

RULE 452 CAN COATING
Adopted 6-19-79
(Amended 11-29-83, 8-27-85, 8-21-90, 11-16-93, 9-5-96)

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100 GENERAL

- 201 **PURPOSE:** To limit emissions of volatile organic compounds from can coating operations. Coating operations subject to this Rule shall be exempt from the requirements of Rule 441.

200 DEFINITIONS

- 201 **COATING LINE:** An operation or process for applying, drying, baking and/or curing surface coatings, together with associated equipment including a coating applicator, flash-off area and oven.
- 202 **CAN COATING:** A coating applied or intended for application by spray, roller, or other means onto the interior and/or exterior surfaces of formed metal cans, or to the surface of flat metal sheets, strips, rolls, or coils intended for can construction.
- 203 **END SEALING COMPOUND:** A coating applied to can ends and which functions as a gasket when the end is assembled onto the can.
- 204 **EXEMPT COMPOUND:** For the purposes of this rule, "exempt compound" has the same meaning as in Rule 101—GENERAL PROVISIONS AND DEFINITIONS.
- 205 **EXTERIOR BASE COATING:** A coating applied to the exterior of a can to provide protection to the metal or to provide background for any lithographic or printing operation.
- 206 **INTERIOR BASE COATING:** A coating applied to the interior of a can to provide a protective lining between the product and the can.
- 207 **INTERIOR BODY SPRAY:** A coating sprayed on the interior of the can body to provide a protective lining between the product and the can.
- 208 **OVERVARNISH:** A coating applied directly over a design coating to reduce the coefficient of friction, to provide gloss and to protect the finish against abrasion and corrosion.
- 209 **THREE-PIECE CAN SIDE-SEAM SPRAY:** A coating sprayed on the interior and/or exterior of a welded, cemented or soldered seam to protect the exposed metal.
- 210 **TWO-PIECE CAN EXTERIOR END COATING:** A coating applied to the exterior end of a can to provide protection to the metal.
- 211 **VOLATILE ORGANIC COMPOUND (VOC):** For the purposes of this rule, "volatile organic compound" has the same meaning as in Rule 101—GENERAL PROVISIONS AND DEFINITIONS.

300 STANDARDS

- 301 **VOC LIMITATION:** Except as provided in Section 302, a person shall not use or apply any coating on any coating line of the type designated below which contain volatile organic compounds in excess of the following limits:

| Coating Category | Grams of VOC/liter of coating as applied, excluding water and exempt compounds |
|---|--|
| Interior Base Coating | 225 |
| Interior Base Coating Overvarnish | 225 |
| Exterior Base Coating | 225 |
| Exterior Base Coating Overvarnish | 225 |
| Two Piece Can Exterior Base Coating | 250 |
| Two Piece Can Exterior Base Coating Overvarnish | 250 |
| Two Piece Can Interior Body Spray | 440 |
| Three Piece Can Interior Body Spray | 510 |
| Two Piece Can Exterior End Coating | 250 |
| Three Piece Can Side Seam Spray | 660 |
| End Sealing Compound | 440 |
| | |
| 302 | EQUIVALENT CONTROL METHODS: Use or application of coatings which contain volatile organic compounds in excess of the limits specified in Section 301 shall not be allowed unless: |
| 302.1 | An emissions control device achieving 90% capture efficiency and 95% control device efficiency is used, as determined by the methods specified in Section 501.2 and 501.3, |
| 302.2 | An Operation and Maintenance Plan is approved by the Air Pollution Control Officer, and |
| 302.3 | Daily emissions do not exceed the level which would be achieved from the equivalent use of coatings which comply with the limits specified in Section 301. |
| | |
| 303 | SOLVENT USAGE: Any person using solvents after December 1, 1990: |
| 303.1 | Shall not use VOC containing materials which contain more than 200 grams of VOC per liter of material for cleanup of container assembly equipment, including slitters, bodymakers, beadlers, end seamers, flangers, and testers, excluding side seam spray application equipment, |
| 303.2 | Shall not store unused or waste solvent in open containers, and |
| 303.3 | Shall not store or dispose of fabric, paper, or any other waste materials used for cleanup or surface preparation in open containers. |
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| 400 | ADMINISTRATIVE REQUIREMENTS |
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| 401 | OPERATION AND MAINTENANCE PLAN: Any facility using an emission control device as a means of complying with this rule, as provided in Section 302, must submit with the application for Authority to Construct and resubmit annually, upon completion of construction of the emission control device, an Operation and Maintenance Plan for the emission control device to the Air Pollution Control Officer for approval. The Plan shall specify operation and maintenance procedures which will demonstrate continuous operation of the emission control device during periods of emissions-producing operations. The Plan shall also specify which records must be kept to document these operation and maintenance procedures. These records shall comply with the requirements of Sections 504 and 505. The Plan shall be implemented upon approval of the Air Pollution Control Officer. |
| | |
| 402 | CALCULATION FOR DETERMINATION OF VOC CONTENT PER VOLUME OF COATING: The volume of coating material is defined as the volume of the original coating, plus any VOC-containing material added to the original coating. The original coating is the coating before any VOC-containing material such as solvent is added for purposes of mixing or thinning. The weight of VOC per combined volume of VOC and coating solids, shall be calculated by the following equation: |

$$\frac{(W_V - W_W - W_{ec})}{(V_m - V_W - V_{ec})}$$

Where: W_V = weight of all volatile compounds.
 W_W = weight of water.
 W_{ec} = weight of compounds listed as exempt in Section 204 from the definition of VOC.
 V_m = volume of coating material.
 V_W = volume of water.
 V_{ec} = volume of compounds listed as exempt in Section 204 from the definition of VOC.

500 MONITORING AND RECORDS

- 501 **TESTING PROCEDURES:** A result by any of the below listed test methods which shows non-compliance with any provision of the rule shall constitute a violation of the rule.
- 501.1 **VOC CONTENT:** Measurement of volatile organic compounds in coatings and solvents shall be conducted and reported in accordance with EPA Reference Method 24 (40 CFR 60, Appendix A) and Sections 402 and 501.4 of this rule.
- 501.2 **CONTROL DEVICE:** Control efficiency and emission rates from control devices shall be determined by EPA Method 25 and ARB Method 422.
- 501.3 **COLLECTION EFFICIENCY:** Collection efficiency shall be determined in accordance with EPA Guidelines for Developing Capture Efficiency Protocols, 55 Federal Register 26865, June 29, 1990.
- 501.4 **DETERMINATION OF COMPOUNDS EXEMPT FROM VOC DEFINITION:** Compounds exempted from the VOC definition, as listed in Section 204 of this rule, shall be determined in accordance with ASTM D 4457-85 or ARB Method 432. If any of the perfluorocarbons are being claimed as exempt compounds, the person making the claim must state in advance which compounds are present, and the EPA-approved test method used to make the determination of these compounds.
- 502 **COATING RECORDS:** A person subject to this rule shall maintain the following daily records for each coating line:
- 502.1 Coating type, the amount of coating applied daily, and description of the substrate coated.
- 502.2 Manufacturer's name and product code or equivalent for each coating type and the coating category as specified in Section 301.
- 502.3 VOC content of the coatings, as applied, in grams per liter, excluding water and exempt compounds.
- 503 **SOLVENT RECORDS:** A person subject to this rule shall maintain the following daily records for each container assembly line:
- 503.1 Amount of solvents used.
- 503.2 VOC content of each solvent.
- 504 **RECORD RETENTION:** A person required to maintain records specified in Sections 502, 503, and 505 shall retain such records on-site for two years and make such records available for review by the Air Pollution Control Officer upon request.
- 505 **CONTROL EQUIPMENT:** Any person using an emission control system pursuant to Section 302 as a means of complying with this rule shall maintain such records as required by the Operation and Maintenance Plan in Section 401 on a daily basis.

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