decanters, strippers, or thin-film evaporation units. If such equipment is used for recovery then the equipment is part of a process unit and is not a waste management unit.

(56) "Wastewater stream" means a stream that contains process wastewater.

(57) "Wastewater tank" means a stationary waste management unit that is designed to contain an accumulation of wastewater or residuals and is constructed primarily of non-earthen materials (e.g., wood, concrete, steel, plastic) which provide structural support. Wastewater tanks used for flow equalization are included in this definition.

(58) "Water seal controls" means a seal pot, p-leg trap, or other type of trap filled with water (e.g., flooded sewers that maintain water levels adequate to prevent air flow through the system) that creates a water barrier between the water level of the seal and the atmosphere. The water level of the seal must be maintained in the vertical leg of a drain in order to be considered a water seal.

(59) "Wet weather retention basin" means an impoundment or tank that is used to store rainfall runoff that would exceed the capacity of the wastewater treatment system until the runoff can be returned to the wastewater treatment system or, if the water meets the applicable discharge limits, discharged without treatment. The wet weather retention basins may also be used to store wastewater during periods when the wastewater treatment system is shut down for maintenance or emergencies.

(Z) As used in rule 3745-21-17 of the Administrative Code:

Except as otherwise provided in this paragraph, the definitions in rule 3745-15-01 of the Administrative Code and paragraph (B) of this rule apply to rule 3745-21-17 of the Administrative



Code (pertaining to portable fuel containers).

(1) "Fuel" means all gasoline, gasoline-alcohol mixtures or blends, diesel, kerosene or petroleum derivatives, having a true vapor pressure within the range of 1.5 to eleven pounds per square in absolute (psia) (10.3 to 75.6) for use in internal combustion engines or aircraft.

(2) "Manufacturer" means any person who imports, manufactures, assembles, packages, repackages, or re-labels a portable fuel container or spout or both portable fuel container and spout.

(3) "Nominal capacity" means the volume indicated by the manufacturer that represents the maximum recommended filling level.

(4) "Outboard engine" means a spark-ignition marine engine that, when properly mounted on a marine water-craft in the position to operate, houses the engine and drive unit external to the hull of the marine water-craft.

(5) "Person" means any individual, public or private corporation, political subdivision, government agency, department or bureau of the State, municipality, industry, co-partnership, association, firm, estate or any legal entity whatsoever.

(6) "Portable fuel container" means any container or vessel with a nominal capacity of ten gallons or less intended for reuse that is designed, or used, sold, advertised or offered for sale primarily for receiving, transporting, storing, and dispensing fuel or kerosene. Portable fuel containers do not include containers permanently embossed, or affixed with a permanent durable label with wording indicating such containers are solely intended for use with non-fuel or non-kerosene products.

(7) "Spout" means any device that can be firmly attached to a portable fuel container for conducting pouring or fueling through which the contents of a portable fuel container can be dispensed.

(8) "Target fuel tank" means any receptacle that receives fuel from a portable fuel container.

(AA) As used in rule 3745-21-19 of the Administrative Code:



- (1) "Ablative coating" means a coating that chars when exposed to open flame or extreme temperatures, as would occur during the failure of an engine casing or during aerodynamic heating. The ablative char surface serves as an insulative barrier, protecting adjacent components from the heat or open flame.
- (2) "Adhesion promoter" means a very thin coating applied to a substrate to promote wetting and form a chemical bond with the subsequently applied material.
- (3) "Adhesive bonding primer" means a primer applied in a thin film to aerospace components for the purpose of corrosion inhibition and increased adhesive bond strength by attachment. There are two categories of adhesive bonding primers: primers with a design cure at two hundred fifty degrees Fahrenheit or below and primers with a design cure above two hundred fifty degrees Fahrenheit.
- (4) "Adhesive primer" means a coating that conforms to one of the following:
 - (a) Inhibits corrosion and serves as a primer applied to bare metal surfaces or prior to adhesive application.
 - (b) Is applied to surfaces that can be expected to contain fuel, however, fuel tank coatings are excluded from this definition.
- (5) "Aerosol coating" means a coating expelled from a handheld, pressurized, non-refillable container in a finely divided spray when a valve on the container is depressed.
- (6) "Aerospace manufacturing or rework facility" means any facility that produces, reworks, or repairs in any amount any commercial, civil, or military aerospace vehicle or component.
- (7) "Aerospace vehicle or component" means any fabricated part, processed part, assembly of parts, or completed unit, with the exception of electronic components, of any aircraft including but not limited to airplanes, helicopters, missiles, rockets, and space vehicles.
- (8) "Aircraft fluid systems" means those systems that handle hydraulic fluids, fuel, cooling fluids, or oils.



(9) "Aircraft transparency" means the aircraft windshield, canopy, passenger windows, lenses and other components which are constructed of transparent materials.

(10) "Antichafe coating" means a coating applied to areas of moving aerospace components that may rub during normal operations or installation.

(11) "Antique aerospace vehicle or component" means an aircraft or component thereof that was built at least thirty years ago. An antique aerospace vehicle would not routinely be in commercial or military service in the capacity for which the vehicle was designed.

(12) "Aqueous cleaning solvent" means a solvent in which water is at least eighty per cent of the solvent as applied. Detergents, surfactants, and bioenzyme mixtures and nutrients may be combined with the water along with a variety of additives, such as organic solvents (e.g., high boiling point alcohols), builders, saponifiers, inhibitors, emulsifiers, pH buffers, and antifoaming agents. Aqueous solutions must have a flash point greater than ninety-three degrees Celsius (two hundred degrees Fahrenheit) (as reported by the manufacturer), and the solution must be miscible with water.

(13) "Bearing coating" means a coating applied to an antifriction bearing, a bearing housing, or the area adjacent to such a bearing in order to facilitate bearing function or to protect base material from excessive wear but is not classified as a bearing coating if the material can also be classified as a dry lubricative material or a solid film lubricant.

(14) "Bonding maskant" means a temporary coating used to protect selected areas of aerospace parts from strong acid or alkaline solutions during processing for bonding.

(15) "Caulking and smoothing compounds" means semi-solid materials which are applied by hand application methods and are used to aerodynamically smooth exterior vehicle surfaces or fill cavities such as bolt hole accesses, but does not include materials that may also be classified as a sealant.

(16) "Chemical agent-resistant coating" or "CARC" means an exterior topcoat designed to withstand exposure to chemical warfare agents or the decontaminants used on these agents.



(17) "Chemical milling maskant" means a coating that is applied directly to aluminum components to protect surface areas when chemical milling the component with a Type I or Type II etchant. Type I chemical milling maskants are used with a Type I etchant and Type II chemical milling maskants are used with a Type II etchant. This definition does not include bonding maskants, critical use, line sealer maskants, and seal coat maskants. Additionally, maskants that must be used with a combination of Type I or II etchants and any of the above types of maskants (i.e., bonding, critical use and line sealer, and seal coat) are also exempt from this subpart. (See also Type I and Type II etchant definitions.)

(18) "Cleaning operation" means collectively spray gun, hand wipe, and flush cleaning operations.

(19) "Cleaning solvent" means a liquid material used for hand wipe, spray gun, or flush cleaning. This definition does not include solutions that contain VOC at concentrations less than 0.1 per cent by weight for carcinogens and less than 1.0 per cent by weight for non-carcinogens, as determined from manufacturer's representations.

(20) "Clear coating" means a transparent coating usually applied over a colored opaque coating, metallic substrate, or placard to give improved gloss and protection to the color coat. A clearcoat refers to any transparent coating without regard to substrate.

(21) "Coating" means a material that is applied to the surface of an aerospace vehicle or component to form a decorative or functional solid film, or the solid film itself.

(22) "Coating line" means an operation consisting of a series of one or more coating applicators and any associated flash-off areas, drying areas and ovens wherein a coating is applied, dried, or cured. The coating line does not have to include an oven, or flash-off area, or drying area in order to be included within this definition.

(23) "Coating operation" means the use of a spray booth, tank, or other enclosure or any area, such as a hangar, for the application of a single type of coating (e.g., primer). The use of the same spray booth, tank, or other enclosure or area for the application of another type of coating (e.g., topcoat) constitutes a separate coating operation for which compliance determinations are performed separately.



(24) "Commercial exterior aerodynamic structure primer" means a primer used on aerodynamic components and structures that protrude from the fuselage, such as wings and attached components, control surfaces, horizontal stabilizers, vertical fins, wing-to-body fairings, antennae, and landing gear and doors, for the purpose of extended corrosion protection and enhanced adhesion.

(25) "Commercial interior adhesive" means materials used in the bonding of passenger cabin interior components. These components must meet the FAA fire worthiness requirements.

(26) "Compatible epoxy primer" means a primer that is compatible with the filled elastomeric coating and is epoxy based. This compatible substrate primer is an epoxy-polyamide primer used to promote adhesion of elastomeric coatings such as impact-resistant coatings.

(27) "Compatible substrate primer" means a primer that is either a compatible epoxy primer or an adhesive primer.

(28) "Confined space" means a space that conforms to the following:

(a) Is large enough and so configured that an employee can bodily enter and perform assigned work.

(b) Has limited or restricted means for entry or exit (for example, fuel tanks, fuel vessels, and other spaces that have limited means of entry).

(c) Is not suitable for continuous employee occupancy.

(29) "Corrosion prevention compound" means a coating that provides corrosion protection by displacing water and penetrating mating surfaces, forming a protective barrier between the metal surface and moisture. Coatings containing oils or waxes are excluded from this definition.

(30) "Critical use and line sealer maskant" means a temporary coating, not covered under other maskant categories, used to protect selected areas of aerospace parts from strong acid or alkaline solutions such as those used in anodizing, plating, chemical milling and processing of magnesium, titanium, or high strength steel, high precision aluminum chemical milling of deep cuts, and



aluminum chemical milling of complex shapes. Materials used for repairs or to bridge gaps left by scribing operations (i.e., line sealer) are also included in this category.

(31) "Cryogenic flexible primer" means a primer designed to provide corrosion resistance, flexibility, and adhesion of subsequent coating systems when exposed to loads up to and surpassing the yield point of the substrate at cryogenic temperatures (minus two hundred seventy-five degrees Fahrenheit and below).

(32) "Cryoprotective coating" means a coating that insulates cryogenic or subcooled surfaces to limit propellant boil-off, maintain structural integrity of metallic structures during ascent or re-entry, and prevent ice formation.

(33) "Cyanoacrylate adhesive" means a fast-setting, single component adhesive that cures at room temperature. Cyanoacrylate adhesive is also known by the tradename "super glue."

(34) "DOD" means the United States department of defense, including military departments and defense agencies, acting through either the secretary of defense or the designee of the secretary.

(35) "Dry lubricative material" means a coating consisting of lauric acid, cetyl alcohol, waxes, or other non-cross linked or resin-bound materials which act as a dry lubricant.

(36) "Electric or radiation-effect coating" means a coating or coating system engineered to interact, through absorption or reflection, with specific regions of the electromagnetic energy spectrum, such as the ultraviolet, visible, infrared, or microwave regions. Uses include, but are not limited to, lightning strike protection, electromagnetic pulse protection, and radar avoidance. Coatings that have been designated "classified" by the department of defense are exempt.

(37) "Electrostatic discharge and electromagnetic interference coating" or "EMI coating" means a coating applied to space vehicles, missiles, aircraft radomes, and helicopter blades to disperse static energy or reduce electromagnetic interference.

(38) "Electrostatic spray" means a method of applying a spray coating in which an electrical charge is applied to the coating and the substrate is grounded. The coating is attracted to the substrate by the



electrostatic potential between the coating and the substrate.

(39) "Elevated temperature Skydrol-resistant commercial primer" means a primer applied primarily to commercial aircraft (or commercial aircraft adapted for military use) that must withstand immersion in phosphate-ester hydraulic fluid (Skydrol 500b or equivalent) at the elevated temperature of one hundred fifty degrees Fahrenheit for one thousand hours.

(40) "Epoxy polyamide topcoat" means a coating used where harder films are required or in some areas where engraving is accomplished in camouflage colors.

(41) "Exterior primer" means the first layer and any subsequent layers of identically formulated coating applied to the exterior surface of an aerospace vehicle or component where the component is used on the exterior of the aerospace vehicle. Exterior primers are typically used for corrosion prevention, protection from the environment, functional fluid resistance, and adhesion of subsequent exterior topcoats. Coatings that are defined as specialty coatings are not included under this definition.

(42) "FAA" means the federal aviation administration, department of transportation, United States.

(43) "Fire-resistant (interior) coating" means the following:

(a) For civilian aircraft, a coating used on passenger cabin interior parts that are subject to the FAA fireworthiness requirements;

(b) For military aircraft, a coating used on parts that are subject to the flammability requirements of MIL-STD-1330C(SH) and MIL-A-87721.

(c) For space applications, a coating used on parts that are subject to the flammability requirements of SE-R-0006 and SSP 30233F.

(44) "Flexible primer" means a primer that meets flexibility requirements such as those needed for adhesive bond primed fastener heads or on surfaces expected to contain fuel. The flexible coating is required because it provides a compatible, flexible substrate over bonded sheet rubber and rubber-



type coatings as well as a flexible bridge between the fasteners, skin, and skin-to-skin joints on outer aircraft skins. This flexible bridge allows more topcoat flexibility around fasteners and decreases the chance of the topcoat cracking around the fasteners. The result is better corrosion resistance.

(45) "Flight test coating" means a coating applied to aircraft other than missiles or single-use aircraft prior to flight testing to protect the aircraft from corrosion and to provide required marking during flight test evaluation.

(46) "Fuel tank adhesive" means an adhesive used to bond components exposed to fuel and must be compatible with fuel tank coatings.

(47) "Fuel tank coating" means a coating applied to fuel tank components for the purpose of corrosion or bacterial growth inhibition and to assure sealant adhesion in extreme environmental conditions.

(48) "General aviation" or "GA" means that segment of civil aviation that encompasses all facets of aviation except air carriers, commuters, and military. General aviation includes charter and corporate-executive transportation, instruction, rental, aerial application, aerial observation, business, pleasure, and other special uses.

(49) "General aviation rework facility" means any aerospace facility with the majority of revenues resulting from the reconstruction, repair, maintenance, repainting, conversion, or alteration of general aviation aerospace vehicles or components.

(50) "Hand wipe cleaning operation" means removing contaminants such as dirt, grease, oil, and coatings from an aerospace vehicle or component by physically rubbing the contaminant with a material such as a rag, paper, or cotton swab that has been moistened with a cleaning solvent.

(51) "High temperature coating" means a coating designed to withstand temperatures of more than three hundred fifty degrees Fahrenheit.

(52) "High volume low pressure spray equipment" or "HVLP spray equipment" means spray equipment that is used to apply coating by means of a spray gun that operates at 10.0 pounds per



square inch gauge of atomizing air pressure or less at the air cap.

(53) "Insulation covering" means material that is applied to foam insulation to protect the insulation from mechanical or environmental damage.

(54) "Intermediate release coating" means a thin coating applied beneath topcoats to assist in removing the topcoat in depainting operations and generally to allow the use of less hazardous depainting methods.

(55) "Lacquer" means a clear or pigmented coating formulated with a nitrocellulose or synthetic resin to dry by evaporation without a chemical reaction. Lacquers are resoluble in the original solvent.

(56) "Large commercial aircraft" means an aircraft of more than one hundred ten thousand pounds, maximum certified take-off weight manufactured for non-military use.

(57) "Leak" means any visible leakage, including misting and clouding.

(58) "Limited access space" means internal surfaces or passages of an aerospace vehicle or component that cannot be reached without the aid of an airbrush or a spray gun extension for the application of coatings.

(59) "Metalized epoxy coating" means a coating that contains relatively large quantities of metallic pigmentation for appearance or added protection.

(60) "Mold release" means a coating applied to a mold surface to prevent the molded piece from sticking to the mold during removal.

(61) "Nonstructural adhesive" means an adhesive that bonds nonload bearing aerospace components in noncritical applications and is not covered in any other specialty adhesive categories.

(62) "Operating parameter value" means a minimum or maximum value established for a control equipment or process parameter that, if achieved by itself or in combination with one or more other



operating parameter values, determines that an owner or operator has complied with an applicable emission limitation.

(63) "Optical anti-reflection coating" means a coating with a low reflectance in the infrared and visible wavelength ranges that is used for antireflection on or near optical and laser hardware.

(64) "Part marking coating" means coatings or inks used to make identifying markings on materials, components, or assemblies. These markings may be either permanent or temporary.

(65) "Pretreatment coating" means an organic coating that contains at least 0.5 per cent acids by weight and is applied directly to metal surfaces to provide surface etching, corrosion resistance, adhesion, and ease of stripping.

(66) "Primer" means the first layer and any subsequent layers of identically formulated coating applied to the surface of an aerospace vehicle or component. Primers are typically used for corrosion prevention, protection from the environment, functional fluid resistance, and adhesion of subsequent coatings. Primers that are defined as specialty coatings are not included under this definition.

(67) "Radome" means the nonmetallic protective housing for electromagnetic transmitters and receivers (e.g., radar, electronic countermeasures, etc.).

(68) "Rain erosion-resistant coating" means a coating or coating system used to protect the leading edges of parts such as flaps, stabilizers, radomes, engine inlet nacelles, etc. against erosion caused by rain impact during flight.

(69) "Research and development operation" means an operation whose purpose is for research and development of new processes and products, that is conducted under the close supervision of technically trained personnel and is not involved in the manufacture of final or intermediate products for commercial purposes, except in a de minimis manner.

(70) "Rocket motor bonding adhesive" means an adhesive used in rocket motor bonding applications.



(71) "Rocket motor nozzle coating" means a catalyzed epoxy coating system used in elevated temperature applications on rocket motor nozzles.

(72) "Rubber-based adhesive" means a quick setting contact cement that provide a strong, yet flexible bond between two mating surfaces that may be of dissimilar materials.

(73) "Scale inhibitor" means a coating that is applied to the surface of a part prior to thermal processing to inhibit the formation of scale.

(74) "Screen print ink" means a inks used in screen printing processes during fabrication of decorative laminates and decals.

(75) "Seal coat maskant" means an overcoat applied over a maskant to improve abrasion and chemical resistance during production operations.

(76) "Sealant" means a material used to prevent the intrusion of water, fuel, air, or other liquids or solids from certain areas of aerospace vehicles or components. There are two categories of sealants: extrudable/rollable/brushable sealants and sprayable sealants.

(77) "Self-priming topcoat" means a topcoat that is applied directly to an uncoated aerospace vehicle or component for purposes of corrosion prevention, environmental protection, and functional fluid resistance. More than one layer of identical coating formulation may be applied to the vehicle or component.

(78) "Semiaqueous cleaning solvent" means a solution in which water is a primary ingredient (greater than sixty per cent of the solvent solution as applied must be water.)

(79) "Silicone insulation material" means an insulating material applied to exterior metal surfaces for protection from high temperatures caused by atmospheric friction or engine exhaust. These materials differ from ablative coatings in that the materials are not "sacrificial."

(80) "Solids" means the nonvolatile portion of the coating that after drying makes up the dry film.



(81) "Solid film lubricant" means a very thin coating consisting of a binder system containing a chief pigment material containing one or more of the following: molybdenum, graphite, polytetrafluoroethylene, or other solids that act as a dry lubricant between faying surfaces.

(82) "Space vehicle" means a man-made device, either manned or unmanned, designed for operation beyond earth's atmosphere. This definition includes integral equipment such as models, mock-ups, prototypes, molds, jigs, tooling, hardware jackets, and test coupons. Also included is auxiliary equipment associated with test, transport, and storage, which through contamination can compromise the space vehicle performance.

(83) "Specialty coating" means a coating that, even though the coating meets the definition of a primer, topcoat, or self-priming topcoat, has additional performance criteria beyond those of primers, topcoats, and self-priming topcoats for specific applications. These performance criteria may include, but are not limited to, temperature or fire resistance, substrate compatibility, antireflection, temporary protection or marking, sealing, adhesively joining substrates, or enhanced corrosion protection. A listing of specialty coatings is found in paragraph (D)(1)(b) of rule 3745-21-19 of the Administrative Code.

(84) "Specialized function coating" means a coating that fulfills extremely specific engineering requirements that are limited in application and are characterized by low volume usage. This category excludes coatings covered in other specialty coating categories.

(85) "Spray gun" means a device that atomizes a coating or other material and projects the particulates or other material onto a substrate.

(86) "Structural autoclavable adhesive" means an adhesive used to bond load carrying aerospace components that is cured by heat and pressure in an autoclave.

(87) "Structural non-autoclavable adhesive" means an adhesive cured under ambient conditions that is used to bond load carrying aerospace components or other critical functions, such as nonstructural bonding in the proximity of engines.

(88) "Surface preparation" means the removal of contaminants from the surface of an aerospace



vehicle or component or the activation or reactivation of the surface in preparation for the application of a coating.

(89) "Temporary protective coating" means a coating applied to provide scratch or corrosion protection during manufacturing, storage, or transportation. Two types include peelable protective coatings and alkaline removable coatings. These materials are not intended to protect against strong acid or alkaline solutions. Coatings that provide this type of protection from chemical processing are not included in this category.

(90) "Thermal control coating" means a coatings formulated with specific thermal conductive or radiative properties to permit temperature control of the substrate.

(91) "Topcoat" means a coating that is applied over a primer on an aerospace vehicle or component for appearance, identification, camouflage, or protection. Topcoats that are defined as specialty coatings are not included under this definition.

(92) "Touchup and repair coating" means a coating used to cover minor coating imperfections appearing after the main coating operation.

(93) "Type II etchant" means a chemical milling etchant that is a strong sodium hydroxide solution containing amines.

(94) "Type I etchant" means a chemical milling etchant that contains varying amounts of dissolved sulfur and does not contain amines.

(95) "VOC composite vapor pressure" means the sum of the partial pressures of the compounds defined as VOC in this rule, as determined according to the procedures specified in paragraph (S) of rule 3745-21-10 of the Administrative Code.

(96) "Waterborne (water-reducible) coating" means a coating which contains more than five per cent water by weight as applied in its volatile fraction.

(97) "Wet fastener installation coating" means a primer or sealant applied by dipping, brushing, or



daubing to fasteners that are installed before the coating is cured.

(98) "Wing coating" means a corrosion-resistant topcoat that is resilient enough to withstand the flexing of the wings.

(BB) As used in rule 3745-21-20 of the Administrative Code:

(1) "Add-on control system" means an air pollution control device such as a carbon adsorber or incinerator that reduces pollution in an air stream by destruction or removal prior to discharge to the atmosphere.

(2) "Air flask coating" means any special composition coating applied to interior surfaces of high pressure breathing air flasks to provide corrosion resistance and that is certified safe for use with breathing air supplies.

(3) "Antenna coating" means any coating applied to equipment through which electromagnetic signals must pass for reception or transmission.

(4) "Antifoulant coating" means any coating that is applied to the underwater portion of a vessel to prevent or reduce the attachment of biological organisms and that is registered with the USEPA as a pesticide under the Federal Insecticide, Fungicide, and Rodenticide Act.

(5) "As applied" means the condition of a coating at the time of application to the substrate, including any thinning solvent.

(6) "As supplied" means the condition of a coating before any thinning, as sold and delivered by the coating manufacturer to the user.

(7) "Batch" means the product of an individual production run of a coating manufacturer's process. A batch may vary in composition from other batches of the same product.

(8) "Bitumens" mean black or brown materials that are soluble in carbon disulfide and consist mainly of hydrocarbons.



- (9) "Bituminous resin coating" means any coating that incorporates bitumens as a principal component and is formulated primarily to be applied to a substrate or surface to resist ultraviolet radiation or water.
- (10) "Chemical Agent Resistant Coating" or "CARC" means a military exterior coating.
- (11) "Coating" means any material that can be applied as a thin layer to a substrate and which cures to form a continuous solid film.
- (12) "Cold-weather time period" means any time during which the ambient temperature is below 4.5 degrees Celsius (forty degrees Fahrenheit) and coating is to be applied.
- (13) "Container of coating" means the container from which the coating is applied, including but not limited to a bucket or pot.
- (14) "Cure volatiles" means reaction products which are emitted during the chemical reaction which takes place in some coating films at the cure temperature. These emissions are other than those from the solvents in the coating and may, in some cases, comprise a significant portion of total VOC emissions.
- (15) "Epoxy coating" means any thermoset coating formed by reaction of an epoxy resin (i.e., a resin containing a reactive epoxide with a curing agent).
- (16) "General use coating" means any coating that is not a specialty coating.
- (17) "Heat resistant coating" means any coating that during normal use must withstand a temperature of at least two hundred four degrees Celsius (four hundred degrees Fahrenheit).
- (18) "High-gloss coating" means any coating that achieves at least eighty-five per cent reflectance on a sixty-degree meter when tested by ASTM D523.
- (19) "High-temperature coating" means any coating that during normal use must withstand a



temperature of at least four hundred twenty-six degrees Celsius (eight hundred degrees Fahrenheit).

(20) "Inorganic zinc (high-build) coating" means a coating that contains eight pounds per gallon (nine hundred sixty grams per liter) or more elemental zinc incorporated into an inorganic silicate binder that is applied to steel to provide galvanic corrosion resistance.

(21) "Interior coating" means any coating used on interior surfaces aboard United States military vessels pursuant to a coating specification that requires the coating to meet specified fire retardant and low toxicity requirements, in addition to the other applicable military physical and performance requirements.

(22) "Marine coating" means any coating that is applied to ships.

(23) "Maximum allowable thinning ratio" means the maximum volume of thinner that can be added per volume of coating without violating the VOC content limits of paragraph (D)(1) of rule 3745-21-20 of the Administrative Code.

(24) "Military exterior coating" means any exterior topcoat applied to military or USCG vessels that are subject to specific chemical, biological, and radiological washdown requirements.

(25) "Mist coating" means any low viscosity, thin film, epoxy coating applied to an inorganic zinc primer that penetrates the porous zinc primer and allows the occluded air to escape through the paint film prior to curing.

(26) "Navigational aids coating" means any coating applied to USCG buoys or other USCG waterway markers when they are recoated aboard ship at the usage site and immediately returned to the water.

(27) "Nonskid coating" means any coating applied to the horizontal surfaces of a marine vessel for the specific purpose of providing slip resistance for personnel, vehicles, or aircraft.

(28) "Nonvolatiles" means substances that do not evaporate readily. This term refers to the film-forming material of a coating.



(29) "Normally closed" means a container or piping system is closed unless an operator is actively engaged in adding or removing material.

(30) "Nuclear coating" means any protective coating used to seal porous surfaces such as steel (or concrete) that otherwise would be subject to intrusion by radioactive materials. These coatings must be resistant to long-term (service life) cumulative radiation exposure (ASTM D4082), relatively easy to decontaminate (ASTM D4256), and resistant to various chemicals to which the coatings are likely to be exposed (ASTM D3912). [For nuclear coatings, see the general protective requirements outlined by the United States nuclear regulatory commission in a report entitled "Regulatory guide 1.54 - service level I, II and III protective coatings applied to nuclear plants."]

(31) "Operating parameter value" means a minimum or maximum value established for a control device or process parameter that, if achieved by itself or in combination with one or more other operating parameter values, determines that an owner or operator has complied with an applicable emission limitation.

(32) "Organic zinc coating" means any coating derived from zinc dust incorporated into an organic binder that contains more than eight pounds of elemental zinc per gallon (nine hundred sixty grams per liter) of coating, as applied, and that is used for the expressed purpose of corrosion protection.

(33) "Pleasure craft" means any marine or fresh-water vessel used by individuals for noncommercial, nonmilitary, and recreational purposes that is less than twenty meters in length including vessels rented exclusively to or chartered by individuals for such purposes.

(34) "Pretreatment wash primer" means any coating that contains a minimum of 0.5 per cent acid, by mass, and is applied only to bare metal to etch the surface and enhance adhesion of subsequent coatings.

(35) "Repair and maintenance of thermoplastic coating" means any vinyl, chlorinated rubber, or bituminous resin coating that is applied over the same type of existing coating to perform the partial recoating of any in-use commercial vessel. This definition does not include coal tar epoxy coatings, which are considered "general use" coatings.



(36) "Rubber camouflage coating" means any specially formulated epoxy coating used as a camouflage topcoat for exterior submarine hulls and sonar domes.

(37) "Sealant coating for thermal spray aluminum" means any epoxy coating applied to thermal spray aluminum surfaces at a maximum thickness of one dry mil.

(38) "Ship" means any marine or fresh-water vessel used for military or commercial operations, including self-propelled vessels, those propelled by other craft (barges), and navigational aids (buoys). This definition includes, but is not limited to, all military and USCG vessels, commercial cargo and passenger (cruise) ships, ferries, barges, tankers, container ships, patrol and pilot boats, and dredges. Pleasure crafts and offshore oil and gas drilling platforms are not included in this definition.

(39) "Shipbuilding or ship repair operations" means any building, repair, repainting, converting, or alteration of ships.

(40) "Solids" means nonvolatiles.

(41) "Special marking coating" means any coating that is used for safety or identification applications, such as markings on flight decks and ships' numbers.

(42) "Tack coating" means any thin film epoxy coating applied at a maximum thickness of two dry mils to prepare an epoxy coating that has dried beyond the time limit specified by the manufacturer for the application of the next coat.

(43) "Thinner" means a liquid that is used to reduce the viscosity of a coating and that evaporates before or during the cure of a film.

(44) "Thinning ratio" means the volumetric ratio of thinner to coating, as supplied.

(45) "Thinning solvent" means thinner.



(46) "Undersea weapons systems coating" means any coating applied to any component of a weapons system intended to be launched or fired from under the sea.

(47) "USCG" means the United States coast guard.

(48) "Weld-through preconstruction primer" means a coating that provides corrosion protection for steel during inventory, is typically applied at less than one mil dry film thickness, does not require removal prior to welding, is temperature resistant (burn back from a weld is less than 1.25 centimeters (0.5 inch)), and does not normally require removal before applying film-building coatings, including inorganic zinc high-build coatings. When constructing new vessels, there may be a need to remove areas of weld-through preconstruction primer due to surface damage or contamination prior to application of film-building coatings.

(CC) [Reserved.]

(DD) As used in rule 3745-21-22 of the Administrative Code (pertaining to the control of VOC emissions from lithographic and letterpress printing operations):

(1) "Alcohol" means any of the following compounds, when used as a fountain solution additive for offset lithographic printing: ethanol, n-propanol, and isopropanol.

(2) "Alcohol substitutes" means nonalcohol additives that contain VOCs and are used in the fountain solution. Some additives are used to reduce the surface tension of water; others are added to prevent piling (ink build-up).

(3) "Automatic blanket wash system" means equipment used to clean lithographic blankets which can include, but is not limited to those utilizing a cloth and expandable bladder, brush, spray, or impregnated cloth system.

(4) "Cleaning material" means with respect to a surface coating operation or graphic arts operation, a liquid solvent or solution used to clean the operating surfaces of a printing press and its parts. For purposes of this standard, cleaning solutions include, but are not limited to blanket wash, roller wash, metering roller cleaner, plate cleaner, impression cylinder washes, rubber rejuvenators, and other



cleaners used for cleaning a press, press parts, or to remove dried ink or coating from areas around the press.

(5) "Capture system" means all equipemnt, including but not limited to hoods, ducts, fans, ovens and dryers, used to contain, collect, and route VOC vapors released from a coating line or printing line.

(6) "Control system" means any device or combination of devices designed to recover or incinerate VOC vapors received from a capture system.

(7) "Composite partial pressure" means the sum of the partial pressures of the VOC compounds in a solvent.

(8) "Dampening system" means equipment used to deliver the fountain solution to the lithographic plate.

(9) "Fountain solution" means a mixture of water and other volatile and non-volatile chemicals and additives used in lithographic printing operations that maintains the quality of the printing plate including preventing debris build up (e.g., spray power, paper fiber, coating particles, dried ink particles, and other materials), and increases viscosity and reduces the surface tension of the water so that the solution spreads easily across the printing plate surface. The fountain solution wets the nonimage area so that the ink is maintained within the image areas. Non-volatile additives include mineral salts and hydrophilic gums. Alcohol and alcohol substitutes are the most common VOC additives used to reduce the surface tension of the fountain solution.

(10) "Fountain solution batch" means a supply of fountain solution that is prepared and used without alteration until completely used or removed from the printing process. For the purposes of this rule, this term may apply to solutions prepared in either discrete batches or solutions that are continuously blended with automatic mixing units.

(11) "Fountain solution reservoir" means the collection tank that accepts fountain solution recirculated from printing units. In some cases, the tanks are equipped with cooling coils for refrigeration of the fountain solution.



(12) "Heatset" means a lithographic printing process where the printing inks are set by the evaporation of the ink oils in a heatset dryer.

(13) "Heatset dryer" means a hot air dryer used in heatset lithography to heat the printed substrate and to promote the evaporation of ink oils.

(14) "Inking system" means a series of rollers used to meter ink onto the lithographic plate. The system can include agitators, pumps, totes, and other types of ink containers.

(15) "Lithographic printing" or "lithographic printing operation" means a planographic printing process where the image and nonimage areas are chemically differentiated; the image area is oil receptive and the nonimage area is water receptive. This method differs from other printing methods, where the image is typically printed from a raised or recessed surface. A lithographic printing operation includes, but is not limited to, a heatset web lithographic printing operation, a coldset web offset lithographic printing operation, and a sheet-fed offset lithographic printing operation.

(16) "Non-heatset lithographic printing" means a lithographic printing process where the printing inks are set by absorption or oxidation of the ink oil, not by evaporation of the ink oils in a dryer. Use of an infrared heater or printing conducted using ultraviolet-cured or electron beam-cured inks is considered non-heatset.

(17) "Offset lithography" means a printing process that transfers the ink film from the lithographic plate to an intermediary surface (blanket), which, in turn, transfers the ink film to the substrate.

(18) "Press" means a printing production assembly composed of one or more units used to produce a printed substrate including any associated coating, spray powder application, heatset web dryer, ultraviolet or electron beam curing units, or infrared heating units.

(19) "Sheet-fed lithographic printing" means a non-heatset lithographic printing process where individual sheets of substrate are fed into the press sequentially.

(20) "Unit" means the smallest complete printing component, composed of inking and dampening systems, of a printing press.



(21) "Web" means a lithographic printing process where a continuous roll of substrate is fed into a press.

(22) "Letterpress printing" means a printing method where the image area is raised relative to the non-image area and the ink is transferred to the paper directly from the image surface.

(23) "Raoult's Law" means the vapor pressure of the solvent in an ideal solution is equal to the mole fraction of the solvent times the vapor pressure of the pure solvent.

(EE) As used in rule 3745-21-23 of the Administrative Code (pertaining to the control of VOC emissions from industrial cleaning solvents):

(1) "Composite partial pressure" means the sum of the partial pressures of the VOC compounds in a solvent.

(2) "Digital printing" means a print-on-demand method of printing in which an electronic output device transfers variable data, in the form of an image, from a computer to a variety of substrates. Digital printing methods include, but are not limited to, inkjet printing, electrophotographic printing, dye sublimation printing, thermal wax printing and solid ink printing.

(3) "Screen printing" means a process in which the printing ink passes through a web or a fabric to which a refined form of stencil has been applied. The stencil openings determine the form and dimensions of the imprint.

(FF) As used in rule 3745-21-24 of the Administrative Code (pertaining to the control of VOC emissions from flat wood paneling coatings):

(1) "Class 2 hardboard paneling finishes" means finishes which meet the specifications of ANSI A135.5.

(2) "Flat wood paneling" means a printed interior panel made of hardwood plywood and thin particle board, natural finish hardwood plywood, hardwood paneling, baseboard, wood flat stock, veneers,



doors, door skins, wood flat product skins, tileboard and wallboard.

(3) "Hardboard" means a panel manufactured primarily from inter-felted ligno-cellulosic fibers which are consolidated under heat and pressure in a hot press.

(4) "Hardwood plywood" means a plywood whose surface layer is a veneer of hardwood.

(5) "Natural finish hardwood plywood panel" means a panel whose original grain pattern is enhanced by essentially transparent finishes frequently supplemented by fillers and toners.

(6) "Panel" means a flat piece of wood or wood product usually rectangular and used inside homes and mobile homes for wall decorations.

(7) "Printed interior panel" means a panel whose grain or natural surface is obscured by fillers and basecoats upon which a simulated grain or decorative pattern is printed.

(8) "Thin particleboard" means a manufactured board one-quarter inch or less in thickness made of individual wood particles which have been coated with a binder and formed into flat sheets by pressure.

(9) "Tileboard" means a paneling that has a colored waterproof surface coating.

(10) "Wood flat stock" means an interior panel containing wood including but not limited to redwood stocks, plywood panels, particle boards, composition hardboards, and any other panels containing solid wood or wood product.

(GG) As used in rule 3745-21-25 of the Administrative Code (pertaining to control of VOC emissions from reinforced plastic composites production operations):

(1) "Add-on control device" means an air pollution control device, such as a thermal oxidizer or carbon adsorber that reduces pollution in an air stream by destruction or removal before discharge to the atmosphere.



(2) "AP-42" means the USEPA document "Compilation of Air Pollutant Emissions Factors, Volume I: Stationary Point and Area Sources."

(3) "Atomized mechanical application means" application of resin or gel coat with spray equipment that separates the liquid into a fine mist. This fine mist may be created by forcing the liquid under high pressure through an elliptical orifice, bombarding a liquid stream with directed air jets, or a combination of these techniques.

(4) "Bulk molding compound" or "BMC" means a putty-like molding compound containing resins in a form that is ready to mold. In addition to resins, BMC may contain catalysts, fillers, and reinforcements. Bulk molding compound can be used in compression molding and injection molding operations to manufacture reinforced plastic composites products.

(5) "BMC manufacturing" means a process that involves the preparation of BMC.

(6) "Centrifugal casting" means a process for fabricating cylindrical composites, such as pipes, in which composite materials are positioned inside a rotating hollow mandrel and held in place by centrifugal forces until the part is sufficiently cured to maintain its physical shape.

(7) "Charge" means the amount of SMC or BMC that is placed into a compression or injection mold necessary to complete one mold cycle.

(8) "Cleaning" means removal of composite materials, such as cured and uncured resin from equipment, finished surfaces, floors, hands of employees, or any other surfaces.

(9) "Clear production gel coat" means an unpigmented, quick-setting resin used to improve the surface appearance or performance of composites. The clear production gel coat can be used to form the surface layer of any composites other than those used for molds in tooling operations.

(10) "Closed molding" means a grouping of processes for fabricating composites in a way that VOC-containing materials are not exposed to the atmosphere except during the material loading stage (e.g., compression molding, injection molding, and resin transfer molding). Processes where the mold is covered with plastic (or equivalent material) prior to resin application, and the resin is injected into



the covered mold are also considered closed molding.

(11) "Composite" means a shaped and cured part produced by using composite materials.

(12) "Composite materials" means the raw materials used to make composites. The raw materials include styrene-containing resins. Composite materials may also include gel coat, monomer, catalyst, pigment, filler, and reinforcement.

(13) "Compression molding" means a closed molding process for fabricating composites in which composite materials are placed inside matched dies that are used to cure the materials under heat and pressure without exposure to the atmosphere. The addition of mold paste or in-mold coating is considered part of the closed molding process. The composite materials used in this process are generally SMC or BMC.

(14) "Compression/injection molding" means a grouping of processes that involves the use of compression molding or injection molding.

(15) "Continuous casting" means a continuous process for fabricating composites in which composite materials are placed on an in-line conveyor belt to produce cast sheets that are cured in an oven.

(16) "Continuous lamination" means a continuous process for fabricating composites in which composite materials are typically sandwiched between plastic films, pulled through compaction rollers, and cured in an oven. This process is generally used to produce flat or corrugated products on an in-line conveyor.

(17) "Continuous lamination/casting" means a grouping of processes that involves the use of continuous lamination or continuous casting.

(18) "Controlled oven VOC emissions" means VOC emissions emitted to the atmosphere from an oven's control device.

(19) "Controlled wet-out area VOC emissions" means VOC emissions emitted to the atmosphere



from a wet-out area's control device.

(20) "Corrosion-resistant gel coat" means a gel coat used on a product made with a corrosion-resistant resin that has a corrosion-resistant end-use application.

(21) "Corrosion-resistant end-use applications" means applications where the product is manufactured specifically for an application that requires a level of chemical inertness or resistance to chemical attack above that required for typical reinforced plastic composites products. These applications include, but are not limited to, chemical processing and storage; pulp and paper production; sewer and wastewater treatment; power generation; potable water transfer and storage; food and drug processing; pollution or odor control; metals production and plating; semiconductor manufacturing; petroleum production, refining, and storage; mining; textile production; nuclear materials storage; swimming pools; and cosmetic production, as well as end-use applications that require high strength resins.

(22) "Corrosion-resistant industry standard" means any of the following standards: ANSI/ASME RTP-1; ASME BPVC-X; ASTM D5364, D3299, D4097, D2996, D2997, D3262, D3517, D3754, D3840, D4024, D4161, D3982, or D3839; ANSI/AWWA C950; UL 2215, 1316 or 1746, IAPMO/ANSI Z1000, or written customer requirements for resistance to specified chemical environments.

(23) "Corrosion-resistant product" means a product made with a corrosion-resistant resin and is manufactured to a corrosion-resistant industry standard, or a food contact industry standard, or is manufactured for corrosion-resistant end-use applications involving continuous or temporary chemical exposures.

(24) "Corrosion-resistant resin" means a resin that does either of the following:

(a) Displays substantial retention of mechanical properties when undergoing ASTM C581 coupon testing, where the resin is exposed for six months or more to one of the following materials: material with a pH equal to or greater than 12.0 or a pH less than or equal to 3.0, oxidizing or reducing agents, organic solvents, or fuels or additives as defined in 40 CFR 79.2. In the coupon testing, the exposed resin needs to demonstrate a minimum of fifty per cent retention of the relevant mechanical



property compared to the same resin in unexposed condition. In addition, the exposed resin needs to demonstrate an increased retention of the relevant mechanical property of at least twenty percentage points when compared to a similarly exposed general-purpose resin. For example, if the general-purpose resin retains forty-five per cent of the relevant property when tested as specified above, then a corrosion-resistant resin needs to retain at least sixty-five per cent (forty-five per cent plus twenty per cent) of its property. The general-purpose resin used in the test needs to have an average molecular weight of greater than one thousand, be formulated with a one to two ratio of maleic anhydride to phthalic anhydride and one hundred per cent diethylene glycol, and a styrene content between forty-three to forty-eight per cent.

(b) Complies with industry standards that require specific exposure testing to corrosive media, such as UL 1316, UL 1746, or ASTM F1216.

(25) "CR/HS" means corrosion-resistant and/or high strength.

(26) "Doctor box" means the box or trough on an SMC machine into which the liquid resin paste is delivered before being metered onto the carrier film.

(27) "Fiberglass boat" means a vessel in which either the hull or deck is built from a composite material consisting of a thermosetting resin matrix reinforced with fibers of glass, carbon, aramid, or other material.

(28) "Filament application" means an open molding process for fabricating composites in which reinforcements are fed through a resin bath and wound onto a rotating mandrel. The materials on the mandrel may be rolled out or worked by using nonmechanical tools prior to curing. Resin application to the reinforcement on the mandrel by means other than the resin bath, such as spray guns, pressure-fed rollers, flow coaters, or brushes is not considered filament application.

(29) "Filled resin" means that fillers have been added to a resin such that the amount of inert substances is at least ten per cent by weight of the total resin plus filler mixture. Filler putty made from a resin is considered a filled resin.

(30) "Fillers" means inert substances dispersed throughout a resin, such as calcium carbonate,



alumina trihydrate, hydrous aluminum silicate, mica, feldspar, wollastonite, silica, and talc. Materials that are not considered to be fillers are glass fibers or any type of reinforcement and microspheres.

(31) "Fire retardant gel coat" means a gel coat used for low-flame spread/low-smoke products for which resin is used.

(32) "Fluid impingement technology" means a spray gun that produces an expanding non-misting curtain of liquid by the impingement of low-pressure uninterrupted liquid streams.

(33) "Food contact industry standard" means a standard related to food contact application contained in food and drug administration's regulations at 21 CFR 177.2420.

(34) "Gel coat" means a quick-setting resin used to improve surface appearance or performance of composites. The gel coat can be used to form the surface layer of any composites other than those used for molds in tooling operations.

(35) "Gel coat application" means a process where either clear production, pigmented production, white/off-white or tooling gel coat is applied.

(36) "High performance gel coat" means a gel coat used on products for which national sanitation foundation, United States department of agriculture, ASTM, durability, or other property testing is required.

(37) "High strength gel coat" means a gel coat applied to a product that requires high strength resin.

(38) "High strength resin" means a polyester resin which has a casting tensile strength of ten thousand pounds per square inch or more and which is used for manufacturing products that have high strength requirements such as structural members and utility poles.

(39) "Injection molding" means a closed molding process for fabricating composites in which composite materials are injected under pressure into a heated mold cavity that represents the exact shape of the product. The composite materials are cured in the heated mold cavity.



(40) "Low flame spread/low smoke products" means products that meet the following:

(a) For all products, both the applicable flame spread requirements and the applicable smoke requirements.

(b) For interior or exterior building application products, an ASTM E84 flame spread index of less than or equal to twenty-five, and smoke developed index of less than or equal to four hundred fifty, or pass national fire protection association 286 room corner burn test with no flash over and total smoke released not exceeding one thousand meters square.

(c) For mass transit application products, an ASTM E162 flame spread index of less than or equal to thirty-five and ASTM E662 smoke density D_s at 1.5 minutes less than or equal to one hundred and D_s at four minutes less than to equal to two hundred.

(d) For duct application products, an ASTM E84 flame spread index less than or equal to twenty-five and smoke developed index less than or equal to fifty on the interior or exterior of the duct.

(41) "Manual resin application" means an open molding process for fabricating composites in which composite materials are applied to the mold by pouring or by using hands and nonmechanical tools, such as brushes and rollers. Materials are rolled out or worked by using nonmechanical tools prior to curing. The use of pressure-fed rollers and flow coaters to apply resin is not considered manual resin application.

(42) "Mechanical resin application" means an open molding process for fabricating composites in which composite materials (except gel coat) are applied to the mold by using mechanical tools such as spray guns, pressure-fed rollers, and flow coaters. Materials are rolled out or worked by using nonmechanical tools prior to curing.

(43) "Mixing" means the blending or agitation of resin or gel coat in vessels that are 5.00 gallons (18.9 liters) or larger, and includes the mixing of putties or polyputties. Mixing may involve the blending of resin or gel coat with filler, reinforcement, pigments, catalysts, monomers, and any other additives.



(44) "Mold" means a cavity or matrix into or onto which the composite materials are placed and from which the product takes its form.

(45) "Monomer" means an organic compound that combines with itself or other similar compounds by a cross-linking reaction to become a part of a cured thermoset resin.

(46) "Monomer content" means the per cent, by weight, of monomer (styrene, methyl methacrylate, and any other monomer) contained in the resin or gel coat prior to the addition of fillers, catalyst, and promoters.

(47) "Neat gel coat" means the gel coat as purchased from the supplier, but not including any inert fillers.

(48) "Neat gel coat plus" means neat gel coat plus any VOC-containing materials that are added to the gel coat by the supplier or the facility, excluding catalysts and promoters. Neat gel coat plus does include any additions of styrene or methyl methacrylate monomer in any form, including in catalysts and promoters.

(49) "Neat resin" means the resin as purchased from the supplier, but not including any inert fillers.

(50) "Neat resin plus" means neat resin plus any VOC-containing materials that are added to the resin by the supplier or the facility. Neat resin plus does not include any added filler, reinforcements, catalysts, or promoters. Neat resin plus does include any additions of styrene or methyl methacrylate monomer in any form, including in catalysts and promoters.

(51) "Nonatomized mechanical application" means the use of application tools other than brushes to apply resin and gel coat where the application tool has documentation provided by its manufacturer or user that this design of the application tool has been VOC emissions tested, and the test results showed that use of this application tool results in VOC emissions that are no greater than the VOC emissions predicted by the applicable nonatomized application equation in table 1 of 40 CFR part 63, subpart WWWW and, the device is operated according to the manufacturer's directions, including instructions to prevent the operation of the device at excessive spray pressures. Examples of nonatomized application include flow coaters, pressure fed rollers, and fluid impingement spray



guns.

(52) "Noncorrosion-resistant resin" means any resin other than a corrosion-resistant resin or a tooling resin.

(53) "Noncorrosion-resistant product" means any product other than a corrosion-resistant product or a mold.

(54) "Non-routine manufacture" means that the facility manufactures parts to replace worn or damaged parts of a reinforced plastic composites product, or a product containing reinforced plastic composite parts, that was originally manufactured in another facility. To qualify as non-routine manufacture, the part shall be used for repair or replacement, and the manufacturing schedule based on the current or anticipated repair needs of the reinforced plastic composites product, or a product containing reinforced plastic composite parts.

(55) "Operation" means a specific process typically found at a reinforced plastic composites facility. Examples of operations are noncorrosion-resistant manual resin application, corrosion-resistant mechanical resin application, pigmented gel coat application, mixing and VOC-containing materials storage.

(56) "Open molding" means a process for fabricating composites in a way that VOC-containing materials are exposed to the atmosphere. Open molding includes processes such as manual resin application, mechanical resin application, filament application, and gel coat application. Open molding also includes application of resins and gel coats to parts that have been removed from the open mold.

(57) "Pigmented gel coat" means a gel coat that has a color, but does not contain ten per cent of more titanium dioxide by weight. It can be used to form the surface layer of any composites other than those used for molds in tooling operations.

(58) "Plastic composite" has the same meaning as composite.

(59) "Polymer casting" means a process for fabricating composites in which composite materials are



ejected from a casting machine or poured into an open, partially open, or closed mold and cured. After the composite materials are poured into the mold, they are not rolled out or worked while the mold is open, except for smoothing the material or vibrating the mold to remove bubbles. The composite materials may or may not include reinforcements. Products produced by the polymer casting process include cultured marble products and polymer concrete.

(60) "Preform injection" means a form of pultrusion where liquid resin is injected to saturate reinforcements in an enclosed system containing one or more chambers with openings only large enough to admit reinforcements. Resin, which drips out of the chamber during the process, is collected in closed piping or covered troughs and then into a covered reservoir for recycle. Resin storage vessels, reservoirs, transfer systems, and collection systems are covered or shielded from the ambient air. Preform injection differs from direct die injection in that the injection chambers are not directly attached to the die.

(61) "Prepreg materials" means reinforcing fabric received precoated with resin which is usually cured through the addition of heat.

(62) "PTE" means permanent total enclosure as defined in paragraph (X) of this rule.

(63) "Pultrusion" means a continuous process for manufacturing composites that have a uniform cross-sectional shape. The process consists of pulling a fiber-reinforcing material through a resin impregnation chamber or bath and through a shaping die, where the resin is subsequently cured. There are several types of pultrusion equipment, such as open bath, resin injection, and direct die injection equipment.

(64) "Reinforced plastic composites production" means operations in which reinforced or nonreinforced plastic composites or plastic molding compounds are manufactured using thermoset resins or gel coats that contain styrene to produce plastic composites. The resins and gel coats may also contain materials designed to enhance the chemical, physical, or thermal properties of the product. Reinforced plastic composites production also includes cleaning, mixing, VOC-containing materials storage, and repair operations associated with the production of plastic composites.

(65) "Repair" means application of resin or gel coat to a part to correct a defect, where the resin or



gel coat application occurs after the part has gone through all the steps of its typical production process, or the application occurs outside the normal production area. Rerouting a part back through the normal production line, or part of the normal production line, is not considered repair.

(66) "Resin" means any of a class of organic polymers of natural or synthetic origin used in reinforced plastic composite products to surround and hold fibers, and is solid or semi-solid in the cured state.

(67) "Resin transfer molding" means a process for manufacturing composites whereby catalyzed resin is transferred or injected into a closed mold in which fiberglass reinforcement has been placed.

(68) "Sheet molding compound" or "SMC" means a ready-to-mold putty-like molding compound that contains resin processed into sheet form. The molding compound is sandwiched between a top and a bottom film. In addition to resin, the SMC may also contain catalysts, fillers, chemical thickeners, mold release agents, reinforcements, and other ingredients. Sheet molding compound can be used in compression molding to manufacture reinforced plastic composites products.

(69) "Shrinkage controlled resin" means a resin that when promoted, catalyzed, and filled according to the resin manufacturer's recommendations demonstrates less than 0.3 per cent linear shrinkage when tested according to ASTM D2566-93.

(70) "SMC manufacturing" means a process which involves the preparation of SMC.

(71) "Thermoset resin" means a resin that does not become soft or return to a liquid state when heated.

(72) "Tooling gel coat" means a gel coat that is used to form the surface layer of molds. Tooling gel coats generally have high heat distortion temperatures, low shrinkage, high barcol hardness, and high dimensional stability.

(73) "Tooling resin" means a resin that is used to produce molds. Tooling resins generally have high heat distortion temperatures, low shrinkage, high barcol hardness, and high dimensional stability.



(74) "Uncontrolled oven VOC emissions" means those VOC emissions emitted from the oven through closed vent systems to the atmosphere and not to a control device. These VOC emissions do not include VOC emissions that may escape into the workplace through the opening of panels or doors on the ovens or other similar fugitive VOC emissions in the workplace.

(75) "Uncontrolled wet-out area VOC emissions" means any or all of the following:

(a) VOC emissions from wet-out areas that do not have any capture and control.

(b) VOC emissions that escape from wet-out area enclosures.

(c) VOC emissions from wet-out areas that are captured by an enclosure, but are vented to the atmosphere and not to an add-on control device.

(76) "Unfilled" means that there has been no addition of fillers to a resin or that less than ten per cent of fillers by weight of the total resin plus filler mixture has been added.

(77) "Vapor suppressant" means an additive, typically a wax, that migrates to the surface of the resin during curing and forms a barrier to seal in the styrene and reduce styrene emissions.

(78) "Vapor-suppressed resin" means a resin containing a vapor suppressant added for the purpose of reducing styrene emissions during curing.

(79) "VOC-containing materials storage" means an ancillary process within reinforced plastic composites production that involves keeping VOC-containing materials, such as resins, gel coats, catalysts, monomers, and cleaners, in containers or bulk storage tanks for any length of time. Containers may include small tanks, totes, vessels, and buckets.

(80) "Wet-out area" means the area within a continuous lamination process or continuous casting process where the resin is applied extending to the point prior to entering the oven.

(81) "White and off-white gel coat" means a gel coat that contains ten per cent or more titanium dioxide by weight.



(HH) As used in rule 3745-21-27 of the Administrative Code (pertaining to boat manufacturing operations):

(1) "Application equipment cleaning" means the process of flushing or removing resins and gel coats from the interior or exterior of equipment that is used to apply resin or gel coat in the manufacture of fiberglass parts.

(2) "Atomized application method" means a resin application technology in which the resin leaves the application equipment and breaks into droplets or an aerosol as it travels from the application equipment to the surface of the part. Atomized application methods include, but are not limited to, resin spray guns and resin chopper spray guns.

(3) "Boat" means any type of vessel, other than a seaplane, that can be used for transportation on the water.

(4) "Boat manufacturing facility" means a facility that manufactures the hulls or decks of boats from fiberglass or builds molds to make fiberglass hulls or decks. A facility that manufactures only parts of boats (such as hatches, seats, or lockers) or boat trailers, but does not manufacture boat hulls, decks or molds for fiberglass boat hulls or decks, is not considered a boat manufacturing facility.

(5) "Clear gel coat" means gel coats that are clear or translucent so that underlying colors are visible. Clear gel coats are used to manufacture parts for sale. Clear gel coats do not include tooling gel coats used to build or repair molds.

(6) "Closed molding" means any molding process in which pressure is used to distribute the resin through the reinforcing fabric placed between two mold surfaces to either saturate the fabric or fill the mold cavity. The pressure may be clamping pressure, fluid pressure, atmospheric pressure, or vacuum pressure used either alone or in combination. The mold surfaces may be rigid or flexible. Closed molding includes, but is not limited to, compression molding with sheet molding compound, infusion molding, resin injection molding (RIM), vacuum-assisted resin transfer molding (VARTM), resin transfer molding (RTM), and vacuum-assisted compression molding. Processes in which a closed mold is used only to compact saturated fabric or remove air or excess resin from the fabric



(such as in vacuum bagging), are not considered closed molding. Open molding steps, such as application of a gel coat or skin coat layer by conventional open molding prior to a closed molding process, are not closed molding.

(7) "Cured resin" or "cured gel coat" means resin or gel coat that has changed irreversibly from a liquid to a solid.

(8) "Fiberglass boat" means a vessel in which either the hull or deck is built from a composite material consisting of a thermosetting resin matrix reinforced with fibers of glass, carbon, aramid, or other material.

(9) "Fiberglass hull and deck coatings" means coatings applied to the exterior or interior surface of fiberglass boat hulls and decks on the completed boat. Polyester and vinylester resins and gel coats used in building fiberglass parts are not fiberglass hull and deck coatings.

(10) "Filled resin" or "filled production resin" means a resin to which an inert material has been added to change viscosity, density, shrinkage, or other physical properties.

(11) "Flowcoater" means a nonatomizing application method of applying resins and gel coats to an open mold with a fluid nozzle in a fan pattern with no air supplied to the nozzle.

(12) "Gel coat" means a polyester resin surface coating, either pigmented or clear, that provides a cosmetic enhancement and improves resistance to degradation from exposure to the elements.

(13) "Hand lay-up" means a hand application technique of composite materials using a bucket and a paint brush or a paint roller, or other hand held method of application.

(14) "Mixing" means any operation in which resin or gel coat, including the mixing of putties or polyputties, is combined with additives that include, but are not limited to, fillers, promoters, or catalysts.

(15) "Mold" means the cavity or surface into or on which gel coat, resin, and fibers are placed and from which finished fiberglass parts take form.



(16) "Mold sealing and release agents" means materials applied to a mold to seal, polish, and lubricate the mold to prevent parts from sticking to the mold. Mold sealers, waxes, and glazing and buffing compounds are considered mold sealing and release agents.

(17) "Monomer" means a relatively low-molecular-weight organic compound such as styrene that combines with itself, or other similar compounds, by a cross-linking reaction to become a cured thermosetting resin.

(18) "Monomer per cent by weight of a resin" means the weight of the monomer, divided by the weight of the polymer.

(19) "Nonatomized application method" means any application technology in which the resin is not broken into droplets or an aerosol as it travels from the application equipment to the surface of the part. Nonatomized application methods include, but are not limited to, flowcoaters, chopper flowcoaters, pressure-fed resin rollers, resin impregnators, and hand application (for example, paint brush or paint roller).

(20) "Open molding resin and gel coat operation" means any process in which the reinforcing fibers and resin are placed in the mold and are open to the surrounding air while the reinforcing fibers are saturated with resin. Open molding includes operations in which a vacuum bag or similar cover is used to compress an uncured laminate to remove air bubbles or excess resin, or to achieve a bond between a core material and a laminate.

(21) "Pigmented gel coat" means opaque gel coats used to manufacture parts for sale. Pigmented gel coats do not include tooling gel coats used to build or repair molds.

(22) "Polyester resin materials" means unsaturated polyester resins, such as isophthalic, orthophthalic, halogenated, bisphenol A, vinyl ester, or furan resins; cross-linking agents; catalysts; gel coats; inhibitors; accelerators; promoters; and any other material containing VOC used in polyester resin operations.

(23) "Polyester resin operations" means fabricate, rework, repair, or touchup products for



commercial, military, or industrial use by mixing, pouring, hand laying-up, impregnating, injecting, forming, winding, spraying, or curing by using unsaturated polyester resin materials.

(24) "Pressure-fed roller" means a fabric roller that is fed with continuous supply of catalyzed resins from a mechanical fluid pump.

(25) "Production resin" means any resin used to manufacture parts for sale. Production resins do not include tooling resins used to build or repair molds, or assembly adhesives as defined in this rule.

(26) "Repair" means that portion of the fabrication process that requires the addition of polyester resin materials to portions of a previously fabricated product in order to mend damage.

(27) "Resin" means any thermosetting resin with or without pigment containing styrene (CAS No. 100-42-5) or methyl methacrylate (CAS No. 80-62-6) and used to encapsulate and bind together reinforcement fibers in the construction of fiberglass parts.

(28) "Resin impregnator" means a mechanical nonatomizing composite materials application method in which fiber reinforcement is saturated with resins in a controlled ratio for each specific composite product.

(29) "Roll-out" means the process of using rollers, squeegees, or similar tools to compact reinforcing materials saturated with resin to remove trapped air or excess resin.

(30) "Skin coat" means a layer of resin and fibers applied over the gel coat to protect the gel coat from being deformed by the next laminate layers.

(31) "Tooling gel coat" means the gel coat used to build or repair molds (also known as tools) or prototypes (also known as plugs) from which molds will be made.

(32) "Tooling resin" means the resin used to build or repair molds (also known as tools) or prototypes (also known as plugs) from which molds will be made.

(33) "Touch-up" means that portion of the process that is necessary to cover minor imperfections.



(34) "Vacuum bagging" means any molding technique in which the reinforcing fabric is saturated with resin and then covered with a flexible sheet that is sealed to the edge of the mold and where a vacuum is applied under the sheet to compress the laminate, remove excess resin, or remove trapped air from the laminate during curing. Vacuum bagging does not include processes that meet the definition of closed molding.

(35) "Vinylester resin" means a thermosetting resin containing esters of acrylic or methacrylic acids and having double-bond and ester linkage sites only at the ends of the resin molecules.

(II) As used in rule 3745-21-28 of the Administrative Code (pertaining to miscellaneous industrial adhesives and sealants):

(1) "Acrylonitrile-butadiene-styrene welding" or "ABS welding" means any process to weld acrylonitrile-butadiene-styrene pipe.

(2) "Adhesive" means any chemical substance that is applied for the purpose of bonding two surfaces together other than by mechanical means.

(3) "Adhesive primer" means any product intended by the manufacturer for application to a substrate, prior to the application of an adhesive, to provide a bonding surface.

(4) "Aerospace component" means the fabricated part, assembly of parts or completed unit of any aircraft, helicopter, missile, or space vehicle, including passenger safety equipment.

(5) "Aerosol adhesive" means an adhesive packaged as an aerosol product in which the spray mechanism is permanently housed in a non-refillable can designed for handheld application without the need for ancillary hoses or spray equipment.

(6) "Application process" means a series of one or more adhesive applicators and any associated drying area or oven, or both, wherein an adhesive is applied, dried or cured, or both. An application process ends at the point where the adhesive is dried or cured, or prior to any subsequent application of a different adhesive. The application process does not have to include an oven or flash-off area to



be included with this definition.

(7) "Architectural sealant or sealant primer" means any sealant or sealant primer intended by the manufacturer to be applied to stationary structures, including mobile homes, and their appurtenances. Appurtenances to an architectural structure include, but are not limited to: hand railings, cabinets, bathroom and kitchen fixtures, fences, rain gutters and downspouts, and windows.

(8) "Automotive glass adhesive primer" means an adhesive primer labeled by the manufacturer to be applied to automotive glass prior to installation of the glass using an adhesive/sealant. This primer improves the adhesion to pinch weld and blocks ultraviolet light.

(9) "CARB" means the California air resources board.

(10) "Ceramic tile installation adhesive" means any adhesive intended by the manufacturer for use in the installation of ceramic tiles.

(11) "Chlorinated polyvinyl chloride plastic" or "CPVC plastic" means a polymer of the vinyl chloride monomer that contains sixty-seven per cent chlorine and is normally identified with a CPVC marking.

(12) "Chlorinated polyvinyl chloride welding adhesive" or "CPVC welding adhesive" means an adhesive labeled for welding of chlorinated polyvinyl chloride plastic.

(13) "Cleanup solvent" means a VOC-containing material used to remove a loosely held uncured (i.e., not dry to the touch) adhesive or sealant from a substrate, or clean equipment used in applying a material.

(14) "Computer diskette jacket manufacturing adhesive" means any adhesive intended by the manufacturer to glue the fold-over flaps to the body of a vinyl computer diskette jacket.

(15) "Contact bond adhesive" means an adhesive that conforms to the following:

(a) Is designed for application to both surfaces to be bonded together.



(b) Is allowed to dry before the two surfaces are placed in contact with each other.

(c) Forms an immediate bond that is impossible, or difficult, to reposition after both adhesive-coated surfaces are placed in contact with each other.

(d) Does not need sustained pressure or clamping of surfaces after the adhesive-coated surfaces have been brought together using sufficient momentary pressure to establish full contact between both surfaces.

Contact adhesive does not include rubber cements that are primarily intended for use on paper substrates. Contact adhesive also does not include vulcanizing fluids that are designed and labeled for tire repair only.

(16) "Cove base" means a flooring trim unit, generally made of vinyl or rubber, having a concave radius on one edge and a convex radius on the opposite edge that is used in forming a junction between the bottom wall course and the floor or to form an inside corner.

(17) "Cove base installation adhesive" means any adhesive intended by the manufacturer to be used for the installation of cove base or wall base on a wall or vertical surface at floor level.

(18) "Cyanoacrylate adhesive" means any adhesive with a cyanoacrylate content of at least ninety-five per cent by weight.

(19) "Digital printing" means a print-on-demand method of printing in which an electronic output device transfers variable data, in the form of an image, from a computer to a variety of substrates. Digital printing methods include, but are not limited to, inkjet printing, electrophotographic printing, dye sublimation printing, thermal wax printing and solid ink printing.

(20) "Flexible vinyl" means non-rigid polyvinyl chloride plastic with at five per cent by weight plasticizer content.

(21) "Fiberglass" means a material consisting of extremely fine glass fibers.



(22) "Indoor floor covering installation adhesive" means any adhesive intended by the manufacturer for use in the installation of wood flooring, carpet, resilient tile, vinyl tile, vinyl backed carpet, resilient sheet and roll, or artificial grass. Adhesives used to install ceramic tile and perimeter bonded sheet flooring with vinyl backing onto a non-porous substrate, such as flexible vinyl, are excluded from this definition.

(23) "Laminate" means a product made by bonding together two or more layers of material.

(24) "Marine deck sealant" or "marine deck sealant primer" means any sealant or sealant primer labeled for application to wooden marine decks.

(25) "Medical equipment manufacturing" means the manufacture of medical devices, such as, but not limited to, catheters, heart valves, blood cardioplegia machines, tracheostomy tubes, blood oxygenators, and cardiatory reservoirs.

(26) "Metal to urethane/rubber molding or casting adhesive" means any adhesive intended by the manufacturer to bond metal to high density or elastomeric urethane or molded rubber materials, in heater molding or casting processes, to fabricate products such as rollers for computer printers or other paper handling equipment.

(27) "Motor vehicle adhesive" means an adhesive, including glass bonding adhesive, used at a facility that is not an automobile or light-duty truck assembly coating facility, applied for the purpose of bonding two vehicle surfaces together without regard to the substrates involved.

(28) "Multipurpose construction adhesive" means any adhesive intended by the manufacturer for use in the installation or repair of various construction materials including but not limited to drywall subfloor, panel, fiberglass reinforced plastic, ceiling tile and acoustical tile.

(29) "Non-membrane roof installation/repair adhesive" means any adhesive intended by the manufacturer for use in the installation or repair of nonmembrane roofs and that is not intended for the installation of prefabricated single-ply flexible roofing membrane, including but not limited to plastic or asphalt roof cement, asphalt roof coating and cold application cement.



- (30) "Outdoor floor covering installation adhesive" means any adhesive intended by the manufacturer for use in the installation of floor covering that is not in an enclosure and that is exposed to ambient weather conditions during normal use.
- (31) "Panel installation" means the installation of plywood, pre-decorated hardboard (or tileboard), fiberglass reinforced plastic, and similar pre-decorated or non-decorated panels to studs or solid surfaces using an adhesive formulated for that purpose.
- (32) "Perimeter bonded sheet flooring installation" means the installation of sheet flooring with vinyl backing onto a nonporous substrate using an adhesive designed to be applied only to a strip of up to four inches wide around the perimeter of the sheet flooring.
- (33) "Plastic cement welding adhesive" means any adhesive intended by the manufacturer for use to dissolve the surface of plastic to form a bond between mating surfaces.
- (34) "Plastic cement welding adhesive primer" means any primer intended by the manufacturer for use to prepare plastic substrates prior to bonding or welding.
- (35) "Plastic foam" means foam constructed of plastics.
- (36) "Plastics" means synthetic materials chemically formed by the polymerization of organic (carbon-based) substances. Plastics are usually compounded with modifiers, extenders, or reinforcers and are capable of being molded, extruded, cast into various shapes and films or drawn into filaments.
- (37) "Polyvinyl chloride plastic" or "PVC plastic" means a polymer of the chlorinated vinyl monomer that contains fifty-seven per cent chlorine.
- (38) "Polyvinyl chloride welding adhesive" or "PVC welding adhesive" means any adhesive intended by the manufacturer for use in the welding of PVC plastic pipe.
- (39) "Porous material" means a substance that has tiny openings, often microscopic, in which fluids



may be absorbed or discharged, including but not limited to, wood, paper and corrugated paperboard.

(40) "Reactive diluent" means a liquid that is a reactive organic compound during application and one in that, through chemical or physical reactions, such as polymerization, twenty per cent or more of the reactive organic compound becomes an integral part of a finished material.

(41) "Roadway sealant" means any sealant intended by the manufacturer for application to public streets, highways and other surfaces, including but not limited to curbs, berms, driveways and parking lots.

(42) "Rubber" means any natural or manmade rubber substrate, including but not limited to, styrene-butadiene rubber, polychloroprene (neoprene), butyl rubber, nitrile rubber, chlorosulfonated polyethylene and ethylene propylene diene terpolymer.

(43) "SCAQMD" means the south coast air quality management district, a part of the California air resources board, which is responsible for the regulation of air quality in the state of California.

(44) "Sealant primer" means any product intended by the manufacturer for application to a substrate, prior to the application of a sealant, to enhance the bonding surface.

(45) "Sealant" means any material with adhesive properties that is formulated primarily to fill, seal, waterproof or weatherproof gaps or joints between two surfaces. Sealants include sealant primers and caulks.

(46) "Sheet-applied rubber installation" means the process of applying sheet rubber liners by hand to metal or plastic substrates to protect the underlying substrate from corrosion or abrasion. These operations also include laminating sheet rubber to fabric by hand.

(47) "Single-ply roof membrane" means a prefabricated single sheet of rubber, normally ethylene-propylenediene terpolymer, that is field applied to a building roof using one layer of membrane material.

(48) "Single-ply roof membrane installation/repair adhesive" means any adhesive labeled for use in



the installation or repair of single-ply roof membrane. Installation includes, as a minimum, attaching the edge of the membrane to the edge of the roof and applying flashings to vents, pipes and ducts that protrude through the membrane. Repair includes gluing the edges of torn membrane together, attaching a patch over a hole and reapplying flashings to vents, pipes or ducts installed through the membrane.

(49) "Single-ply roof membrane adhesive primer" means any primer labeled for use to clean and promote adhesion of the single-ply roof membrane seams or splices prior to bonding.

(50) "Single-ply roof membrane sealant" means any sealant labeled for application to single-ply roof membrane.

(51) "Solvent" means organic compounds that are used as diluents, thinners, dissolvers, viscosity reducers, cleaning agents or other related uses.

(52) "Structural glazing adhesive" means any adhesive intended by the manufacturer to apply glass, ceramic, metal, stone or composite panels to exterior building frames.

(53) "Subfloor installation" means the installation of subflooring material over floor joists, including the construction of any load bearing joists. Subflooring is covered by a finish surface material.

(54) "Surface preparation solvent" means a solvent used to remove dirt, oil and other contaminants from a substrate prior to the application of a primer, adhesive or sealant.

(55) "Thin metal laminating adhesive" means any adhesive intended by the manufacturer for use in bonding multiple layers of metal to metal or metal to plastic in the production of electronic or magnetic components in which the thickness of the bond line is less than 0.25 millimeters.

(56) "Tire repair" means a process that includes expanding a hole, tear, fissure or blemish in a tire casing by grinding or gouging, applying adhesive and filling the hole or crevice with rubber.

(57) "Tire tread adhesive" means any adhesive intended by the manufacturer for application to the back of precure tread rubber and to the casing and cushion rubber. Tire tread adhesive may also be



used to seal buffed tire casings to prevent oxidation while the tire is being prepared for a new tread.

(58) "Traffic marking tape" means preformed reflective film intended by the manufacturer for application to public streets, highways and other surfaces, including but not limited to curbs, berms, driveways and parking lots.

(59) "Traffic marking tape adhesive primer" means any primer intended by the manufacturer for application to surfaces prior to installation of traffic marking tape.

(60) "Undersea-based weapons systems components" means the fabrication of parts, assembly of parts or completed units of any portion of a missile launching system used on undersea ships.

(61) "Waterproof resorcinol glue" means a two-part resorcinol-resin-based adhesive designed for applications where the bond line must be resistant to conditions of continuous immersion in fresh or salt water.

(JJ) Referenced materials. This chapter includes references to certain matter or materials. The text of the referenced materials is not included in the rules contained in this chapter. Information on the availability of the referenced materials as well as the date of, or the particular edition or version of the material is included in this rule. For materials subject to change, only the specific versions specified in this rule are referenced. Material is referenced as it exists on the effective date of this rule. Except for subsequent annual publication of existing (unmodified) Code of Federal Regulation compilations, any amendment or revision to a referenced document is not applicable unless and until this rule has been amended to specify the new dates.

(1) Availability. The referenced materials are available as follows:

(a) "American Architectural Manufacturers Association" (AAMA). Information and copies of documents may be obtained by writing to: "AAMA, 1827 Walden Office Square, Suite 550, Schaumburg, IL 60173." These documents are also available for purchase at www.aamanet.org. AAMA documents are also available for inspection and use at most public libraries and "The State Library of Ohio."



(b) "American National Standards Institute" (ANSI). Information and copies of publications may be obtained by writing to: "ANSI, Attn: Customer Service Department, 25 W 43rd Street, 4th Floor, New York, NY, 10036." Publications are also available for ordering at <http://webstore.ansi.org>. The ANSI publications are also available for inspection and use at most public libraries and "The State Library of Ohio."

(c) "American Petroleum Institute" (API). Information and copies of publications may be obtained by writing to: "Techstreet, 3916 Ranchero dr., Ann Arbor, MI, USA 48108." Publications are also available for ordering at <http://www.techstreet.com/apigate.html>. The API publications are also available for inspection and use at most public libraries and "The State Library of Ohio."

(d) "American Society for Testing Materials" (ASTM). Information and copies of documents may be obtained by writing to: "ASTM International, 100 Bar Harbor Drive, P.O. Box C700, West Conshohocken, Pennsylvania 19426-2959." These documents are also available for purchase at www.astm.org. ASTM documents are also available for inspection and use at most public libraries and "The State Library of Ohio."

(e) "American Society of Mechanical Engineers" (ASME). Information and copies of documents may be obtained by writing to: "ASME, Two Park Avenue, New York, NY 10016-5990." These documents are also available for purchase at www.asme.org. ASME documents are also available for inspection and use at most public libraries and "The State Library of Ohio."

(f) "American Water Works Association" (AWWA). Information and copies of documents may be obtained by writing to: "AWWA, 6666 W. Quincy Ave., Denver, CO 80235." These documents are also available for purchase at www.awwa.org. AWWA documents are also available for inspection and use at most public libraries and "The State Library of Ohio."

(g) "California air resources board (CARB) certification". Information and copies of executive orders, approval letters, equipment advisories, certification procedures and equivalent test procedures may be obtained by writing to: "California Air Resources Board, Monitoring and Laboratory Division, P.O. Box 2815, Sacramento, CA, 95812-2815" or by calling (916) 327-0900. The full text of all CARB certification documents are also available in electronic format at <http://www.arb.ca.gov/vapor/vapor.htm>.



(h) "California Code of Regulations." Copies of regulations may be obtained by writing to: " West Customer Service, P.O. Box 64833, St. Paul, MN 55164-0833" or by calling 1-800-888-3600. The full text of regulations are also available in electronic format at <http://ccr.oal.ca.gov/>.

(i) Chemical abstract service (CAS). Information can be obtained by writing to: "Chemical Abstract Service, 2540 Olentangy River road, Columbus, Ohio, 43202," or by visiting the web site at www.cas.org.

(j) Clean Air Act. Information and copies may be obtained by writing to: "U.S. government printing office, P.O. Box 979050, St. Louis, MO 63197-9000." The full text of the Act as amended in 1990 is also available in electronic format at www.epa.gov/oar/caa/. A copy of the Act is also available for inspection and use at most public libraries and "The State Library of Ohio."

(k) "Code of Federal Regulations" (CFR). Information and copies may be obtained by writing to: "U.S. government printing office, P.O. Box 979050, St. Louis, MO 63197-9000." The full text of the CFR is also available in electronic format at www.ecfr.gov/. The CFR compilations are also available for inspection and use at most public libraries and "The State Library of Ohio."

(l) "Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources" (AP-42). Information and copies may be obtained by writing to: "U.S. Government Printing Office, P.O. Box 979050, St. Louis, MO 63197-9000." The full text of AP-42 is also available in electronic format at <http://www.epa.gov/ttn/chief/ap42/index.html>. AP-42 is also available for inspection and use at most public libraries and "The State Library of Ohio."

(m) "Control of Volatile Organic Compound Emissions from Coating Operations at Aerospace Manufacturing and Rework Operations." Information and copies may be obtained by writing to: "U.S. EPA/NSCEP, P.O. Box 42419, Cincinnati, Ohio 45242-0419." This document is also available for ordering at <http://www.epa.gov/nscep/?OpenForm>. A copy of this document is also available for inspection and use at most public libraries and "The State Library of Ohio."

(n) "Control of Volatile Organic Compound Emissions from Reactor Processes and Distillation Operations Processes in the Synthetic Organic Chemical Manufacturing Industry." Information and



copies may be obtained by writing to: "U.S. EPA/NSCEP, P.O. Box 42419, Cincinnati, Ohio 45242-0419." This document is also available for ordering at <http://www.epa.gov/nscep/?OpenForm>. A copy of this document is also available for inspection and use at most public libraries and "The State Library of Ohio."

(o) "CRC Handbook of Chemistry and Physics." Information and copies may be ordered by writing to: "CRC Press, 6000 Broken Sound Parkway NW, Suite 300, Boca Raton, FL 33487" or by calling (800) 272-7737. A copy of the document is also available for inspection and use at most public libraries and "The State Library of Ohio."

(p) "Federal Insecticide, Fungicide, and Rodenticide Act." Information and copies may be obtained by writing to: "U.S. Government Printing Office, P.O. Box 979050, St. Louis, MO 63197-9000." The full text of the Act is also available in electronic format at <http://www.epa.gov/oecaagct/lfra.html>. A copy of the Act is also available for inspection and use at most public libraries and "The State Library of Ohio."

(q) "Federal Register" (FR). Information and copies may be obtained by writing to: "Superintendent of Documents, Attn: New Orders, P.O. Box 371954, Pittsburgh, PA 15250-7954." Online access to the Federal Register is available at <https://www.federalregister.gov/>. A copy of the Federal Register is also available for inspection and use at most public libraries and "The State Library of Ohio."

(r) "Guidelines for determining capture efficiency." Information and copies may be obtained by writing to: "Office of Air Quality Planning and Standards (OAQPS), TTN EMCwebmaster, Mail Code E143-02, Research Triangle Park, NC, 27711." This document is also available in electronic format at <http://www.epa.gov/ttn/emc/guidlnd/gd-035.pdf>. A copy of the document is also available for inspection and use at most public libraries and "The State Library of Ohio."

(s) "International Association of Plumbing and Mechanical Officials" (IAPMO). Information and copies of documents may be obtained by writing to: "IAPMO, 4755 East Philadelphia Street, Ontario, California 91761-2816." These documents are also available for purchase at www.iapmo.org. IAPMO documents are also available for inspection and use at most public libraries and "The State Library of Ohio."



(t) "Lange's Handbook of Chemistry." Information and copies may be ordered by writing to: "McGraw-Hill, 860 Taylor Station Road, Blacklick, OH 43004" or by calling (877) 833-5524. A copy of the document is also available for inspection and use at most public libraries and "The State Library of Ohio."

(u) "Methods and Guidance for Analysis of Water." Information and copies may be ordered by writing to: "National Technical Information Service, 5301 Shawnee Road, Alexandria, Virginia, 22312." or by calling 703-605-6000. This document is also available for ordering at <https://www.epa.gov/nscep>. A copy of the document is also available for inspection and use at most public libraries and "The State Library of Ohio".

(v) "MIL-A-87721" and "MIL-STD-1330C(SH)." Information and copies may be ordered by writing to: "DLA Land and Maritime Freedom of Information Act Office, 3990 E. Broad Street, Columbus, Ohio 43218-3990." These documents are also available in electronic format at <http://www.everyspec.com/library.php>.

(w) "Motor Vehicle Safety Standards." Information and copies may be obtained by writing to: "NHTSA Headquarters, 1200 New Jersey Avenue, SE, West Building, Washington, DC 20590." These documents are also available in electronic format at <http://www.nhtsa.gov/Laws-Regs>. A copy of the documents are also available for inspection and use at most public libraries and "The State Library of Ohio."

(x) "National Fire Protection Association" (NFPA). Information on the National Fire Protection Association codes may be obtained by contacting the association at "NFPA, 1 Batterymarch Park, Quincy, MA 02169-7471" or by calling 617-770-3000. Codes may be ordered on line at <https://www.nfpa.org/>. Copies of the code are available at most public libraries and "The State Library of Ohio."

(y) "Perry's Chemical Engineer's Handbook." Information and copies may be ordered by writing to: "McGraw-Hill, 860 Taylor Station Road, Blacklick, OH 43004" or by calling (877) 833-5524. A copy of the document is also available for inspection and use at most public libraries and "The State Library of Ohio."



(z) "Petroleum Equipment Institute (PEI)". Information and copies of documents may be obtained by writing to "P.O. Box 2380, Tulsa, OK 74101-2380 or 6514 E. 69 Street, Tulsa, OK 74133-1729", by calling 918-494-9696 (telephone), 918-491-9895 (fax) or electronically on their website at: <http://www.pei.org/>. This document is also available for review and use at most public libraries and "The State Library of Ohio."

(aa) "Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Topcoat Operations." EPA-453/R-08-002 Information and copies may be ordered by writing to: "State and Local Programs Group, US EPA Mail Code C539-01, Research Triangle Park, NC 27711" or by calling 919-541-5208. A copy of this protocol is also available electronically at: https://www3.epa.gov/airquality/ctg_act/200809_voc_epa453_r-08-002_auto_ldtruck_vocemisrate_protocol.pdf. A copy of the document is also available for inspection and use at most public libraries and "The State Library of Ohio."

(bb) "Regulatory Guide 1.54 - Service Level I, II and III Protective Coatings Applied to Nuclear Plants." Information and copies may be obtained by writing to: "U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001" or by calling (301)415-7000. A copy of this guide is also available in electronic format at: <http://www.nrc.gov/reading-rm/doc-collections/reg-guides/power-reactors/rg/division-1/division-1-41.html>. A copy of the manual is also available for inspection and use at most public libraries and "The State Library of Ohio."

(cc) "South Coast Air Quality Management District (SCAQMD) Test Methods." Information and copies of documents may be obtained by writing to: "South Coast AQMD, Public Records Coordinator/Public Records Unit, 21865 Copley Dr., Diamond Bar, CA, 91765." These documents are also available at <https://www.aqmd.gov/home/research/methods-procedures>. SCAQMD documents are also available for inspection and use at most public libraries and "The State Library of Ohio."

(dd) "Standard Industrial Classification Manual" (SICM). Information and copies may be ordered by writing to: "U.S. Department of Commerce, Technology Administration, National Technical Information Service, Springfield, Virginia, 22161." or by calling 1-800-553-6847. This document is also available in electronic format at http://www.osha.gov/pls/imis/sic_manual.html. A copy of the manual is also available for inspection and use at most public libraries and "The State Library of



Ohio."

(ee) "Standard Methods for the Examination of Water and Wastewater." Information and copies may be ordered by writing to: "Water Environment Federation, 601 Wythe Street, Alexandria, VA 22314-1994" or by calling 571-830-1545. This document is also available for ordering at

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