Proposed Amended Rule 1168:
Adhesive and Sealant Applications

PUBLIC WORKSHOP

August 17, 2017
SCAQMD Auditorium
Background

• Rule adopted in 1989; last amended in 2005
• Most current limits established in 2000 - *No significant VOC reductions in 17 years*
• Applies to adhesives, adhesive primers, sealant, and sealant primers
  • All uses excluding products regulated by CARB
• Current emissions inventory estimated to be 10.5 tons per day (tpd)- previously estimated at 4.1 tpd
• Growth industry
  • Use increases with population
  • Increased interest in adhesives and sealants used for insulation/energy efficiency
• Significant advances in technology over the past decade
• Rule amendment process began in 2013
Public Process

2013/2014
• Survey
• Eight Working Group Meetings
• Six drafts of the rule and a preliminary draft staff report released
• Stakeholder meetings/comments
• Proposed 4.4 tpd total emissions reductions
  • 22 affected categories
  • Considered use of tBAc and DMC as an exempt VOC

2017
• Three Working Group Meetings
• Two drafts of the rule
• Preliminary Draft Staff Report
• Stakeholder meetings/comments
• Proposed 1.4 tpd total emissions reductions
  • 14 affected categories
  • tBAc and DMC not exempt VOC
Objective of Proposed Amended Rule 1168

- VOC emission reductions needed to meet federal air quality standards and achieve healthy air
- VOC reductions effective for achieving 1979 1-hour ozone standard by 2022 and 1997 8-hour ozone standard by 2023
- Since 2000, Rule 1168 has not had significant
  - VOC reductions
  - Amendments or clarification to rule language
- Stakeholder support for updating rule language
Proposed Amended Rule 1168

• Purpose and Applicability
  • Clarify that the purpose of the rule is to reduce VOC and toxic air contaminants
  • Clarify that applicability applies to:
    • Manufacture, sale, and use of adhesives, adhesive primers, sealants, and sealant primers
  • Excludes regulated products
    • Exclusively for consumer or institutional use
    • Weigh one pound or less and consist of 16 fl oz or less
    • Have applicable VOC limit in the California Air Resources Board (CARB) Consumer Products Regulation (CPR)
Proposed Amended Rule 1168 (Cont.)

• Definitions
  • Delete definitions that restate dictionary definition or provide no additional insight
  • Revise definitions to be more consistent with Ozone Transport Commission (OTC) and CARB
  • Add definitions for terms or categories now referenced in the rule
  • Added to assist with understanding applicability, administrative requirements, VOC table of standards
Definitions - Additions

To clarify meaning of terms within the rule:

- Adhesive Tape
- Ambient Reactive Cure Adhesive
- Architectural Appurtenance
- Big Box Retailer
- Building Envelope
- Consumer Products Regulation
- CPVC Welding Cement
- Dip Coat
- Distribution Center
- Electrostatic Application
- Energy Curable Adhesives and Sealants
- Establishments
- Flow Coat
- Institutional Use
- Insulating Foam
- Maintenance
- Manufacturing
- Marine Appurtenances
- Ozone-Depleting Compound
- Plastic Adhesive Primer
- Private Labeler
- PVC Welding Cement
- Regulated Product
- Repair
- Rubber
- Toll Manufacturer
- Toxic Air Contaminant (TAC)
• New Categories:
  • ABS to PVC Transition Cement
  • Building Envelope Membrane Adhesives
  • Edge Glue
  • Foam Sealant
  • Grout
  • Non-Staining Plumbing Putty

• Potable Water Architectural Sealant
• Pressure Sensitive Adhesive
• Rubber Vulcanization Adhesive
• Vehicle Glass Adhesive Primer
• Waterproof Resorcinol Glue
Definitions - Deletions

Deleted or Substituted:

- Adhesive Bonding Primer
- Adhesive Primer for Plastic
- Adhesive Promoter
- Adhesive Solid
- Aerosol Spray Can
- Aerospace Component
- Aircraft
- Aircraft Tire Repair
- Architectural Sealant or Sealant Primer
- Ceramic Tiles
- Coating Solid
- Foam
- Glue
- Light Curable Adhesives and Sealants
- Low-Solids Adhesive Primer
- Non-membrane Roof Adhesive/Sealant
- Orthotics and Prosthetics
- Polyurethane Foams
- Primer
- Propellant
- Rubber Foam
- Sheet Applied Rubber Lining Operation
- Space Vehicle
- Viscosity
- Wood Parquet Flooring
- Wood Plank Flooring
Definitions - Revisions

- Adhesive
- Adhesive Primer
- Aerosol Adhesive
- Architectural Application
- Ceramic, Glass, Porcelain, and Stone Tile Adhesive
- Contact Adhesive
- Cove Base
- Cyanoacrylate Adhesive
- Grams of VOC Per Liter of Regulated Product, Less Water and Less Exempt Compounds
- Grams of VOC Per Liter of Material
- Hand Application Methods
- High-Volume, Low-Pressure (HVLP) Spray
- Indoor Floor Covering Adhesive
- Low-Solids
- Marine Deck Sealant
- Marine Deck Sealant Primer
- Outdoor Floor Covering Adhesive
- Person
- Plastics
- Polyvinyl Chloride (PVC)
- Reactive Products
- Roll Coater
- Sealant
- Sealant Primer
- Single-Ply Roof Membrane Sealant
- Tire Tread Adhesive
- Traffic Marking Tape
- Traffic Marking Tape Adhesive Primer
- Transfer Efficiency
- Vinyl Compositions Tile
Proposed Amended Rule 1168 (Cont.)

• Requirements
  • Substitute the default VOC limit of 250 g/L (paragraph (c)(1)) to be included in the Table of Standards as “Other” category (e.g. all other adhesives and all other adhesive primers)
    • “Non-membrane sealants” replaced by “Other Roof Sealants”
    • Non-membrane adhesives captured under “Other Roof Adhesives”
  • Changed layout of the Table of Standards to include all categories
<table>
<thead>
<tr>
<th>Category</th>
<th>VOC Limits (g/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Current (2005 Version)</td>
</tr>
<tr>
<td>Adhesives</td>
<td></td>
</tr>
<tr>
<td>Building Envelope Membrane Adhesive</td>
<td>250</td>
</tr>
<tr>
<td>Other Outdoor Floor Covering Adhesives</td>
<td>150</td>
</tr>
<tr>
<td>Other Roof Adhesive</td>
<td>250</td>
</tr>
<tr>
<td>Single-Ply Roof Membrane Adhesive</td>
<td>250</td>
</tr>
<tr>
<td>ABS to PVC Transition Cement Welding</td>
<td>250</td>
</tr>
<tr>
<td>CPVC Welding</td>
<td>490</td>
</tr>
<tr>
<td>PVC Welding</td>
<td>510</td>
</tr>
<tr>
<td>Other Plastic Welding</td>
<td>250</td>
</tr>
<tr>
<td>Wood Flooring Adhesive</td>
<td>100</td>
</tr>
<tr>
<td>Edge Glue</td>
<td>250</td>
</tr>
<tr>
<td>Rubber Vulcanization Adhesive</td>
<td>250 b</td>
</tr>
<tr>
<td>Top and Trim Adhesive</td>
<td>250 b</td>
</tr>
<tr>
<td>Waterproof Resorcinol Glue c</td>
<td>250</td>
</tr>
<tr>
<td>Substrate Specific Adhesive Applications</td>
<td></td>
</tr>
<tr>
<td>Reinforced Plastic Composite c</td>
<td>250</td>
</tr>
<tr>
<td>Sealants and Caulks</td>
<td></td>
</tr>
<tr>
<td>Clear, Paintable, Immediately Water-Resistant</td>
<td>250</td>
</tr>
<tr>
<td>Foam Sealant</td>
<td>250</td>
</tr>
<tr>
<td>Grout</td>
<td>250</td>
</tr>
<tr>
<td>All Other Roof</td>
<td>300</td>
</tr>
<tr>
<td>Single-Ply Roof Membrane</td>
<td>450</td>
</tr>
<tr>
<td>All Other Architectural Applications</td>
<td>250</td>
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<tr>
<td>All Other Sealants</td>
<td>420</td>
</tr>
<tr>
<td>Adhesive Primers</td>
<td></td>
</tr>
<tr>
<td>Pressure Sensitive</td>
<td>250</td>
</tr>
<tr>
<td>Vehicle Glass</td>
<td>250</td>
</tr>
</tbody>
</table>

Table of Standards: Proposed Categories

a. Contingent on ASTM change
b. Predominantly sold under the 55 gals/year exemption
c. EPA’s RACM/BACM requirements
d. Tech Assessment one year prior to January 1, 2023
Proposed Amended Rule 1168 (Cont.)

• Regulated Product Categorization
  • Moved and clarified the language regarding products that could fall under multiple categories

• Sell-Through Provision
  • 3 year Sell-through and Use-through for products manufactured prior to VOC limit change
Proposed Amended Rule 1168 (Cont.)

• Requirements are clarified for the following:
  • Solvent Cleaning is subject to Rule 1171 - Solvent Cleaning Operations
  • Transfer Efficiency excluding high viscosity products moved to paragraph (i)(14)

• Control Devices
  • Compliance with Reasonably Available Control Technology/Measures (RACT/RACM) requirement - increase VOC emission efficiency from 80% to 90/95%
• Disposal of Regulated Products and VOC-Laden Cloth
  • Language modified for clarification

• Storage and Mixing
  • The proposed rule requires that containers for storage or mixing shall remain closed except while in use
  • Product storage restriction - non-compliant products cannot be stored on premises (e.g. in stock room), does not apply to:
    • Products sold for use outside SCAQMD
    • Facilities with control equipment (burden of proof on end user)
Proposed Amended Rule 1168 - Test Methods

- Standard Gravitational Method
  - EPA Method 24
    - Applicable to sealants
- Direct VOC Method
  - SCAQMD Method 313 - GC Method
    - Applicable to low-VOC, high water/exempt products

- Sandwich Methods
  - SCAQMD Method 316A - Pipe Fittings
  - SCAQMD Method 316B - Cyanoacrylate
    - Applicable to thin film adhesives/adhesive primers
    - No spacers
- Appendix A to Subpart PPPP of 40 CFR Part 63
  - Applicable to thick film adhesives/adhesive primers
  - 1/8” spacer
Administrative Requirements: Labeling

• Effective January 1, 2019, containers must include VOC content and manufacturing date, does not apply to:
  • Consumer products
  • Products sold in containers having capacities of one fluid ounce or less

• Higher-VOC niche category labeling requirements:
  • Top and Trim Adhesive
  • Rubber Vulcanization Adhesive
  • Pressure Sensitive Adhesive Primer
  • ABS to PVC Transition Cement
Administrative Requirements: Reporting

• Reporting:
  • Quantity and Emission Reports required every 3 years until 2025, every 5 years thereafter, sunset in 2040
    • Manufacturers and private labelers
      • Separate reporting requirements for aerosol and non-aerosol regulated products
    • Big Box Retailers and Distribution Centers
      • Report to manufacturer to assist in providing accurate sales for products shipped to distribution centers
  • Annual Report for End users utilizing 55 gallon/year exemptions
### Administrative Requirements: Reporting

#### Reporting Timeline

<table>
<thead>
<tr>
<th>Reporting Deadline</th>
<th>Big Box &amp; Distribution Centers</th>
<th>Reported Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>September 1, 2019</td>
<td>May 1, 2019</td>
<td>2016, 2017, 2018</td>
</tr>
<tr>
<td>September 1, 2022</td>
<td>May 1, 2022</td>
<td>2019, 2020, 2021</td>
</tr>
<tr>
<td>September 1, 2025</td>
<td>May 1, 2025</td>
<td>2022, 2023, 2024</td>
</tr>
<tr>
<td>September 1, 2030</td>
<td>May 1, 2030</td>
<td>2027, 2028, 2029</td>
</tr>
<tr>
<td>September 1, 2035</td>
<td>May 1, 2035</td>
<td>2032, 2033, 2034</td>
</tr>
<tr>
<td>September 1, 2040</td>
<td>May 1, 2040</td>
<td>2037, 2038, 2039</td>
</tr>
</tbody>
</table>
Administrative Requirements: QER

- Product manufacturer (as labeled)
- Product name and code
- Applicable Rule 1168 category
- Regulatory VOC content
- Material VOC content
- Utilization of Sell-Through Provision
- Designation as to whether or not the product is Low Solids
- Product type (water/solvent based)
- Volume sold into or within the District, reported in gallons of container size
Administrative Requirements: Reporting

- Aerosol adhesive and aerosol adhesive primer Quantity and Emission Report
  - Product manufacturer
  - Product name and code
  - VOC content, *in weight percent*
  - Total weight sold
  - Container size of product

- Would consider allowing volumes to be estimated based on CA population
Proposed Amended Rule 1168 (Cont.)

• Prohibition of sale and use excludes products:
  • Subject to the CARB CPR
  • Products sold for use outside SCAQMD

• Prohibits use of Group II exempt solvents except volatile methyl siloxanes

• Sunset prohibition of sale for solvent welding operations containing methylene chloride January 1, 2021
Exemptions

- Modified language regarding the CARB CPR applicability to excludes maintenance and repair
- Streamlined recordkeeping options for regulated products with VOC content of 20 grams per liter (g/L) or less
- 55 gal/year exemption restricted to excluding Top & Trim Adhesive and Rubber Vulcanization Adhesive - effective January 1, 2018 *(received request to extend one year)*
Exemptions

• Amend the exemption for regulated products shipped out of SCAQMD jurisdiction to require manufacturers and suppliers to maintain notification letters
• Exempt distribution centers that do not ship regulated products into or within the SCAQMD
• Exempt regulated products:
  • Offered for sale as dry mix
  • Used in field installation and repair of potable water linings and covers at water treatment, storage or water distribution facilities
Stakeholder Key Concerns

- Expanding scope of Rule 1168
  - Not expanding, but codifying how the rule is already enforced
  - Supported by CARB Correspondence Letters

- Initial proposal to limit aerosol use
  - Aerosol exemption retained, but still subject to new reporting requirements

- Providing accurate sales volume for aerosol adhesives and adhesive primers
  - District staff will consider aerosol reporting to be based on population

- Include CARB 310 test method for aerosols
  - Aerosol exemption is retained so testing should not be an issue
  - SCAQMD laboratory developing a new test method for aerosol foam sealants
Stakeholder Key Concerns (Cont.)

• Reporting requirements too burdensome
  • Staff needs accurate inventory data for planning purposes
  • Emission inventory from 2016 AQMP was underestimated (4.1 tpd versus 10.5 tpd estimated from the survey)
  • Growth industry
  • Frequency of reporting has been lessened over several rule proposal changes
  • Included a sunset date

• Reporting accurate sales into the District would be difficult
  • Staff included requirements for Big Box retailers and distribution centers to assist manufacturers and private labelers to comply
• Allow products to be grouped in QER
  • Based on past experience, grouping is difficult to track and report
  • Compliance staff must be able to determine if products found in the field have been reported

• Allow aerosol QER to be based on VOC weight percent
  • Proposed rule modified to allow weight percent for aerosol QER
  • Proposed rule allows annual sales in pounds instead of gallons
Stakeholder Key Concerns (Cont.)

- Remove Equivalent and Multiple Test Method subparagraphs
  - Equivalent Test Method provision provides flexibility for emerging technologies and/or niche products
  - Staff is evaluating Multiple Test Method requirement
  - Staff will develop a guidance document that states which test method should be utilized for each regulated product
• Delay effective dates for certain VOC limit reductions
  • Received feedback supporting feasibility of dates for several categories
  • Some effective dates have been delayed from original proposal

• VOC Limits are not feasible for various categories
  • Technology assessments proposed where there is not a large volume of future complaint products
  • Considering higher final VOC limit for pipe cements (400 g/L for CPVC from 490 g/L; 425 for PVC and ABS to PVC Transition Cement from 510 g/L) to ensure product stability and ASTM compliance
Stakeholder Key Concerns (Cont.)

- Rule applicability and compliance should be determined by use and is not manufacturer’s responsibility
  - Rule compliance determination is based on both appropriate product labeling (manufacturer) and product use (user)
  - Manufacturer is responsible for reporting applicable categories and subject to most restrictive VOC limit
  - Not the manufacturer’s responsibility if a product is used in a non-compliant manner unless the manufacturer recommended it for that use
California Environmental Quality Act (CEQA)

- California State Law adopted 1970
- Purpose [CEQA Guidelines § 15002(a)]
  - Inform governmental decision-makers and public about potential significant effects of projects
  - Identify ways to avoid or reduce adverse impacts
  - Require feasible alternatives and mitigation measures to prevent significant environmental damage
  - Disclose to the public why a project was approved
- Applies to projects undertaken by a Public Agency such as SCAQMD adoption of rules [CEQA Guidelines § 15002(b)]
  - Required to comply with CEQA when approving a project [CEQA Guidelines § 15002(d)]
  - Required for discretionary approvals [CEQA Guidelines § 15002(i)]
- Lead Agency = SCAQMD
  - Oversight and legal responsibility for appropriate CEQA document preparation, circulation, response to comments, and approval/certification
• PAR 1168 is a project subject to CEQA
• Decision to prepare 30-day Draft Environmental Assessment (EA)
  • Equivalent to a Negative Declaration when no significant impacts identified
  • No CEQA scoping meeting is required to be held
  • Analysis of alternatives and mitigation measures not required
  • Will contain project description (Chapter 1) and environmental checklist (Chapter 2) to evaluate project’s impacts on 17 topic areas
  • Was released for 30-day public review period from August 16, 2017 to September 15, 2017
• Final EA
  • Will include responses to Draft EA comment letters and any necessary modifications to Draft EA
  • Governing Board must certify Final EA
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Schedule

- Comments Due: August 31, 2017
- Set Hearing: September 1, 2017
- CEQA Comments Due: September 14, 2017
- Stationary Source Committee: September 15, 2017
- Public Hearing: October 6, 2017