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
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
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
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
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
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

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
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

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