

Proposed Amended Rule 1168: Adhesive and Sealant Applications

WORKING GROUP MEETING #1

WEDNESDAY, MAY 10, 2017

Background

- ▶ Rule adopted in 1989; Rule 1168 last amended in 2005
- ▶ Applies to adhesives, adhesive primers, caulks, sealants and sealant primers
 - ▶ All uses excluding products regulated by CARB
- ▶ Most current limits established in 2000
- ▶ Current emissions inventory estimated to be greater than 6 tons per day (tpd)
- ▶ Significant advances in technology over the past decade

2013/2014 PAR 1168

- ▶ Survey - 2013
- ▶ Eight Working Group Meetings
- ▶ Preliminary Rule Language (6 drafts)
- ▶ Comment Letters (Received Jan – Feb 2014)
- ▶ Preliminary Draft Staff Report
- ▶ Amendment put on hold due to uncertainty with exempting tertiary Butyl Acetate (tBAC)/Dimethyl Carbonate (DMC) as VOCs
- ▶ Working group consensus on a number of issues
- ▶ Industry support to continue rule amendment process

Precautionary Approach

Ensure regulatory VOC reductions do not encourage the use of chemicals that have a known or suspected toxic profile

▶ DMC

- ▶ Developmental toxin
- ▶ Not considering exemption

▶ tBAC

- ▶ Waiting for Scientific Review Panel to finalize Cancer Potency Factor (CPF)
 - ▶ Any CPF indicates a compound is a carcinogen

If deemed carcinogen

- No further exemptions
- May remove current exemptions

If not deemed carcinogen

- Consider including in Rule 102 – Definition of Terms

- ▶ Reconsider previously proposed VOC limits without tBAC/DMC exemption

Proposed VOC Limits

- ▶ 2013 survey data used where available
- ▶ Product review conducted
 - ▶ Marketing literature
 - ▶ Online literature
 - ▶ Store shelves (field research)
- ▶ VOC limits would become effective 18 months after adoption (as in 2014 Proposed Amended Rule) except:
 - ▶ Foam Sealants (1/1/2018 and 1/1/2020)
 - ▶ Rubber Vulcanization Adhesives (1/1/2022)
- ▶ “Most restrictive” limit applies
- ▶ Any regulated product without a specific category limit is subject to appropriate “Other” limit

Proposed Amended Rule 1168

- ▶ Purpose and Applicability
 - ▶ Clarify that the purpose of the rule is to reduce VOC and toxic air contaminants
 - ▶ Applies to manufacture, sale and use of adhesives, adhesive primers, caulks, sealants and sealant primers
- ▶ Definitions
 - ▶ Delete definitions that restate dictionary definition or provide no additional insight
 - ▶ Clarify that primers must be film-forming and include promoters, bonding primers, etc.
 - ▶ Revise definitions to be more consistent with Ozone Transport Commission (OTC)
 - ▶ Revise “Cyanoacrylate” definition and replace conditional exemption with appropriate VOC limit

Proposed Amended Rule 1168 (Cont.)

- ▶ Container labeling
 - ▶ VOC Content and date code/manufacture date
 - ▶ Does not apply to consumer products or products sold in containers having capacities of two fluid ounces or less
- ▶ Product storage
 - ▶ Containers of products with non-compliant VOC content may not be stored on premises
 - ▶ Does not apply to products sold and shipped for use outside SCAQMD or facilities with control equipment

Proposed Amended Rule 1168 (Cont.)

- ▶ Annual report of regulated products sold into SCAQMD until 2020 followed by reporting every other year
 - ▶ Product name, VOC content, and volume sold
 - ▶ VOC content shall be reported as calculated or tested
 - ▶ Only products with VOC contents of 20 g/L or less may be reported as “less than or equal to”
 - ▶ VOC content determination data must be provided upon request
- ▶ SCAQMD to develop publicly searchable database of compliant products

Proposed Amended Rule 1168 (Cont.)

- ▶ 55 gallon per year exemption
 - ▶ Two major use groups identified
 - ▶ Top & Trim
 - ▶ Rubber vulcanization adhesive/primer
 - ▶ Incorporate higher VOC limits to address technology limitations & narrow exemption
 - ▶ Annual reporting by facilities utilizing 55 gal/yr exemption

Proposed Amended Rule 1168 (Cont.)

- ▶ Eliminate complete exemption for consumer products used in manufacturing operations
- ▶ Limit exemption for aerosol products to 16 oz/day
- ▶ Provide limited exemptions for low-VOC content products as incentives

Proposed Amended Rule 1168 (Cont.)

- ▶ Prohibit use of Group II exempt solvents except volatile methyl siloxanes
- ▶ Sell-through and use-through included
 - ▶ Effective dates should accommodate typical shelf life
 - ▶ Allow sell-through/use-through up to three years
- ▶ Include prohibition of sale, will not apply to:
 - ▶ Products subject to Consumer Products Regulation
 - ▶ Products sold for use outside SCAQMD

Proposed Amended Rule 1168 (Cont.)

- ▶ Rubber Cement
 - ▶ Recommending exemption until 2021 to allow CARB to adopt limit in CPR
- ▶ Methylene chloride containing products
 - ▶ Retain exemption for solvent welding of hard acrylic substrates
- ▶ Control equipment efficiency
 - ▶ Limit output to 50 ppm VOC by volume

Test Methods

- ▶ Standard Gravitational Method
 - ▶ EPA Method 24
 - ▶ Applicable to sealants
- ▶ Sandwich Methods
 - ▶ SCAQMD Method 316A – Pipe Fittings
 - ▶ Lab experimenting with standard sheet method
 - ▶ SCAQMD Method 316B – Cyanoacrylate
 - ▶ Applicable to thin film adhesives/adhesive primers
 - ▶ No spaces
 - ▶ Appendix A to Subpart PPPP of 40 CFR Part 63
 - ▶ Applicable to thick film adhesives/adhesive primers
 - ▶ 1/8" spacer

Test Methods (Cont.)

- ▶ Direct VOC Method
 - ▶ SCAQMD Method 313 – GC Method
 - ▶ Applicable to low-VOC, high water/exempt products
- ▶ Aerosol Method
 - ▶ SCAQMD Method 305
- ▶ Thin Film UV Adhesives
 - ▶ Adding to definition as a tool for formulators
 - ▶ Not a compliance method
- ▶ Experimental Methods
 - ▶ Polyurethane foams

Other issues/Method/Chemistries to consider?

Working Group Consensus

COMMENT

- ▶ Exempt consumer products used for repair and maintenance
- ▶ Reactive chemistries may not comply
- ▶ Include thin-film test method for Energy Curable products

STAFF RESPONSE

- ▶ Including “repair” and “maintenance” definitions
- ▶ Proposing new test methods to address concern
- ▶ Including this test method in definition section as option for manufacturers

Working Group Consensus (Cont.)

COMMENT

- ▶ Wood Flooring limit should be 50 or 100 g/L
- ▶ Subfloor Adhesive limit should be 50 g/L
- ▶ Structural Wood Membrane Adhesive should be 50 g/L
- ▶ Pressure Sensitive Adhesive Primer requires new limit

STAFF RESPONSE

- ▶ Recommending 50 g/L limit
- ▶ Recommending 50 g/L limit
- ▶ Recommending 50 g/L limit
- ▶ Recommending 785 g/L limit

Working Group Consensus (Cont.)

COMMENT

- ▶ Air Barriers better fit for Rule 1113
- ▶ Consumer products use in manufacturing not seller's responsibility

STAFF RESPONSE

- ▶ Fluid applied Building Envelope Coatings are now included in Rule 1113
- ▶ Proposing adhesives/adhesive primers for building envelope membranes
- ▶ Sales prohibition excludes CARB regulated consumer products

Remaining Issues

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COMMENT

- ▶ Rule should not apply to consumer products
- ▶ Rule should not apply to aerosol adhesives
- ▶ Low-VOC limits subject to freeze/thaw issues
- ▶ Static Dissipative Tile Adhesive needs 50 g/L limit

RESPONSE

- ▶ Proposed Rule will include consumer products used in manufacturing
- ▶ All technologies shall meet the same limits
- ▶ Low-VOC products currently available
- ▶ Reviewing available low-VOC alternatives

Remaining Issues (Cont.)

COMMENT

- ▶ Multi-purpose Construction Adhesive limit too low
- ▶ Foam Sealant limit infeasible due to cost
- ▶ Architectural Sealant limits too low
- ▶ Aerosol VOC limits should be in weight percent

STAFF RESPONSE

- ▶ Low-VOC products are available
- ▶ Alternative propellants appear cost-effective
- ▶ Low-VOC products are available
- ▶ Requesting working group input on appropriate format

Remaining Issues (Cont.)

COMMENT

- ▶ Single-Ply Roof Adhesive limit too low
- ▶ Single-Ply Roof Sealant limit too low
- ▶ Other Roof Adhesive limit too low
- ▶ Other Roof Sealant limit too low
- ▶ Clear, paintable, water-resistant sealant requires special limit

STAFF RESPONSE

- ▶ Currently reevaluating feasibility of lower VOC limit
- ▶ VOC limit under review

Remaining Issues (Cont.)

COMMENT

- ▶ Reporting 55 gal/yr exemption users burdensome
- ▶ Exempt 16 oz/day aerosol usage
- ▶ Exempt specialty shoe manufacturing

STAFF RESPONSE

- ▶ Proposed rule addresses most current exemption users. (i.e. Top & Trim, Rubber Vulcanization)
- ▶ Reporting will allow staff to assess if exemption is necessary
- ▶ 16 oz/day nearly identical to 55 gal/yr
- ▶ Awaiting testing documentation from industry

Other Areas of Research

- ▶ Adhesives and sealants for tile installations
 - ▶ Thin set – admix contains VOCs
 - ▶ Grout
- ▶ Edge Glue for fan apart carbonless paper
- ▶ Adhesives and adhesive primers for building envelope membranes

2017 Rule Process

- ▶ Restarting the rule process, using the 2013-2014 Proposed Amended Rule 1168 as a launching point
 - ▶ Working Group Meetings
 - ▶ Stakeholder Meetings/Conference Calls
 - ▶ Site Visits
 - ▶ Proposed Rule Language
 - ▶ Preliminary Draft Staff Report
 - ▶ Comment Letters

Schedule

- ▶ Working Group Meetings – Ongoing
- ▶ Stakeholder Meetings – Ongoing
- ▶ Public Workshop – June/July 2017
- ▶ Set Hearing – July 2017
- ▶ Board Meeting - September 1, 2017

Contact: Nicole Silva
AQ Specialist
nsilva@aqmd.gov
909-396-3384