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RULE 1168. ADHESIVE AND SEALANT APPLICATIONS

(a) Purpose and Applicability

The purpose of this rule is to reduce emissions of volatile organic compounds (VOCs), toxic air contaminants, and stratospheric ozone-depleting compounds from the application of adhesives, adhesive primers, sealants, and sealant primers. This rule applies to any person who uses, sells, stores, supplies, distributes, offers for sale, or manufactures for sale any adhesives, adhesive primers, sealants, or sealant primers, unless otherwise specifically exempted by this rule.

(b) Definitions

For the purpose of this rule, the following definitions shall apply:

- (1) ACRYLIC is a thermoplastic polymer or a copolymer of acrylic acid, methacrylic acid, esters of these acids, or acrylonitrile.
- (2) ACRYLONITRILE-BUTADIENE-STYRENE (ABS) plastic is made by reacting monomers of acrylonitrile, butadiene, and styrene and is normally identified with an ABS marking.
- (3) ABS TO POLYVINYL CHLORIDE (PVC) TRANSITION CEMENT is Plastic Welding Cement used to join ABS and PVC building drains or building sewers.
- (4) ABS WELDING CEMENT is a Plastic Welding Cement that is used to join ABS pipe, fittings, and other system components, including, but not limited to, components for shower pan liner, drain, closet flange, and backwater valve systems.
- (5) ADHESIVE is any substance that is used to bond one surface to another surface by attachment.
- (6) ADHESIVE PRIMER is a film-forming material applied to a substrate, prior to the application of an adhesive or adhesive tape, to increase adhesion or film bond strength, promote wetting, or form a chemical bond with a subsequently applied adhesive.

- (7) ADHESIVE TAPE is a backing material coated with an adhesive, and includes, but is not limited to, drywall tape, heat sensitive tape, pressure-sensitive adhesive tape, and water-activated tape.
- (8) AEROSOL ADHESIVE is any adhesive packaged as an aerosol product in which the spray mechanism is permanently housed in a can designed for hand-held application where no ancillary hoses or spray equipment is used.
- (9) AEROSOL PRODUCT is a pressurized spray system that dispenses product ingredients by means of a propellant contained in a product or a product's container, or by means of a mechanically induced force. Aerosol Products do not include Pump Spray.
- (10) ARCHITECTURAL APPLICATION is the use of a regulated product on stationary structures, including mobile homes, and their appurtenances.
- (11) ARCHITECTURAL APPURTENANCE is any accessory to a stationary structure, including, but not limited to, hand railings; cabinets; bathroom and kitchen fixtures; fences; rain-gutters and down-spouts; window screens; lamp-posts; heating and air conditioning equipment; other mechanical equipment; large fixed stationary tools; signs; motion picture and television production sets; and concrete forms.
- (12) BIG BOX RETAILER is a physically large-chain retail outlet that is classified by the U.S. Department of Labor under North American Industry Classification System code 444110: Home Centers or identified in a list maintained by the Executive Officer.
- (13) BUILDING ENVELOPE is the exterior and demising partitions of a building that enclose conditioned space.
- (14) BUILDING ENVELOPE MEMBRANE ADHESIVES are used to adhere membranes applied to the building envelope to provide a barrier to air or vapor leakage through the building envelope that separates conditioned from unconditioned spaces. Building Envelope Membranes are applied to diverse materials, including, but not limited to, concrete masonry units (CMU), oriented stranded board (OSB), gypsum board, and wood substrates.
- (15) CARPET PAD ADHESIVE is an adhesive used for the installation of a carpet pad (or cushion) beneath a carpet.
- (16) CERAMIC, GLASS, PORCELAIN, AND STONE TILE ADHESIVE is an adhesive used for the installation of tile products.

- (17) CHLORINATED POLYVINYL CHLORIDE (CPVC) plastic is a polymer of the chlorinated polyvinyl monomer that contains 67% chlorine and is normally identified with a CPVC marking.
- (18) CPVC WELDING CEMENT is a Plastic Welding Cement that is used to join CPVC pipe, fittings, and other system components, including, but not limited to, components for shower pan liner, drain, closet flange, and backwater valve systems.
- (19) CLEAR, PAINTABLE, AND IMMEDIATELY WATER-RESISTANT SEALANT is a compound with adhesive properties that contains no appreciable level of opaque fillers or pigments; transmits most or all visible light through itself when cured; is capable of being painted; is immediately resistant to precipitation upon application; and must meet the following criteria:
 - (A) Clarity of 15 turbidity units or less per ASTM D7315 - Determination of Turbidity Above 1 Turbidity Unit (TU) in Static Mode as manufactured and packaged;
 - (B) Color of Gardner 0 as tested by ASTM D1544 - Standard Test Method for Color of Transparent Liquids (Gardner Color Scale) or Platinum-Cobalt Color of 50 or less using ASTM D1209 - Standard Test Method for Color of Clear Liquids (Platinum-Cobalt Scale) as manufactured and packaged; and
 - (C) Compatible with paint per ASTM C1520 Standard Guide for Paintability of Latex Sealants.
- (20) COMPUTER DISKETTE MANUFACTURING is the process where the fold-over flaps are glued to the body of a vinyl jacket.
- (21) CONTACT ADHESIVE is an adhesive applied to two separate surfaces, allowed to dry before the two surfaces are placed in contact with each other, and forms an immediate bond after both adhesive-coated surfaces are placed in full contact with each other.
- (22) CONSUMER PRODUCTS REGULATION is the regulation implemented by the California Air Resources Board (CARB) under Title 17 of the California Code of Regulations, Section 94507, et. seq.
- (23) COVE BASE is 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, to form an inside corner.

- (24) CYANOACRYLATE ADHESIVE is an acrylic adhesive that contains ethyl, methyl, methoxymethyl or other functional groupings of cyanoacrylate.
- (25) DIP COAT is a method of application to a substrate by submersion into, and removal from, a bath.
- (26) DISTRIBUTION CENTER is a warehouse or other specialized building, which is stocked with products (goods), to be redistributed to retailers, wholesalers, or directly to end-users.
- (27) DRY WALL ADHESIVE is an adhesive used during the installation of gypsum dry wall to studs or solid surfaces.
- (28) EDGE GLUE is an adhesive applied to the edge of multi-sheet carbonless forms prior to being fanned apart after drying.
- (29) ELECTROSTATIC APPLICATION is a spray method where the atomized droplets are charged and subsequently deposited on the substrate by electrostatic attraction.
- (30) ENERGY CURABLE ADHESIVES AND SEALANTS are single-component reactive products that cure upon exposure to visible-light, ultra-violet light, or to an electron beam. The VOC content of thin film Energy Curable Adhesives and Sealants may be determined by manufacturers using ASTM Test Method 7767 Standard Test Method to Measure Volatiles from Radiation Curable Acrylate Monomers, Oligomers, and Blends and Thin Coatings Made from Them.
- (31) EXEMPT COMPOUNDS are as defined in Rule 102 – Definition of Terms.
- (32) FACILITY means any permit unit or grouping of permit units or other air contaminant-emitting activities which are located on one or more contiguous properties within the District, in actual physical contact or separated solely by a public roadway or other public right-of-way, and are owned or operated by the same person (or by persons under common control). Such above-described groupings, if not contiguous, but connected only by land carrying a pipeline, shall not be considered one facility.
- (33) FIBERGLASS is fine filaments of glass.
- (34) FLOW COAT is an application method that coats an object by flowing a stream of regulated product over the object and draining off any excess product.
- (35) FOAM INSULATION is an expanding foam that is sprayed into ceiling or wall cavities to provide thermal resistance or to minimize air infiltration.

- (36) FOAM SEALANT is a foam used to fill and form a durable, airtight, water-resistant seal to common building substrates, such as wood, brick, concrete, foam board, and plastic.
- (37) GRAMS OF VOC PER LITER OF REGULATED PRODUCT, LESS WATER AND LESS EXEMPT COMPOUNDS is the weight of VOC per combined volume of VOC and product solids, and can be calculated by the following equation:

Grams of VOC per Liter of Regulated Product, Less Water and Less

$$\text{Exempt Compounds} = \frac{W_s - W_w - W_{es}}{V_m - V_w - V_{es}}$$

- Where: W_s = weight of volatile compounds, in grams
 W_w = weight of water, in grams
 W_{es} = weight of exempt compounds, in grams
 V_m = volume of material, in liters
 V_w = volume of water, in liters
 V_{es} = volume of exempt compounds, in liters

For reactive products, the VOC content is determined after curing. The grams of VOC per liter of any regulated product, except a low-solids product, shall be calculated by the following equation:

Grams of VOC per Liter of Regulated Product, Less Water and Less

$$\text{Exempt Compounds} = \frac{W_{rs} - W_{rw} - W_{res}}{V_{rm} - V_{rw} - V_{res}}$$

- Where: W_{rs} = weight of volatile compounds not consumed during curing, in grams
 W_{rw} = weight of water not consumed during curing, in grams
 W_{res} = weight of exempt compounds not consumed during curing, in grams
 V_{rm} = volume of material prior to reaction, in liters
 V_{rw} = volume of water not consumed during curing, in liters
 V_{res} = volume of exempt compounds not consumed during curing, in liters

- (38) GRAMS OF VOC PER LITER OF MATERIAL is the weight of VOC per volume of material, to be used for a low-solids product, and can be calculated by the following equation:

$$\text{Grams of VOC per Liter of Material} = \frac{W_s - W_w - W_{es}}{V_m}$$

Where: W_s = weight of volatile compounds, in grams
 W_w = weight of water, in grams
 W_{es} = weight of exempt compounds, in grams
 V_m = volume of material, in liters

For reactive products, the VOC content is determined after curing.

- (39) GROUT is a cement-based sealant formulated to fill or seal gaps, including those associated with, but not limited to, tile installations.
- (40) HAND APPLICATION METHODS is the application of a regulated product using hand held equipment. Such equipment includes paint brush, hand roller, trowel, spatula, dauber, rag, sponge, and mechanically- and/or pneumatic-driven syringe provided there is no atomization of the materials.
- (41) HIGH-VOLUME, LOW-PRESSURE (HVLP) SPRAY is equipment used to apply a regulated product by means of a spray gun that is designed to be operated and that is operated between 0.1 and 10 pounds per square inch gauge (psig) air pressure measured dynamically at the center of the air cap and at the air horns.
- (42) INDOOR FLOOR COVERING ADHESIVE is an adhesive used during the installation of a carpet or indoor flooring that is in an enclosure and is not exposed to ambient weather conditions during normal use.
- (43) LOW-SOLIDS is any regulated product that contains less than one pound of solids per gallon of material (or 120 grams of solids per liter of material).
- (44) MAINTENANCE is a routine process to keep equipment and machinery in working order or to prevent breakdowns.
- (45) MANUFACTURING is the use of tools and labor to make things for sale.
- (46) MARINE APPURTENANCES include, but are not limited to, a wood boardwalk, deck, dock, fender, lock gate, or other wooden structure specified for the marine environment.
- (47) MARINE DECK SEALANT is any sealant that is applied to wooden marine decks and their appurtenances and is specified and used exclusively for the marine environment.

- (48) MARINE DECK SEALANT PRIMER is any sealant primer that is applied to wooden marine decks and their appurtenances and is specified and used exclusively for the marine environment.
- (49) MODIFIED BITUMINOUS PRIMER consist of bituminous materials, and a high flash solvent used to prepare a surface by (1) improving the adhesion and (2) absorbing dust from the surface for adhesive, or flashing cement bitumen membrane.
- (50) MODIFIED BITUMINOUS MATERIALS are materials obtained from natural deposits of asphalt or residues from the distillation of crude oil petroleum or coal which consist mainly of hydrocarbons, and include, but are not limited to, asphalt, tar, pitch, and asphalt tile that are soluble in carbon disulfide.
- (51) MULTI-PURPOSE CONSTRUCTION ADHESIVE is any adhesive to be used for the installation or repair of various construction materials, including, but not limited to, drywall, subfloor, panel, fiberglass reinforced plastic (FRP), ceiling tile, and acoustical tile.
- (52) NON-STAINING PLUMBING PUTTY is a non-staining sealant formulated for use on natural surface materials that remains flexible and creates a waterproof seal when setting plumbing fixtures.
- (53) OUTDOOR FLOOR COVERING ADHESIVE is an adhesive used during the installation of carpet or floor covering that is not in an enclosure and is exposed to ambient weather conditions during normal use.
- (54) OZONE-DEPLETING COMPOUND is as defined in Rule 102.
- (55) PANEL ADHESIVE is an adhesive used for the installation of plywood, pre-decorated hardboard (or tileboard), FRP, and similar pre-decorated or non-decorated panels to studs or solid surfaces.
- (56) PERCENT VOC BY WEIGHT is the ratio of the weight of the VOC to the weight of the material, expressed as a percentage of VOC by weight. The percent VOC by weight can be calculated as follows:

$$\% \text{ VOC weight} = \frac{W_v}{W} \times 100$$

Where: W_v = weight of the VOCs, in grams

W = weight of material, in grams

- (57) PERSON is as defined in Rule 102.

- (58) PLASTIC ADHESIVE PRIMER is a material applied to CPVC and PVC plastic to prepare joining surfaces for the application of CPVC or PVC welding cements.
- (59) PLASTIC WELDING CEMENT is the use of adhesives made of resins and solvents which are used to dissolve the surfaces of plastic, except ABS, CPVC, and PVC plastic, to form a bond between mating surfaces.
- (60) PLASTIC FOAM is a foam constructed of plastics.
- (61) PLASTICS are synthetic materials chemically formed by the polymerization of organic (carbon-based) substances. Plastics are usually compounded with modifiers, extenders, and/or reinforcers. They are capable of being molded, extruded, cast into various shapes and films, or drawn into filaments and are used to produce pipe, solid sheet, film, or bulk products.
- (62) POLYCARBONATE is a thermoplastic resin derived from bisphenol A and phosgene, a linear polyester of carbonic acid, dihydroxy compound and any carbonate diester, or by ester interchange.
- (63) POLYETHYLENE TEREPHTHALATE (PET, PETE) is a thermoplastic polyester formed from ethylene glycol by direct esterification or by catalyzed ester exchange between ethylene glycol and dimethyl terephthalate.
- (64) POLYETHYLENE TEREPHTHALATE GLYCOL (PETG) is a glycol modified polyethylene terephthalate.
- (65) POLYVINYL CHLORIDE (PVC) plastic is a polymer of the vinyl chloride monomer that contains 57 percent chlorine.
- (66) POROUS MATERIAL is a substance which has tiny openings, often microscopic, in which fluids may be absorbed or discharged. Such materials include, but are not limited to, wood, fabric, paper, corrugated paperboard, and plastic foam.
- (67) POTABLE WATER ARCHITECTURAL SEALANT is a sealant used in water treatment or water distribution applications required to comply with NSF/ANSI Standard 61: Drinking Water System Components – Health Effects.
- (68) PRESSURE SENSITIVE ADHESIVE is an adhesive, typically coated on backings or release liners that forms a bond when pressure is applied, without the need for solvent, water, or heat.

- (69) PRIVATE LABELER is the person, company, firm, or establishment (other than the toll manufacturer) identified on the label of a regulated product.
- (70) PUMP SPRAY is a packaging system in which the product ingredients within the container are not under pressure and in which the product is expelled only while a pumping action is applied to a button, trigger, or other actuator.
- (71) PVC WELDING CEMENT is a Plastic Welding Cement that is used to join PVC pipe, fittings, and other system components, including, but not limited to, components for shower pan liner, drain, closet flange, and backwater valve systems.
- (72) QUANTITY AND EMISSIONS REPORT (QER) is the report specified in subparagraph (f)(2).
- (73) REACTIVE PRODUCTS are regulated products composed, in part, of monomers that become integral parts of the cured product through chemical reaction. Reactive Products include, but are not limited to, polyurethane and two-component regulated products.
- (74) REGULATED PRODUCT is an adhesive, adhesive primer, sealant, or sealant primer subject to this rule.
- (75) REINFORCED PLASTIC COMPOSITE is a composite material consisting of plastic reinforced with fibers.
- (76) REPAIR is an operation or activity to return a damaged object or an object not operating properly, to good condition.
- (77) ROADWAY SEALANT is any sealant to be applied to streets, highways, and other surfaces, including, but not limited to, curbs, berms, driveways, and parking lots.
- (78) ROLL COATER is a series of mechanical rollers that form a thin film on the surface roller, which is applied to a substrate by moving the substrate underneath the roller.
- (79) RUBBER is any natural or manmade rubber-like substrate, and includes, but is not limited to, styrene-butadiene, polychloroprene (neoprene), butyl, nitrile, chlorosulfonated polyethylene, and ethylene propylene diene terpolymer.
- (80) RUBBER FLOORING ADHESIVE is an adhesive that is used for the installation of flooring material in which both the back and top surfaces are made of synthetic rubber, and which may be in sheet or tile form.

- (81) RUBBER VULCANIZATION ADHESIVE is a reactive adhesive used for rubber-to-substrate bonding achieved during vulcanization of the rubber elastomer at temperatures greater than 250°F. Vulcanized rubber adhesive does not include bonding previously vulcanized rubber.
- (82) SEALANT is any material with adhesive properties that is designed to fill, seal, waterproof, or weatherproof gaps or joints between two surfaces. Sealants include caulks.
- (83) SEALANT PRIMER is any film-forming product applied to a substrate, prior to the application of a sealant, to enhance the bonding surface.
- (84) SHOE REPAIR, LUGGAGE AND HANDBAG ADHESIVE is an adhesive used to repair worn, torn, or otherwise damaged uppers, soles, and heels of shoes, or for making repairs to luggage and handbags.
- (85) SINGLE PLY ROOF MEMBRANE ADHESIVE is any adhesive sealant to be used for the installation or repair of single ply roof membrane. Installation includes, but is not limited to, attaching the edge of the membrane to the edge of the roof and applying flashings to vents, pipes, or ducts that protrude through the membrane.
- (86) SINGLE PLY ROOF MEMBRANE SEALANT is any sealant used for the installation or repair of single ply roof membrane.
- (87) SOLVENT WELDING is the softening of the surfaces of two substrates by wetting them with solvents and/or adhesives, and joining them together through a chemical and/or physical reaction(s) to form a fused union.
- (88) SPECIAL PURPOSE CONTACT ADHESIVE is a contact adhesive that is used to bond all of the following substrates to any surface: melamine covered board, metal, unsupported vinyl, Teflon, ultra-high molecular weight polyethylene, rubber, and wood veneer 1/16 inch or less in thickness.
- (89) STRUCTURAL GLAZING ADHESIVE is any adhesive to be used to adhere glass, ceramic, metal, stone, or composite panels to exterior building frames.
- (90) STRUCTURAL WOOD MEMBER ADHESIVE is an adhesive used for the construction of any load bearing joints in wooden joists, trusses, or beams.
- (91) SUBFLOOR ADHESIVE is an adhesive used for the installation of subflooring material over floor joists.
- (92) THIN METAL LAMINATING ADHESIVE is an adhesive for 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(s) is less than 0.25 mil.

- (93) TIRE REPAIR is the expanding of a hole, tear, fissure, or blemish in a tire casing by grinding or gouging, applying adhesive, and filling the hole or crevice with rubber.
- (94) TIRE TREAD ADHESIVE is any adhesive to be applied to the back of precured tread rubber and to the casing and cushion rubber, or to be used to seal buffed tire casings to prevent oxidation while the tire is being prepared for a new tread.
- (95) TOLL MANUFACTURER is a regulated product manufacturer who produces regulated product for a private labeler.
- (96) TOP AND TRIM ADHESIVE is an adhesive used during the installation of automotive and marine trim, including, but not limited to, headliners, vinyl tops, vinyl trim, sunroofs, dash covering, door covering, floor covering, panel covering, and upholstery.
- (97) TOXIC AIR CONTAMINANT (TAC) is an air pollutant which may cause or contribute to an increase in mortality or serious illness, or which may pose a present or potential hazard to human health as listed by the Office of Environmental Health Hazard Assessment.
- (98) TRAFFIC MARKING TAPE is preformed reflective tape that is applied to public streets, highways, and other surfaces, including, but not limited to, curbs, berms, driveways, and parking lots.
- (99) TRAFFIC MARKING TAPE ADHESIVE PRIMER is any adhesive primer that is applied to surfaces prior to installation of traffic marking tape.
- (100) TRANSFER EFFICIENCY is the ratio of the weight or volume of the regulated product solids adhering to an object to the total weight or volume, respectively, of the regulated product solids dispensed in the application process, expressed as a percentage.
- (101) VINYL COMPOSITIONS TILE (VCT) is a material made from thermoplastic resins, fillers, and pigments.
- (102) VEHICLE GLASS ADHESIVE PRIMER is a primer applied to vehicle glass or to the frame of a vehicle prior to installation or repair of the vehicle glass using an adhesive or sealant to improve adhesion to the pinch weld. For the purposes of this definition, a vehicle is a mobile machine that transports passengers or cargo, and includes, but is not limited to, automobiles, trucks, buses, motorcycles, trains, ships, and boats.

- (103) VOLATILE ORGANIC COMPOUND (VOC) is as defined in Rule 102.
- (104) WATERPROOF RESORCINOL GLUE is a two-part, resorcinol-resin-based adhesive used in applications where the bond line must be resistant to conditions of continuous immersion in fresh or salt water.
- (105) WOOD FLOORING ADHESIVE is an adhesive used to install a wood floor surface, which may be in the form of parquet tiles, wood planks, or strip-wood.

(c) Requirements

- (1) A person shall not use, sell, store, supply, distribute, offer for sale, or manufacture regulated products subject to the provisions of this rule, which contain VOC in excess of the limits specified in Table 1 below:

Table 1 – Regulated Product Categories and VOC Limits

Category	VOC Limits (g/L) ¹			
	Current	Upon Adoption	1/1/2019	1/1/2023
Adhesives				
Architectural Applications				
Building Envelope Membrane Adhesive	250			
Carpet Pad Adhesive	50			
Ceramic Glass, Porcelain, & Stone Tile Adhesive	65			
Cove Base Adhesive	50			
Dry Wall and Panel Adhesive	50			
Multi-Purpose Construction Adhesives	70			
Roofing				
Single Ply Roof Membrane Adhesive	250			200 ²
All Other Roof Adhesives	250			200 ²
Rubber Floor Adhesive	60			
Structural Glazing Adhesive	100			
Structural Wood Member Adhesive	140			
Subfloor Adhesive	50			
VCT and Asphalt Tile Adhesive	50			
Wood Flooring Adhesive	100			20
All Other Indoor Floor Covering Adhesives	50			
All Other Outdoor Floor Covering Adhesives	150		50	

Category	VOC Limits (g/L) ¹			
	Current	Upon Adoption	1/1/2019	1/1/2023
Computer Diskette Manufacturing Adhesive	350			
Contact Adhesive	80			
Edge Glue Adhesive	250			
Plastic Welding Cement				
ABS Welding Cement	325			
ABS to PVC Transition Cement	510			425 ²
CPVC Welding Cement	490			400 ²
PVC Welding Cement	510			425 ²
All Other Plastic Welding Cements	250		100	
Rubber Vulcanization Adhesive	250	850		250
Special Purpose Contact Adhesive	250			
Thin Metal Laminating Adhesive	780			
Tire Tread Adhesive	100			
Top and Trim Adhesive	250	540		250 ²
Waterproof Resorcinol Glue	250		170	
All Other Adhesives	250			
Substrate Specific Adhesives				
Metal	30			
Plastic Foams	50			
Porous Material (except wood)	50			
Wood	30			
Fiberglass	80			
Reinforced Plastic Composite	250		200	
Sealants				
Architectural Applications				
Clear, Paintable, and Immediately Water-Resistant Sealant	250	380		250
Foam Insulation	250			50 ³
Foam Sealant	250			50 ³
Grout	250	65		
Roadway Sealant	250			
Non-Staining Plumbing Putty	250	150		50
Potable Water Sealant	250	100		
Roofing				
Single Ply Roof Membrane Sealant	450			250 ²
All Other Roof Sealants	300			250 ²

Category	VOC Limits (g/L) ¹			
	Current	Upon Adoption	1/1/2019	1/1/2023
All Other Architectural Sealants	250		50	
Marine Deck Sealant	760			
All Other Sealants	420			250
Adhesive Primers				
Plastic	550			
Pressure Sensitive	250	785		
Traffic Marking Tape	150			
Vehicle Glass	250	700		
All Other Adhesive Primers	250			
Sealant Primers				
Architectural Applications				
Non Porous	250			
Porous	775			
Marine Deck	760			
Modified Bituminous	500			
All Other Sealant Primers	750			

1. VOC limits are expressed as grams of VOC per liter of regulated product, less water and less exempt compounds, as defined in paragraph (b)(37) except for low-solid regulated products where the VOC limit is expressed in grams per liter of material as defined in paragraph (b)(38).
2. Technology assessment will be conducted in 2022 and the Executive Officer shall report on the results of the technology assessment to the Stationary Source Committee prior to the implementation date.
3. Technology assessment will be conducted in 2020 and the Executive Officer shall report on the results of the technology assessment to the Stationary Source Committee prior to the implementation date.

(2) Regulated Product Categorization

- (A) Adhesives not regulated by a specific adhesive category, shall be limited to the VOC limits listed under the Substrate Specific Adhesive category in Table 1, if anywhere on the regulated product container, on any sticker or label affixed thereto, or in any sales or advertising literature, any representation is made that the regulated product may be used, or is suitable for use, on that substrate. If the adhesive is used to bond dissimilar substrates together, the higher Substrate Specific Adhesive VOC limit shall apply.

- (B) If anywhere on the regulated product container, on any sticker or label affixed thereto, or in any sales or advertising literature, any representation is made that the regulated product may be used, or is suitable for use, as a regulated product for which a VOC standard in a specific category is specified in Table 1, then the lowest VOC standard shall apply. This provision does not apply to Substrate Specific Adhesives.
- (3) **Sell-Through and Use-Through Provision**
Any regulated product that is manufactured prior to the effective date of the applicable limit specified in Table 1 and that has a VOC content above that limit (but not above the limit in effect on the date of manufacture), may be sold, supplied, or offered for sale for up to three years after the specified effective date and used up to four years after the specified effective date.
- (4) All regulated product containers shall be closed when not in use. Any VOC-laden application tools, such as a brush, pad, rag, cloth, or paper, used in the regulated product application, shall be stored and disposed of in closed containers when not in use.
- (5) Solvent cleaning of application equipment, parts, products, tools, machinery, equipment, general work areas, and the storage and disposal of VOC-containing materials, used in cleaning operations shall be conducted pursuant to Rule 1171 - Solvent Cleaning Operations.
- (6) **Transfer Efficiency**
A person shall not apply VOC-containing regulated product unless the regulated product is applied with properly operating equipment in accordance with operating procedures specified by either the equipment manufacturer or by use of one of the following methods:
- (A) Electrostatic application; or
 - (B) Flow coat; or
 - (C) Dip coat; or
 - (D) Roll coat; or
 - (E) High-Volume, Low-Pressure (HVLP) spray; or
 - (F) Hand application methods; or
 - (G) Such other application methods as are demonstrated to the Executive Officer to be capable of achieving a transfer efficiency equivalent to or better than the method listed in subparagraph

(c)(6)(E) and for which prior written approval of the Executive Officer has been obtained.

(7) Control Devices

A person may comply with the provisions of paragraphs (c)(1), or (c)(6), or both, by using approved air pollution control equipment to apply a regulated product, provided:

- (A) The control device reduces VOC emissions from an emission collection system by at least 95 percent by weight or the output of the air pollution control device is no more than 50 ppm VOC by volume calculated as carbon with no dilution; and
- (B) The owner/operator demonstrates that the emission collection system collects at least 90 percent by weight of the VOC emissions generated by the sources of VOC emissions.

(8) A person may comply with the provisions of paragraph (c)(1) by means of an Alternative Emission Control Plan to apply a regulated product pursuant to Rule 108.

(9) The VOC content of regulated products that are applied with the use of refillable pressurized spray system are subject to the VOC limits of this rule.

(10) Except as provided in subdivision (i) and paragraphs (c)(3), (c)(7), and (c)(8), a person shall not store regulated products which contain VOC in excess of the limits specified in paragraph (c)(1).

(11) Containers used for mixing VOC-containing regulated products shall be kept closed at all times except when in use or when product is being added or removed.

(d) Recordkeeping Requirements

Records of regulated product usage shall be maintained pursuant to Rule 109.

(e) Test Methods

(1) The VOC content of regulated products shall be determined by the South Coast Air Quality Management District (SCAQMD) using the applicable test methods below. When a test method specifies it is inapplicable to a product category, it shall not be used for that inapplicable category. The Executive Officer will develop a Guidance Document to determine which test method will be used when two or more applicable test methods can be

used to demonstrate compliance with the rule. The selected test method will be based on product type, chemistry, and VOC content.

- (A) VOC content may be determined by USEPA Reference Method 24 (Determination of Volatile Matter Content, Water Content, Density Volume Solids, and Weight Solids of Surface Coating, Code of Federal Regulations Title 40, Appendix A, utilizing Procedure B of ASTM Method D2369).
 - (B) VOC content may be determined by Method 304 (Determination of Volatile Organic Compounds (VOC) in Various Materials) in the SCAQMD's "Laboratory Methods of Analysis for Enforcement Samples" manual.
 - (C) Exempt compound content shall be determined by Method 303 in the SCAQMD's "Laboratory Methods of Analysis for Enforcement Samples" or ASTM Method D4457.
 - (D) VOC content may be determined by Method 313 (Determination of Volatile Organic Compounds VOC by Gas Chromatography-Mass Spectrometry) in the SCAQMD's "Laboratory Methods of Analysis for Enforcement Samples" manual.
 - (E) VOC content may be determined by ASTM Test Method 6886 (Standard Test Method for Determination of the Weight Percent Individual Volatile Organic Compounds in Waterborne Air-Dry Coatings by Gas Chromatography).
 - (F) The VOC content of PVC, CPVC, ABS, ABS to PVC Transition Welding Cements, and plastic adhesive primers shall be determined by Method 316A in the SCAQMD's "Laboratory Methods of Analysis for Enforcement Samples."
 - (G) The VOC content of cyanoacrylate adhesives shall be determined by Method 316B in the SCAQMD's "Laboratory Methods of Analysis for Enforcement Samples."
 - (H) The VOC content of reactive adhesives may be determined by Appendix A to Subpart PPPP of 40 CFR Part 63—Determination of Weight Volatile Matter Content and Weight Solids Content of Reactive Adhesives.
- (2) The efficiency of the control device and the VOC content measured and calculated as carbon in the control device exhaust gases shall be determined by USEPA'S Test Method 18, or CARB Method 422 for the determination

of emissions of Exempt Compounds and USEPA's Test Methods 25, 25A, SCAQMD's Method 25.1, or SCAQMD Test Method 25.3. (Determination of Total Gaseous Non-Methane Organic Emissions as Carbon) for the determination of total organic compound emissions. Emissions determined to exceed any limits established by this rule through the use of any of the above-referenced test methods shall constitute a violation of the rule.

- (3) Viscosity shall be determined by ASTM D 1084- Standard Test Methods for Viscosity of Adhesives.
 - (4) The following classes of compounds: cyclic, branched, or linear, completely fluorinated alkanes; cyclic, branched, or linear, completely fluorinated ethers with no unsaturations; cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations; and sulfur-containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine, will be analyzed as exempt compounds for compliance with subdivision (c), only at such time as manufacturers specify which individual compounds are used in the regulated product formulations and identify the test methods, which, prior to such analysis, have been approved by the USEPA and the SCAQMD, that can be used to quantify the amounts of each exempt compound.
 - (5) Equivalent Test Methods
Other test methods determined to be equivalent after review by the Executive Officer, CARB, and the USEPA, and approved in writing by the District Executive Officer, may also be used.
 - (6) All test methods referenced in this subdivision shall be the version most recently approved by the appropriate governmental entities.
- (f) Administrative Requirements
- (1) Regulated products manufactured after January 1, 2019, shall display the following:
 - (A) Each container shall display the VOC content of the regulated product, as recommended for application. VOC content shall be displayed as grams of VOC per liter of regulated product, excluding water and exempt compounds, or grams of VOC per liter of material for low-solids products. The VOC content shall be determined by calculation based on product formulation or laboratory analysis using the applicable test method in subdivision (e).

- (i) Regulated products subject to both the provisions of this rule and the Consumer Products Regulation may display the VOC content as percent VOC provided the regulated product has supplemental product documentation published from the manufacturer that displays the VOC content in grams of VOC per liter of regulated product.
 - (B) Each container or an associated product data sheet shall display a statement of the manufacturer's recommendations regarding thinning, reducing, or mixing with any other VOC containing material, if applicable. Mixing recommendations shall specify a ratio which results in a compliant, as applied, product.
 - (C) Each container shall display the date of manufacture of the contents or a date code indicating the date of manufacture. A manufacturer utilizing a date code shall file an explanation of each date code with the District Executive Officer.
 - (D) Each container of all Top and Trim Adhesives shall include the statement "For Top and Trim Uses Only" prominently displayed.
 - (E) Each container of all Rubber Vulcanization Adhesives shall include the statement "For Rubber Vulcanization Adhesive Uses Only" prominently displayed.
 - (F) Each container of all Pressure Sensitive Adhesive Primers shall include the statement "For Pressure Sensitive Adhesive Primer Uses Only" prominently displayed.
 - (G) Each container of all ABS to PVC Transition Cements shall include the statement "For ABS to PVC Transition Uses Only" prominently displayed.
- (2) Reporting Requirements
- (A) Reporting Timeline

A Quantity and Emission Report (QER) shall be submitted according to the reporting timeline identified in Table 2 below:

 - (i) Every three years, from the years 2019 to 2025.
 - (ii) Every five years, thereafter, until and including 2040.

Table 2: Reporting Timeline

Reporting Deadlines		Reported Years
Manufacturers & Private Labelers	Big Box Retailers & Distribution Centers	
September 1, 2019	May 1, 2019	2017, 2018
September 1, 2022	May 1, 2022	2020, 2021
September 1, 2025	May 1, 2025	2023, 2024
September 1, 2030	May 1, 2030	2028, 2029
September 1, 2035	May 1, 2035	2033, 2034
September 1, 2040	May 1, 2040	2038, 2039

(B) General QER

A manufacturer or private labeler of regulated products shall submit to the District a QER of regulated product sales into or within the District according to the schedule in Table 2. The report shall include the following information:

- (i) Product manufacturer (as listed on the label);
- (ii) Product name and code;
- (iii) Applicable Rule 1168 category;
- (iv) The grams of VOC per liter of regulated product (less water and exempt solvents);
- (v) The grams of VOC per liter of material;
- (vi) Whether the product is waterborne or solvent-based;
- (vii) Total annual volume sold into or within the District, including products sold through distribution centers located within or outside the District, reported in gallons for all container sizes;
- (viii) For any regulated product with VOC content higher than the applicable limit in Rule 1168, an indication whether the product has been sold under any of the following provision of this rule:
 - (A) Sell-through provision;
 - (B) Low-Solids product;
 - (C) Exempted under subdivision (i);
 - (D) Complying with subparagraph (c)(7) – Control Device ; or

- (E) Complying with subparagraph (c)(8) - Alternative Emission Control.
- (C) Aerosol QER
- The manufacturer or private labeler of aerosol adhesives and aerosol adhesive primers shall submit to the District a QER of aerosol adhesive and aerosol adhesive primer sales into or within the District according to the schedule in Table 2. The report shall include the following information:
- (i) Product manufacturer (as listed on the label);
 - (ii) Product name and code;
 - (iii) Percent VOC by weight;
 - (iv) Total weight sold, including products sold through distribution centers located within or outside the District; and
 - (v) Container size of product.
- (D) A corporate officer of the manufacturer or private labeler of regulated products, who previously reported under (f)(2)(B) and (f)(2)(C), that had no distribution or sales into or within the District for the specified reporting years in Table 2, must certify that fact in a letter and on company letterhead by the reporting deadline specified in Table 2.
- (i) A manufacturer or private labeler of regulated products that has no intention to sell regulated products into or within the District in future years, must indicate that fact to be removed from future outreach efforts.
 - (ii) A manufacturer or private labeler of regulated products who resumes sales of regulated product into or within the District, must adhere to the reporting requirements specified in (f)(2)(B) and (f)(2)(C).
- (E) Big Box Retailer or Distribution Center QER
- A big box retailer or distribution center shall submit a QER to the regulated product manufacturer or private labeler, according to the schedule in Table 2. The QER must be electronically submitted, in a spreadsheet format and certified that all information reported is true and correct. The QER must contain the following information:

- (i) The manufacturer or private labeler's product name and code; and
 - (ii) The quantity of each regulated product, aerosol adhesive, and aerosol adhesive primer distributed into the District.
- (F) Facilities Using the 55 Gallon Exemption

For each calendar year (January 1 through December 31) beginning in 2017, the facility using or purchasing regulated products under the provisions of paragraph (i)(5)(C) shall submit to the District by September 1 of the following calendar year, an annual report of regulated product used under the provisions of paragraph (i)(5)(C) within the District. The report shall include the following information:

 - (i) Product manufacturer (as listed on the label);
 - (ii) Product name and code;
 - (iii) The grams of VOC per liter of regulated product (less water and exempt solvents);
 - (iv) The grams of VOC per liter of material;
 - (v) Unit size of product;
 - (vi) Total volume purchased, in gallons;
 - (vii) The name and address of the company or retailer where the products were purchased.
- (3) Manufacturers, private labelers, or suppliers of regulated products shall maintain records to verify data used to determine VOC content in preparing their QER. The records shall be maintained for three (3) years and made available upon request by the Executive Officer. Such records shall include:
 - (A) Laboratory reports; or
 - (B) Formulation data used for VOC content calculations.
- (4) Confidentiality of Information

Subject to the provisions of the California Public Records Act (Gov Code §§ 6250-6276.48) information submitted to the Executive Officer may be designated as confidential. The designation must be clearly indicated on the reporting form, identifying exactly which information is deemed confidential. District guidelines require a detailed and complete basis for such claim in the event of a public records request.

(g) Prohibition of Sales and Use

- (1) Except as provided in subdivision (i), no person shall use, supply, sell, or offer for sale a regulated product in the District that contains chloroform, ethylene dichloride, methylene chloride, perchloroethylene, and trichloroethylene.
- (2) On and after January 1, 2019, except as provided in subdivision (i), no person shall use, supply, sell, or offer for sale a regulated product in the District that contains Group II exempt compounds listed in Rule 102 in quantities greater than 0.1 percent by weight. This provision does not apply to cyclic, branched, or linear, completely methylated siloxanes.

(h) Rule 442 Applicability

Any regulated product which is exempt from all or a portion of this rule shall comply with the provisions of Rule 442.

(i) Exemptions

- (1) The provisions of this rule shall not apply to:
 - (A) Adhesives, adhesive primers, sealants, or sealant primers, and associated application processes that are subject to Rule 1124;
 - (B) Adhesive tape;
 - (C) Regulated products shipped, supplied, or sold to persons for use outside the District; or
 - (D) Distribution centers that do not ship regulated products into or within the District.
- (2) The provisions of this rule, except paragraphs (f)(2)(C), shall not apply to aerosol adhesives and primers dispensed from non-refillable aerosol spray systems.
- (3) The provisions of this rule, except paragraphs (g)(1) and (g)(2), shall not apply to:
 - (A) Regulated products sold in quantities of one fluid ounce or less;
 - (B) Adhesives used to glue flowers to parade floats;
 - (C) Adhesives used to fabricate orthotics and prosthetics under a medical doctor's prescription; or
 - (D) Shoe repair, luggage, and handbag adhesives.
- (4) The provisions of subdivision (c) shall not apply to:

- (A) Research and development programs and quality assurance labs. Records shall be maintained in accordance with the provisions of subdivision (d) of this rule; or
 - (B) Solvent welding operations used in the manufacturing of medical devices.
- (5) The provisions of paragraph (c)(1) shall not apply to the following:
- (A) Adhesives used in tire repair;
 - (B) Adhesives and/or adhesive application processes in compliance with Rules 1104, 1106, 1128, 1130, and 1130.1;
 - (C) A facility that demonstrates that the total volume of noncompliant products is less than 55 gallons per facility per calendar year. A facility may not use this paragraph to exclude noncompliant adhesives used in architectural applications, contact adhesives, special purpose contact adhesives, and adhesives used on porous substrates. Effective January 1, 2019, a facility may not use this paragraph to exclude noncompliant rubber vulcanization adhesives and top and trim adhesives; or
 - (D) Regulated products used in the field installation and repair of potable water linings and covers at water treatment, storage, or water distribution facilities.
- (6) The provisions of paragraph (c)(6) shall not apply to regulated products with a viscosity of 200 centipoise or greater.
- (7) The provisions of subdivision (f) shall not apply to thermoplastic hot melt adhesives or to regulated products offered for sale as a dry mix, containing no polymer, which are ready for use or only mixed with water prior to use, and include, but are not limited to, grouts, cements, and mortars.
- (8) The provisions of subdivisions (c) and (d), shall not apply to regulated products with a VOC content no more than 20 grams per liter, less water and less exempt compounds, or no more than 20 grams per liter material for low-solids regulated products.
- (9) Until January 1, 2021, the provision of paragraph (g)(1) and (g)(2) shall not apply to solvent welding formulations containing methylene chloride used to bond hard acrylic, polycarbonate, and polyethylene terephthalate glycol plastic fabrications, provided:
- (A) The concentration of methylene chloride in any solvent welding formulation does not exceed 60 percent by weight; and

- (B) The purchase of all solvent welding products does not exceed 20 gallons per calendar year at a single facility, as demonstrated by purchase records and invoices of methylene chloride containing solvent welding formulations. Such records shall be made available to the Executive Officer upon request.
- (10) The provisions of this rule shall not apply to regulated products, which weigh one pound or less, or consist of 16 fluid ounces or less and have VOC content limits in Section 94509(a) of the Consumer Products Regulation, unless they are:
 - (A) Incorporated into or used exclusively in the manufacture or construction of the goods or commodities, and not exempted in paragraph (i)(2); or
 - (B) Used in pollution-generating activities that take place at stationary sources, excluding maintenance and repair, and not exempted in paragraph (i)(2).
- (11) As of January 1, 2018, the provisions of subdivision (c)(1) and (g) shall not apply to any manufacturer or supplier of regulated products provided the product was sold to an independent distributor that was informed in writing, including electronic formats, by the manufacturer or supplier, that the regulated product is not to be used in the South Coast Air Quality Management District. Manufacturers utilizing this provision shall maintain notification letters for three (3) years, which shall be made available to the Executive Officer or designee upon request.