

Rule 1168 Survey Instructions

WHY REPORT ANNUAL QUANTITY AND VOC INFORMATION?

The data collected is used to update the emissions inventory for the [South Coast Air Quality Management District](#) (SCAQMD), which includes Orange County, the non-desert portions of Los Angeles and San Bernardino counties, and the Riverside County areas west of the Palo Verde Valley. This survey is essential to properly design and evaluate clean air strategies for this region's Air Quality Management Plan in order to comply with state and federal air quality standards. The information supplied pursuant to this survey is not intended to be used and will not be used to support the issuance of a Notice of Violation.

WHO SHOULD SUBMIT?

Manufacturers and distributors of adhesives and sealants sold in the SCAQMD. Adhesive and sealants include (but are not limited to) the following products:

- Adhesives
- Adhesive primers
- Adhesive promoters
- Spray foams
- Pipe dopes
- Insulating foams
- Sealants
- Sealant primers
- Plastic welding products

SUBMITTAL DATE

Please submit the survey information by **August 16, 2013**.

PROGRAM SUPPORT

Free support is available from SCAQMD staff. Support staff will be available from 8:00 a.m. to 5:00 p.m., Tuesday through Friday. Please call Mike Morris at (909) 396-2390 or you can send your questions via e-mail to mmorris@aqmd.gov (please include your telephone number).

SURVEY INFORMATION

Column A - Name of Product Manufacturer: List the manufacturer provided on the container label.

Column B - Product Name and Code: Words, characters, numbers and symbols providing a unique identification; include product code if available.

Column C - Rule 1168 Category (OPTIONAL): Enter the associated code for the product name above. Category definitions are defined below and/or as defined in Rule 1168 – Adhesive and Sealant Applications. For products with more than one applicable category, select the most commonly used category. If no category is applicable, select “Substrate Adhesive – All Other Substrates”

Column D - Regulatory VOC (g/L): Enter the VOC content in grams of VOC per liter as supplied, or for multi-component products as recommended for use, by the manufacturer, less water, less exempt compounds. This may be determined from the formulation data or previously

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determined by U.S. EPA Reference Test Method 24 (Determination of Volatile Matter Content, Water Content, Density, Volume Solids, and Weight Solids of Surface Coatings, Code of Federal Regulations Title 40, Part 60, Appendix A) with the exempt compounds' content determined by Method 303 (Determination of Exempt Compounds) in the South Coast Air Quality Management District's (SCAQMD) "Laboratory Methods of Analysis for Enforcement Samples" manual, or Method 304 [Determination of Volatile Organic Compounds (VOC) in Various Materials] in the SCAQMD's "Laboratory Methods of Analysis for Enforcement Samples" manual. Refer to the definition below or SCAQMD Rule 1168.

Column E - Material VOC (g/L): Also known as Actual VOC. Enter the VOC content in grams of VOC per liter of material for each product as supplied or for multi-component products as recommended for use by the manufacturer. This is the weight of all volatile materials less the weight of water and less the weight of exempt compounds per the entire volume of the coating. This is **NOT** the same as Regulatory VOC. Refer to the definition below or SCAQMD Rule 1168.

Note: For a discussion of the difference between the VOC of coating and the VOC of material, as well as an Excel spreadsheet that can be used to calculate those values, please see the [SCAQMD VOC webpages](#).

Columns F to I - Contains: Please indicate with a "Y" if the products contains the listed solvent(s) in quantities greater than 0.1% by weight.

Column J – Consumer Product: Please indicate with a "Y" if the products are subject to the California Air Resources Board Consumer Products Regulation.

Column J - Quantity Sold: The total annual quantity (in gallons) of adhesive and sealants sold in the South Coast Basin. Please check the box marked "Confidential" if you wish the sales data to be treated as confidential pursuant to the District's Guidelines for Implementing the California Public Records Act.

DEFINITIONS

Definitions listed in below are subject to change and the contact person completing the report should review the latest versions of [Rule 1168 – Adhesive and Sealant Applications](#).

ACRYLIC is a thermoplastic or thermoset polymer or a copolymer of acrylic acid, methacrylic acid, esters of these acids, or acrylonitrile and is used in the production of adhesives.

ACRYLONITRILE-BUTADIENE-STYRENE (ABS) plastic is made by reacting monomers of acrylonitrile, butadiene, and styrene and is normally identified with an ABS marking.

ADHESIVE is any substance that is able or designed to be used to unite or bond two surfaces to each other and cures by either evaporation of solvents or by chemical reaction that occurs between two or more constituents. Adhesives include adhesive bonding primers, adhesive primers, adhesive primers for plastics, and any other primer.

ADHESIVE BONDING PRIMER is an adhesive that is applied to a surface to increase adhesive or film bond strength for subsequent adhesives.

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ADHESIVE PRIMER is a coating that is applied to a substrate, prior to the application of an adhesive, to increase adhesive or film bond strength for subsequent adhesives.

ADHESIVE PRIMER FOR PLASTIC is a material applied to a plastic substrate before applying an adhesive in order to obtain better adhesion.

ADHESIVE SOLID is the nonvolatile portion of an adhesive that remains after heating a sample of the material at 110°C for one hour.

AEROSOL ADHESIVE means any adhesive packaged as an aerosol product in which the spray mechanism is permanently housed in a nonrefillable can designed for hand-held application without the need for ancillary hoses or spray equipment. Aerosol adhesives include special purpose spray adhesives, mist spray adhesives, and web spray adhesives, as defined by the California Air Resources Board consumer products regulation found in Title 17 of the California Code of Regulations, beginning at Section 94507.

AEROSOL COATING PRODUCT is a pressurized coating product containing pigments or resins that dispenses product ingredients by means of a propellant, and is packaged in a disposable can for hand-held application, or for use in specialized equipment for ground traffic/marketing applications. **AEROSOL COATING PRODUCT** does not include “pump Spray.”

APPURTENANCES are accessories 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.

ARCHITECTURAL APPLICATION is the use of an adhesive, sealant, or sealant primer on stationary structures, including mobile homes, and their appurtenances.

ARCHITECTURAL SEALANT OR SEALANT PRIMER is any sealant or sealant primer applied to stationary structures, including mobile homes, and their appurtenances.

CARPET PAD ADHESIVE is an adhesive used for the installation of a carpet pad (or cushion) beneath a carpet.

CERAMIC TILE ADHESIVE is an adhesive used for the installation of ceramic tile products.

CERAMIC TILES are a ceramic surfacing unit made from clay or a mixture of clay and other materials.

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.

CONTACT ADHESIVE is an adhesive applied to two separate surfaces, allowed to dry, and brought together for adhesion and bonding with subsequent pressure.

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COVE BASE ADHESIVE is an adhesive used during the installation of cove base (or wall base), which is generally made of vinyl or rubber, on a wall or vertical surface at floor level.

CYANOACRYLATE ADHESIVE is a single-component reactive diluent adhesive that contains at least 85 percent by weight ethyl, methyl, methoxymethyl or other functional groupings of cyanoacrylate.

DRY WALL ADHESIVE is an adhesive used during the installation of gypsum dry wall to studs or solid surfaces.

EXEMPT COMPOUNDS are as defined in Rule 102.

FIBERGLASS is fine filaments of glass.

FOAM is a rigid or spongy cellular mass with gas bubbles dispersed throughout.

GLUE is a hard gelatin obtained from hides, tendons, cartilage, bones, or other parts of animals.

GRAMS OF VOC PER LITER OF ADHESIVE OR SEALANT, LESS WATER AND LESS EXEMPT COMPOUNDS is the weight of VOC per combined volume of VOC and adhesive or sealant solids, and can be calculated by the following equation:

Grams of VOC per Liter of Adhesive or Sealant, 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 adhesives or sealants that contain reactive diluents, the VOC content of the adhesive or sealant is determined after curing. The grams of VOC per liter of any adhesive or sealant, except a low solids adhesive or sealant shall be calculated by the following equation:

Grams of VOC per Liter of Adhesive or Sealant, Less Water and Less

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

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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_m	=	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

GRAMS OF VOC PER LITER OF MATERIAL is the weight of VOC per volume of material, to be used for a low-solids adhesive or sealant, 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

INDOOR CARPET ADHESIVE is an adhesive used during the installation of a carpet that is in an enclosure and is not exposed to ambient weather conditions during normal use.

LIGHT CURABLE ADHESIVES and SEALANTS are single-component reactive adhesives and sealants that cure upon exposure to visible-light, ultra-violet light or to an electron beam.

LOW-SOLIDS ADHESIVE is any adhesive that contains less than one pound of solids per gallon of material (or 120 grams of solids per liter of material).

LOW-SOLIDS ADHESIVE PRIMER is any adhesive primer that contains less than one pound of solids per gallon of material (or 120 grams of solids per liter of material).

MARINE DECK SEALANT is any sealant that is applied to wooden marine decks of ships, boats, and their appurtenances and is specified for the marine environment.

MARINE DECK SEALANT PRIMER is any sealant primer that is applied to wooden marine decks of ships, boats, and their appurtenances and is specified for the marine environment.

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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.

MODIFIED BITUMINOUS MATERIALS are materials obtained from natural deposit 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.

MULTIPURPOSE 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.

NONMEMBRANE ROOF ADHESIVE is any adhesive to be used for the installation or repair of nonmembrane roofs. This category includes plastic or asphalt roof cement, asphalt roof coatings, and cold application cement.

NONMEMBRANE ROOF SEALANT is any sealant to be used for installation or repair of nonmembrane roofs. This category includes plastic or asphalt roof cement, asphalt roof coatings, and cold application cement.

OUTDOOR CARPET ADHESIVE is an adhesive used during the installation of carpet that is not in an enclosure and is exposed to ambient weather conditions during normal use.

PANEL ADHESIVE is an adhesive used for 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.

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

PLASTIC CEMENT WELDING 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.

PLASTIC FOAM is a foam constructed of plastics.

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 used to produce pipe, solid sheet, film, or bulk products.

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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.

POLYETHYLENE TEREPHALATE (PET, PETE) is a thermoplastic polyester formed from ethylene glycol by direct esterification or by catalyzed ester exchange between ethylene glycol and dimethyl terephalate.

POLYETHYLENE TEREPHALATE GLYCOL (PETG) is a glycol modified polyethylene terephalate.

POLYURETHANE FOAMS are plastic foams, as defined in "Whittington's Dictionary of Plastics," page 329, and may be either rigid or flexible.

POLYVINYL CHLORIDE (PVC) plastic is a polymer of the chlorinated vinyl monomer that contains 57 percent chlorine.

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.

PRIMER is a material applied to a surface to provide a firm bond between the substrate and a subsequent adhesive.

REACTIVE DILUENT is a liquid which is a VOC during application and one in which, through chemical and/or physical reactions, such as polymerization, 20 percent or more of the VOC becomes an integral part of the adhesive, sealer or primer sealer.

ROADWAY SEALANT is any sealant to be applied to public streets, highways, and other surfaces, including but not limited to curbs, berms, driveways, and parking lots.

ROLL COATER is a series of mechanical rollers that form a thin coating or adhesive film on the surface roller, which is applied to a substrate by moving the substrate underneath the roller.

RUBBER FLOORING ADHESIVE is an adhesive that is used for the installation of flooring material in which both the back and the top surface are made of synthetic rubber, and which may be in sheet or tile form.

RUBBER FOAM is a foam constructed of natural or synthetic rubber.

SEALANT is any material with adhesive properties that is formulated primarily to fill, seal, or waterproof gaps or joints between two surfaces. Sealants include sealant primers and caulks.

SEALANT PRIMER is any product applied to a substrate, prior to the application of a sealant, to enhance the bonding surface.

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SHEET-APPLIED RUBBER LINING OPERATION is the hand application of sheet rubber lining to metal or plastic substrates in order to protect the underlying substrate from corrosion or abrasion. These operations also include laminating sheet rubber to fabric.

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.

SINGLE-PLY ROOF MEMBRANE SEALANT is any sealant to be used for the installation or repair of single-ply roof membrane to the edge of the roof and applying flashings to vents, pipes, or ducts that protrude through the membrane.

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.

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.

STRUCTURAL GLAZING ADHESIVE is any adhesive to be used to adhere glass, ceramic, metal, stone, or composite panels to exterior building frames.

STRUCTURAL WOOD MEMBER ADHESIVE is an adhesive used for the construction of any load bearing joints in wooden joists, trusses, or beams.

SUBFLOOR ADHESIVE is an adhesive used for the installation of subflooring material over floor joists.

THIN METAL LAMINATING is a process of 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.

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.

TIRE RETREAD 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.

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.

TRAFFIC MARKING TAPE is preformed reflective to be applied to public streets, highways, and other surfaces, including but not limited to curbs, berms, driveways, and parking lots.

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TRAFFIC MARKING TAPE ADHESIVE PRIMER is any adhesive primer to be applied to surfaces prior to installation of traffic marking tape.

VCT means Vinyl Composition Tile and is a material made from thermoplastic resins, fillers and pigments.

VOLATILE ORGANIC COMPOUND (VOC) is as defined in Rule 102 - Definition of Terms.

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.

WOOD PARQUET FLOORING is wood flooring in tile form constructed of smaller pieces of wood which are joined together in a pattern by the maker to form the tile.

WOOD PLANK FLOORING is solid or laminated wood in plank form.