6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 59

[EPA-HQ-OAR-2006-0971; FRL-7966-03-OAR]

RIN 2060-AU94

National Volatile Organic Compound Emission Standards for Aerosol Coatings Amendments

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: The U.S. Environmental Protection Agency (EPA) is finalizing amendments to the National Volatile Organic Compound Emission Standards for Aerosol Coatings. This action revises national emission standards for the aerosol coatings (aerosol spray paints) category under the Clean Air Act (CAA), which requires control of volatile organic compound (VOC) emissions from certain categories of consumer and commercial products for purposes of reducing VOC emissions contributing to ozone formation and ozone nonattainment. The regulation employs a relative reactivity-based approach to control aerosol coating products' contribution to ozone formation by encouraging the use of less reactive VOC ingredients in formulations. In this final rule, the EPA is updating coating category product-weighted reactivity (PWR) limits, adding new compounds and reactivity factors, updating existing reactivity factors, revising the rule's default reactivity factor, amending thresholds for VOC regulated by the rule, amending reporting

requirements, updating test methods to reflect more recent versions, adding a new compliance date, and making clarifying edits.

DATES: *Effective date*. The effective date of this final rule is **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. The incorporation by reference of certain material listed in this rule is approved by the Director of the Federal Register as of **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. The incorporation by reference of certain other material listed in this rule was approved by the Director of the Federal Register as of March 24, 2008.

ADDRESSES: The EPA has established a docket for this action under Docket ID No. EPA-HQ-OAR-2006-0971. All documents in the dockets are listed on the www.regulations.gov website. Although listed, some information is not publicly available, *e.g.*, Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically through www.regulations.gov, or in hard copy at the EPA Docket Center, WJC West Building, Room Number 3334, 1301 Constitution Ave., NW, Washington, DC. The Public Reading Room hours of operation are 8:30 a.m. to 4:30 p.m. Eastern Standard Time (EST), Monday through Friday. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the EPA Docket Center is (202) 566-1742.

FOR FURTHER INFORMATION CONTACT: For information about the National Volatile Organic Compound Emission Standards for Aerosol Coatings, contact Kaye Whitfield, U.S. EPA, Office of Air Quality Planning and Standards, Sector Policies and Programs Division, Minerals and Manufacturing Group (D243-02), Research Triangle Park, North Carolina 27711;

telephone number: (919) 541-2509; fax number (919) 541-4991; and e-mail address: whitfield.kaye@epa.gov. For questions related to enforcement, contact John Cox, Office of Enforcement and Compliance Assurance, U.S. Environmental Protection Agency, U.S. EPA WJC South Building (2221A), Pennsylvania Avenue, NW, Washington, DC 20460; telephone number: (202) 564-1395 and email address: cox.john@epa.gov. For questions related to reporting, contact the EPA Regional Office where the regulated entity is located. For a complete list, see **Addresses of EPA regional offices** in 40 CFR 59.512.

SUPPLEMENTARY INFORMATION:

Preamble acronyms and abbreviations. Throughout this document the use of "we," "us," or "our" is intended to refer to the EPA. We use multiple acronyms and terms in this preamble. While this list may not be exhaustive, to ease the reading of this preamble and for reference purposes, the EPA defines the following terms and acronyms here:

ACA	American Coatings Association
ASTM	American Society for Testing and Materials
CARB	California Air Resources Board
CAA	Clean Air Act
CBI	Confidential Business Information
CDX	Central Data Exchange
CEDRI	Compliance and Emissions Data Reporting Interface
CFR	Code of Federal Regulations
CRA	Congressional Review Act
EJ	Environmental Justice
EPA	Environmental Protection Agency
FR	*Federal Register*
g 0_3 /g product	grams of ozone per grams of product
IBR	incorporation by reference
ICR	Information Collection Request
MIR	maximum incremental reactivity
NTTAA	National Technology Transfer and Advancement Act
OMB	Office of Management and Budget
PRA	Paperwork Reduction Act
PWR	product-weighted reactivity
RF	reactivity factor
RFA	Regulatory Flexibility Act

UMRA	Unfunded Mandates Reform Act
VOC	volatile organic compound

Background information. The EPA promulgated "The National Volatile Organic Compound Emission Standards for Aerosol Coatings," on March 24, 2008 (73 FR 15604) and codified the action at 40 CFR part 59, subpart E (§§ 59.500 through 59.516). The rule establishes nationwide VOC reactivity-based standards for the aerosol coatings source category under the statutory authority of section 183(e) of the CAA (42 U.S.C. 7401 *et seq*.). Section 183(e) requires the EPA to control VOC emissions from certain categories of consumer and commercial products for purposes of reducing VOC emissions that contribute to ozone formation and nonattainment of the ozone national ambient air quality standards (NAAQS).

The EPA has amended the original aerosol coatings rule several times to respond to petitions and to make rule clarifications. Many of the amendments were in accordance with a provision in 40 CFR 59.511(j) that allows regulated entities who elect not to use the default reactivity factors (RF) to calculate PWR to "…petition the Administrator to add a compound to table 2A, 2B, or 2C of this subpart. Petitions must include the chemical name, [Chemical Abstract Services] (CAS) number, a statement certifying the intent to use the compound in an aerosol coatings product, and adequate information for the Administrator to evaluate the reactivity of the compound and assign a RF…" Accordingly, the EPA has amended the aerosol coatings rule to add 131 compounds, corresponding RFs, and CAS numbers for each compound or class of compounds listed in 40 CFR part 59, table 2 (79 FR 29604). As for rule clarifications, the EPA has made revisions that clarify which VOC are to be quantified in compliance determinations (79 FR 29604); to inform regulated entities that VOC normally exempt by definition under 40 CFR 51.100(s)(1) and (s)(5) must be counted as VOC for the purposes determining compliance with the aerosol coatings rule (74 FR 29595); and, to ensure that both

the certifying entity and the regulated entity have full knowledge of responsibilities assumed by the certifying entity (74 FR 29595).

More recently, on September 17, 2021, in response to petitions from American Coatings Association (ACA), the EPA proposed amendments to the aerosol coatings rule that promote consistency and uniformity between the California Air Resources Board (CARB) aerosol coating product regulation and the national aerosol coatings emission limitations, where appropriate (86 FR 51851).

This action finalizes the Agency's response to the ACA petitions and makes additional revisions based on public comments the EPA received on the proposed action. For more information, see the docket for this action, Docket ID No. EPA-HQ-OAR-2006-0971, and section IV. of this preamble.

Organization of this document. The information in this preamble is organized as follows:

I. General Information

A. Entities Potentially Affected by This Action

The entities potentially affected by this regulation encompass those engaged in many aspects of the manufacture and sale of aerosol coatings. This includes manufacturers, processors, wholesale distributors, or importers of aerosol coating products for sale or distribution in interstate commerce in the United States, or manufacturers, processors, wholesale distributors, or importers who supply the entities listed above with aerosol coatings for sale or distribution in interstate commerce in the United States. In addition, affected entities include those listed in the North American Industry Classification System codes 32551 and 325998. This list is not intended to be exhaustive, but rather provides a guide for entities likely to be affected by this action. If you have any questions regarding the applicability of this action to a particular entity, consult the appropriate EPA contact listed in the **FOR FURTHER INFORMATION CONTACT** section of this preamble.

B. Where can I get a copy of this document and other related information?

The EPA has established a docket for this rulemaking under Docket ID No. EPA-HQ-OAR-2006-0971. All documents in the dockets are listed in www.regulations.gov. In addition to being available in the docket, an electronic copy of this final action will also be available on the Internet. Following signature by the EPA Administrator, the EPA will post a copy of this final action at www.epa.gov/stationary-sources-air-pollution/aerosol-coatings-national-volatile-organic-compound-emission. Following publication in the *Federal Register*, the EPA will post the *Federal Register* version of the final rule and key technical documents at this same website.

C. Judicial Review and Administrative Reconsideration

Under CAA section 307(b)(1), judicial review of this final action is available only by filing a petition for review in the United States Court of Appeals for the District of Columbia Circuit by **[INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. Under CAA section 307(b)(2), the requirements established by this final rule may not be challenged separately in any civil or criminal proceedings brought by the EPA to enforce the requirements. Section 307(d)(7)(B) of the CAA further provides that only an objection to a rule or procedure which was raised with reasonable specificity during the period for public comment (including any public hearing) may be raised during judicial review. This section also provides a mechanism for the EPA to reconsider the rule if the person raising an objection can demonstrate to the Administrator that it was impracticable to raise such objection within the period for public comment or if the grounds for such objection arose after the period for public comment (but within the time specified for judicial review) and if such objection is of central relevance to the outcome of the rule. Any person seeking to make such a demonstration should submit a Petition for Reconsideration to the Office of the Administrator, U.S. EPA, Room 3000, WJC South Building, 1200 Pennsylvania Ave. NW, Washington, DC 20460, with a copy

to both the person(s) listed in the preceding **FOR FURTHER INFORMATION CONTACT** section, and the Associate General Counsel for the Air and Radiation Law Office, Office of General Counsel (Mail Code 2344A), U.S. EPA, 1200 Pennsylvania Ave. NW, Washington, DC 20460.

II. Background

A. What amendments have been made since promulgation of the original rule?

The EPA has amended the original aerosol coatings rule several times to respond to petitions and to make rule clarifications. Many of the amendments were in accordance with a provision in 40 CFR 59.511(j) that allows regulated entities who elect not to use the default RF to calculate PWR to "…petition the Administrator to add a compound to table 2A, 2B, or 2C of this subpart. Petitions must include the chemical name, [Chemical Abstract Services] (CAS) number, a statement certifying the intent to use the compound in an aerosol coatings product, and adequate information for the Administrator to evaluate the reactivity of the compound and assign a RF…" As such, the EPA has amended the rule to add 131 compounds, corresponding reactivity factors, and CAS numbers for each compound or class of compounds listed in 40 CFR part 59 table 2 (79 FR 29604). As for rule clarifications, the EPA has made revisions to clarify which volatile organic compounds must be quantified in compliance determinations (79 FR 29604); to inform regulated entities that VOC normally exempt by definition under 40 CFR 51.100(s)(1) and (s)(5) are to be counted as VOC for the purposes determining compliance with this rule (74 FR 29595); and to ensure that both the certifying entity and the regulated entity have full knowledge of responsibilities assumed by the certifying entity (74 FR 29595).

B. What changes did we propose for the National Volatile Organic Compound Emission Standards for Aerosol Coatings source category on September 21, 2021?

On September 17, 2021, in response to petitions from ACA, the EPA proposed amendments to the standards that promote consistency and uniformity between the CARB aerosol coating product regulation and the EPA aerosol coatings rule emission limitations, where appropriate (86 FR 51851). This action finalizes the Agency's response to the ACA petitions and makes additional revisions based on public comments received on the proposal. For more information, see the docket for this action, Docket ID No. EPA-HQ-OAR-2006-0971, and section IV. of this preamble.

III. Summary of the Final Standards and Changes Since Proposal

A. Table 1 to Subpart E of Part 59: Product-Weighted Reactivity Limits by Coatings Category

This final rule updates the PWR limits for the coating categories listed in table 1 of 40 CFR part 59, subpart E. The changes, which are based on updates to the relative reactivity scale that underlies both the reactivity factors and limits, will further decrease the contribution of aerosol coatings to ozone formation.

In addition, the EPA is adopting identical category names and limits as those in CARB's aerosol coating product regulation and, where possible, including them in the EPA's national aerosol coatings rule in table 1 of 40 CFR part 59, subpart E. This amendment also led to the Agency combining two sets of coatings subcategories into two main categories and adding corresponding limits for those categories, as follows:

- The subcategories "enamel," "lacquer," and "clear or metallic" coatings are now subsumed under the category heading, "Hobby/Model/Craft Coatings," with a category limit of 1.6 grams of ozone per gram of VOC (g O_3/g VOC); and
- The subcategories "clear" and "pigmented" coatings are now subsumed under the category heading, "Shellac Sealers," with a category limit of1.00 g O_3/g VOC.

The EPA also is adding six new specialty coating categories and imposing corresponding emission limitations for consistency with CARB's aerosol coating product regulation, as follows:

- "Electrical/Electronic/Conformal Coatings," with a category limit of 2.00 O_3/g VOC;
- "Flexible Coatings," with a category limit of 1.60 O_3/g VOC;
- "Mold Release Coatings," with a category limit of 1.10 O_3/g VOC;
- "Rust Converter," with a category limit of 1.10 O_3/g VOC;
- "Two Component Coating," with a category of 1.20 O_3/g VOC; and
- "Uniform Finish Coating," with a category limit of 1.30 O_3/g VOC.

B. Table 2A, 2B, and 2C to Subpart E of Part 59: Reactivity Factors, Aliphatic Hydrocarbon Solvent Mixtures, and Aromatic Hydrocarbon Solvent Mixtures

The EPA is finalizing amendments to 40 CFR part 59 subpart E, tables 2A, 2B, and 2C by adding 17 new compounds and corresponding RF to table 2A, and by updating the RF of one existing compound mixture to table 2B. Of the 17 new compound additions to table 2A, 15 have an assigned maximum incremental reactivity (MIR) value in CARB's aerosol coatings regulation, which the Agency is adopting as RF values in this final action. The EPA is also finalizing the addition of two remaining compounds to table 2A: trans-1-chloro-3,3,3-trifluoropropene (HFO-1233zdE), CAS 102687-65-0, and diethyl carbonate, CAS 105-58-8, with RFs of 0.04 g O_3/g VOC and 0.71 g O_3/g VOC, respectively. The RFs that the EPA has assigned to these two compounds are based on MIR values derived by Venecek[1] and Carter[2], respectively.

[1] Venecek, Melissa (2020). *Estimating Maximum Incremental Reactivity for Diethyl Carbonate.* Final Report. Sacramento, California: Technical Development Section, Consumer Products and Air Quality Assessment Branch, Air Quality Planning and Science Division, California Air Resources Board.
[2] Carter, William (2009). *Investigation of Atmospheric Ozone Impacts of Trans 1-Chloro-3,3,3 - Trifluoropropene*, Final Report. Riverside, California: Center for Environmental Research and Technology, University of California.

One of the compounds the EPA is adding, dipropylene glycol monomethyl ether, CAS 34590-94-8, is a mixture of isomers. Another compound, 2-[2-methoxypropoxy]-1-propanol, CAS 13588-28-8, is an isomer of dipropylene glycol monomethyl ether, which is already on table 2A; and the EPA is assigning both of those compounds an RF of 2.58 g O_3/g VOC.

In addition to adding the new compounds listed above, the EPA is updating reactivity factors in tables 2A, 2B, and 2C for other compounds already addressed in the EPA's aerosol coatings rule to align with the MIR values in the current CARB aerosol coating product regulation[3]. This will maintain the internal consistency of the relative reactivity scale and changes to the limits finalized in 40 CFR part 59 subpart E, table 1. The updates to the existing RFs listed in tables 2A, 2B, and 2C will take effect on **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. Regulated entities who are already formulating their products to meet CARB's aerosol coating product regulation may elect to use the new RFs and meet the new category emission limitations of the EPA's aerosol coatings rule upon the effective date of this action. However, regulated entities must use the new RFs and meet the new emission limitations by the compliance date. All regulated entities must come into compliance with all provisions in this final rule by **[INSERT DATE 181 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

C. The Default Reactivity Factor

In the EPA's original national aerosol coatings rule, if a regulated entity used a VOC in an aerosol coating formulation that was not listed in tables 2A, 2B, or 2C, it was assigned a default RF of 22.04 g O_3/g VOC (see 40 CFR 59.505(e)(4) and 59.511(j)). In this final action, we reset the default RF for VOCs of unknown reactivity consistent with the methodology used in the

[3] Title 17, CCR, Sections 94700-94701.

original aerosol coatings rule, whereby we identified the VOC with the maximum RF value in table 2A, and then assigned that value as the default RF for any VOC that is not listed with a specific RF (73 FR 15610). Therefore, the EPA is resetting the default RF to 18.50 g O_3/g VOC, the highest value in table 2A of this final action. Furthermore, the EPA is finalizing two additional requirements related to the default RF. First, regulated entities shall include the name and CAS number of all VOCs for which they are using the default RF, as specified in the reporting requirements in 40 CFR 59.511. Second, if a regulated entity uses a VOC in a product that is not listed in table 2A, but its isomer is listed in table 2A, then the regulated entity shall use the RF of the isomer. If more than one isomer of that VOC, or mixtures of the isomers of that VOC, is listed in table 2A, then the regulated entity shall use the highest RF associated with the listed isomers or isomer mixtures.

D. VOC Regulated by the Rule

The EPA is not making changes to the current definition of VOC in 40 CFR 51.100(s)(7) in this final action. However, it is important to note that in the original aerosol coatings rule, the EPA amended the regulatory definition of VOC to remove the exemption of specific organic compounds identified in 40 CFR 51.100(s)(1) and (s)(5) for purposes of determining compliance with the reactivity-based emission limitations in the aerosol coatings rule. Thus, 40 CFR 51.100(s)(7) provides that "any organic compound in the volatile portion of an aerosol coating is counted towards the product's reactivity-based limit, as provided in part 59, subpart E. Therefore, the compounds that are used in aerosol coating products and that are identified in paragraph (s) of this section as negligibly reactive and excluded from the EPA's definition of VOC are to be counted towards a product's reactivity limit for the purposes of determining compliance with the EPA's aerosol coatings reactivity-based national regulation, as provided in

part 59, subpart E." To eliminate consideration of VOC that make *de minimis* contributions to a product's overall reactivity in the original aerosol coatings rule, the EPA also excluded from the applicable emission limitations those compounds that: (a) contribute less than 0.1 percent of the product weight (regardless of their RF); and (b) have reactivities less than ethane and comprise less than 7.3 percent of product weight. We explained the basis for the derivation of the 7.3 percent threshold and its relationship to the RF for ethane and the default RF in the original rulemaking (see 73 FR 15604). In this action, the EPA is finalizing amendments to the aerosol coatings rule to retain part (a), where compounds that comprise less than 0.1 percent of the product weight are excluded from the product's mass-weighted reactivity, but eliminate part (b), the exclusion of low reactivity compounds that comprise more than 0.3 percent but less than 7.3 percent of the product weight.

E. Electronic Reporting of Notifications and Reports

The EPA is also finalizing the revision to the aerosol coatings rule to require that regulated entities submit electronic copies of required notifications and reports in template format through the EPA's Central Data Exchange (CDX) using the Compliance and Emissions Data Reporting Interface (CEDRI), instead of the current hard copy submission requirement. A description of the electronic data submission process is provided in the memorandum *Electronic Reporting Requirements for New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP) Rules,* available in the docket for this action. For the nine notifications and reports in the aerosol coatings rule, (*i.e.*, Temporary Variances, Initial Notification, Change to Information in Initial Notification, Response to Written Notification, Exemption Claim Initial Notification, Exemption Claim Annual Report, Notice of Certifying Entity to Maintain Records, Notice Rescinding Certification and Triennial Report),

this final rule requires that regulated entities use the appropriate spreadsheet template to submit information to CEDRI. A final version of the spreadsheet template for these notifications and reports is included in the docket and on the CEDRI webpage[4]. The EPA has also updated the spreadsheet in response to the comments received on the proposal.

Furthermore, the EPA is finalizing revisions to the aerosol coatings rule that provide owners and operators the ability to seek extensions for submitting electronic reports for circumstances beyond the control of the facility, *i.e.*, for a possible outage in the CDX or CEDRI or for a force majeure event, in the time just prior to a report's due date, as well as the process to assert such a claim.

F. Test Methods

Regulated entities may use formulation data to demonstrate compliance with the emission limitations in the aerosol coatings rule. However, it is also necessary to have test methods in place that can be used by regulated entities, the EPA, or others to verify the accuracy of formulation data and determine compliance with the reactivity limits. In this final action, we are not requiring new test methods; instead, the EPA is amending the aerosol coatings rule to require use of the updated version of CARB Method 310, "Determination of Volatile Organic Compounds (VOC) in Consumer Products and Reactive Organic Compounds in Aerosol Coating Products," May 25, 2018, when verifying compliance using test methods. For measurement of specular gloss, the EPA will continue to require regulated entities to use, "Standard Test Method for Specular Gloss," ASTM Method D523-08 (2008), formerly ASTM D523–89 (1999). As noted in section IV.A. of this preamble, regulated entities may elect to use the updated RFs and

[4] www.epa.gov/electronic-reporting-air-emissions/cedri.

meet the revised emission limitations in this final rule in advance of the compliance date, but if they do so they must use the updated test methods.

IV. Response to Significant Comments

The EPA received a total of eight letters commenting on the September 17, 2021, proposed rule. Significant comments and the EPA's responses appear in this preamble; however, a summary of all public comments and the EPA's responses are contained in the document titled, "Summary of Public Comments and Responses for the National Volatile Organic Compound Emissions for Aerosol Coatings – Amendments," located in the docket for this action, Docket ID No. EPA-HQ-OAR-2006-0971. Copies of all the comment letters are available at the EPA docket Center Public Reading Room and electronically through www.regulations.gov by searching Docket ID No. EPA-HQ-OAR-2006-0971.

A. Compliance Date of the Rule

Four commenters requested that the EPA establish a 2-year compliance date for the revisions being made to the aerosol coatings rule in this final action. The commenters argue that sufficient time will be needed for manufacturers to comply with the new VOC MIR emission limitations if they do not already manufacture aerosol coating products for sale in California. In addition, one of the commenters asserts that a two-year compliance date will ensure that industry has sufficient time to reformulate their products and adapt their distribution methods to implement the amended rule's requirements effectively and efficiently. According to the commenter, when a rule is amended, industry requires a reasonable amount of lead time to adjust formulations and supply chain processes to ensure compliance with VOC limits, labeling, and reporting requirements. Additionally, commenters state that manufacturers will need sufficient time to properly communicate these changes to their distributors and retail customers to ensure

compliance with amended VOC emission limitations. Therefore, the commenters assert, a compliance date of two years after publication of a final rule would give industry enough time to reformulate with the updated/added compounds and ensure compliance with the new coatings category limits.

The EPA agrees that, especially for regulated entities that do not manufacture or sell products in California, additional time may be needed to come into compliance with the amendments to the aerosol coatings rule. However, the EPA has determined that the two-year compliance period requested by commenters is not warranted, because based upon information available to the agency most, if not all, manufacturers of aerosol coatings already manufacture products that meet the CARB emission limitations, either for themselves or for others. Commenters did not identify any specific manufacturers of aerosol coatings who do not do so. Nevertheless, in this final action, the EPA is providing additional time for manufactures to make any necessary adjustments by finalizing a six-month compliance date for the revised aerosol coatings rule requirements.

It is important to note that the effective date of this rule is the date of publication in the *Federal Register*, or **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. In the intervening six months, all regulated entities are subject to the aerosol coatings rule in its current form but may elect to start complying with the amended aerosol coatings rule. This means that regulated entities, including those that are currently in compliance with the CARB aerosol coating product regulation on the effective date of this rule, may elect to begin complying immediately. However, all regulated entities shall come into compliance with all the provisions in this final action by **[INSERT DATE 181 DAYS AFTER DATE OF PUBLICATON IN THE FEDERAL REGISTER]**. The original tables with values for the

PWR emission limits by coatings category and the reactivity factors are in appendix A – table 1 and tables 2A, 2B and 2C of this final action.

B. Effective Date of the Final Rule

Several commenters recommend that the EPA allow industry to use the new and updated RF values immediately, once they are finalized and published in the *Federal Register*. The commenters assert that this would allow industry to use the new and updated reactivity values in their formulations to come into compliance with the new coatings category limits in table 1 sooner.

The EPA agrees that this is appropriate. We note that the effective date of this rule indicates when regulated entities may elect to begin meeting the new aerosol coatings product-weighted coating category emission limitations in 40 CFR part 59, subpart E - table 1 using the corresponding reactivity factors in 40 CFR part 59, subpart E - table 2. The Agency directs the commenters to 40 CFR 59.502 and the **DATES** section of this preamble, where the effective date of the rule is the date of publication in the *Federal Register*, or **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. Therefore, regulated entities may begin meeting the new emission limitations and using corresponding reactivity factors immediately upon publication of this final rule. The EPA emphasizes that all regulated entities must do so by the compliance date. Also note that, although regulated entities may elect to begin to use the new RF values immediately on **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, the EPA is granting a six-month compliance date.

In summary, the EPA has added a provision to 40 CFR 59.502 to clarify that regulated entities may elect to begin meeting the new coating category product-weighted limits in 40 CFR part 59, subpart E - table 1 and use the corresponding reactivity factors in 40 CFR part 59,

subpart E - table 2 upon the effective date of the rule, or **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. However, all regulated entities must come into compliance with all the revised provisions in the amended aerosol coatings rule by **[INSERT DATE 181 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

For the reasons discussed above, this final rule is effective immediately upon publication. Section 553(d)(3) of the Administrative Procedure Act (''APA''), 5 U.S.C. 553(d), provides that final rules shall not become effective until 30 days after publication in the *Federal Register* ''except . . . as otherwise provided by the agency for good cause.'' The purpose of this provision is to ''give affected parties a reasonable time to adjust their behavior before the final rule takes effect.'' *Omnipoint Corp. v. Fed. Commc'n Comm'n*, 78 F.3d 620, 630 (D.C. Cir. 1996). Thus, in determining whether good cause exists to waive the 30-day delay, an agency should ''balance the necessity for immediate implementation against principles of fundamental fairness which require that all affected persons be afforded a reasonable amount of time to prepare for the effective date of its ruling.'' Gavrilovic, 551 F.2d at 1105. The EPA has determined that there is good cause for making this final rule effective immediately because, as noted above, regulated entities do not need to come into compliance with the revised provisions for another 181 days – that is, by **[INSERT DATE 181 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

C. Definitions

Several commenters requested changes, additions, or deletions to the list of definitions included in the aerosol coatings rule. When CARB amended its aerosol coating product regulation in 2013, one commenter stated that they worked diligently with CARB staff to update the definitions so that they correctly characterized industry's products. The commenter noted that

further alignment with the definitions in CARB's aerosol coatings regulation is critical and will assist with industry compliance.

The EPA evaluated the commenters' suggestions and has revised some definitions in the updated aerosol coatings rule. Where appropriate, we have amended definitions in the EPA aerosol coatings rule to be consistent with the CARB's definitions. For example, for consistency, we have eliminated the use of the word "paint" in both category names and in definitions and replaced it with the more correct term "coating." We have removed words from definitions that needlessly limited a definition, as suggested by commenters. The EPA has removed the term "synthetic" from the definition of slip-resistant coatings because it is possible that such a product could use non-synthetic material. We have also removed the term "elemental" from the definition of metallic coating, as recommended by a commenter.

In several cases, we are unable to make the changes suggested by the commenters. The EPA does not agree that a claim made by a regulated entity on a label, or on a "principal display panel" as specified in CARB's rule, is sufficient to define a category. Our definitions are based solely on the function of the coating and not on the printed claims. Therefore, we will not add a sentence to coatings that defer to a "principal display panel," nor will we include a definition of that term in this final rule. In addition, we will not include definitions of several terms recommended by the commenter but are not used in the EPA's aerosol coatings rule. For example, the term "Reactivity Limit" is the term used by CARB in its aerosol coating product regulation, while "Product-Weighted Reactivity (PWR) limit" is the term that the EPA uses in the national aerosol coatings rule. The EPA is not adding a definition for the term "Reactivity Limit" to the list of definitions because the Agency does not use this term in the aerosol coatings rule.

A more complete discussion of the individual changes to definitions is included in the "Summary of Public Comments and Responses for the National Volatile Organic Compound Emissions for Aerosol Coatings – Amendments," Docket ID No. EPA-HQ-OAR-2006-0971.

D. VOC Regulated by the Rule

The EPA proposed to retain a provision that excludes from the applicable limits those compounds that contribute less than 0.1 percent of the product weight (regardless of their RF) and eliminate a provision from 40 CFR 59.505 that excludes low reactivity compounds that comprise more than 0.1 percent but less than 7.3 percent of the product weight. The EPA received several comments supporting this revision and one that opposed it, based upon concerns that the exclusion of compounds could have unintended adverse impacts. The EPA has concluded that it is appropriate to make the proposed revisions and thus, we are amending 40 CFR 59.505 of this final rule, accordingly. We respond to the adverse comment in more detail in response to comment document titled, "Summary of Public Comments and Responses for the National Volatile Organic Compound Emissions for Aerosol Coatings – Amendments," Docket ID No. EPA-HQ-OAR-2006-0971.

E. Default Reactivity Factor

Five commenters suggested that the EPA adopt a default RF of 11.97 g O_3/g VOC to align with CARB's default MIR value.

The EPA considered whether to adopt CARB's default MIR value as the EPA's default RF in the amended national aerosol coatings rule but is declining to do so. The EPA's methodology for setting a default RF value in the original aerosol coatings rule was to require regulated entities to use the maximum RF value for the compounds specified in table 2. The EPA has used this conservative methodology for setting the default RF to help to ensure the protection

of public health by reducing ozone that may result from new and/or previously unstudied VOCs. Consistent with this preferred methodology and considering the updates to RF values in table 2, the EPA is resetting the default RF to 18.50 g O_3 /g VOC in this final action.

V. Summary of Impacts

A. Environmental Impacts

There are no anticipated environmental impacts from compliance with this final rule. The revisions to the aerosol coatings rule in this final action are minor and not expected to result in net changes to an aerosol coating product's potential to form ozone because the overall average changes to the values used to measure reactivity of a given regulated product, *i.e.*, category emission limitations and RFs, are small compared to the values in the original rule. The final action is, however, expected to improve upon the original aerosol coatings rule by making updates (*e.g.*, adding new compounds, updating reactivity factors, and adding electronic reporting) that promote consistency and uniformity between state and national regulations. The EPA anticipates that this final action will maintain the level of environmental protection to populations in affected ozone nonattainment areas without having any disproportionately high and adverse human health or environmental effects on any populations, including communities with environmental justice (EJ) concerns.

B. Energy Impacts

There are no adverse energy impacts anticipated from compliance with this final rule.

C. Cost and Economic Impacts

There are no adverse economic impacts anticipated from compliance with this final rule. This action primarily updates reactivity tables and factors and adds electronic reporting provisions.

VI. Statutory and Executive Order Reviews

Additional information about these statutes and Executive Orders can be found at www.epa.gov/laws-regulations/laws-and-executive-orders.

A. Executive Order 12866: Regulatory Planning and Review and Executive Order 14094: Modernizing Regulatory Review

This action is not a significant regulatory action as defined in Executive Order 12866, as amended by Executive Order 14094, and was therefore not subject to a requirement for Executive Order 12866 review.

B. Paperwork Reduction Act (PRA)

The information collection requirements in this final rule have been submitted for approval to OMB under the PRA. The information collection request (ICR) document that the EPA prepared for this action has been assigned OMB control number 2060-0617, EPA ICR Number 2289.06. You can find a copy of the ICR in the docket for this rule, and it is briefly summarized here. The information collection requirements are not enforceable until OMB approves them. There is no increase in burden associated with this action because the rule primarily adds compounds and reactivity factors, updates category limits and reactivity factors, and adds electronic reporting provisions. The burden associated with the change from paper to electronic reporting in this final action will not increase significantly because of this action, and results in a slight decrease in the annual average burden for reporters. In the short term, regulated entities will need time to become familiar with the new reporting scheme and template. In the long term, however, the Agency anticipates that electronic reporting will reduce the burden as regulated entities become more familiar with the electronic reporting process. Additionally, there

is a decrease in burden due to a decrease in respondents, which is due to updated information on the number of sources.

Respondents/affected entities: Manufacturers, distributors, and importers of aerosol coatings.

Respondent's obligation to respond: Mandatory (40 CFR part 59, subpart E).

Estimated number of respondents: 47

Frequency of response: Initially, triennially, and occasionally.

Total estimated burden: 9,562 hours (per year). Burden is defined at 5 CFR 1320.3(b).

Total estimated cost: $740,520 (per year), includes no annualized capital or operation and maintenance costs.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for the EPA's regulations in 40 CFR are listed in 40 CFR part 9. When OMB approves this ICR, the Agency will announce that approval in the *Federal Register* and publish a technical amendment to 40 CFR part 9 to display the OMB control number for the approved information collection activities contained in this final rule.

C. Regulatory Flexibility Act (RFA)

I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA. In making this determination, the EPA concludes that the impact of concern for this rule is any significant adverse economic impact on small entities and that the Agency is certifying that this rule will not have a significant economic impact on a substantial number of small entities because the rule has no net increase in burden on the small entities subject to the rule. The EPA has determined that small entities will incur a reduction in burden over the long term because the primary revisions to the aerosol coatings rule include

updating coating categories in table 1, adding compounds to table 2, and adding an electronic reporting provision, where the method of reporting from paper to electronic is the only change. The burden associated with the change from paper to electronic reporting will not increase significantly because of this action, at least in the long term. Small entities will need time to become familiar with the new reporting scheme and template. However, in the long term, the Agency anticipates that, because electronic reporting is more efficient than paper reporting, the burden will be reduced as small entities become more familiar with the electronic reporting process. We have therefore concluded that this action will have no net regulatory burden for all directly regulated small entities.

D. Unfunded Mandates Reform Act (UMRA)

This final action does not contain an unfunded mandate of $100 million (adjusted annually for inflation) or more (in 1995 dollars) as described in UMRA, 2 U.S.C. 1531–1538, and does not significantly or uniquely affect small governments. The costs involved in this action are estimated not to exceed $183 million in 2023 dollars ($100 million in 1995 dollars adjusted for inflation using the GDP implicit price deflator) or more in any one year.

E. Executive Order 13132: Federalism

This action does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government.

F. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments

This action does not have Tribal implications as specified in Executive Order 13175. The final regulatory action does not have a substantial direct effect on one or more Indian Tribes, in

that this action imposes no regulatory burdens on Tribes. Thus, Executive Order 13175 does not apply to this action.

G. Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks

The EPA interprets Executive Order 13045 as applying only to those regulatory actions that concern environmental health or safety risks that the EPA has reason to believe may disproportionately affect children, per the definition of "covered regulatory action" in section 2-202 of the Executive Order. Therefore, this final action is not subject to Executive Order 13045 because it does not concern an increase in an adverse or environmental health risk or safety risk. Since this action does not concern human health, the EPA's Policy on Children's Health does not apply.

H. Executive Order 13211 Actions Concerning Regulations that Significantly Affect Energy Supply, Distribution, or Use

This action is not subject to Executive Order 13211 because it is not a significant regulatory action under Executive Order 12866.

I. National Technology Transfer and Advancement Act (NTTAA) and 1 CFR Part 51

The national VOC emission standards for aerosol coatings involves technical standards; however, no new technical standards are being finalized in this action. Instead, the EPA is amending this final rule to require that regulated entities use an updated version of an existing test method. As such, we conducted searches for the national VOC standards for aerosol coatings through the Enhanced NSSN Database managed by the American National Standards Institute. We also contacted VCS organizations and accessed and searched their databases. Searches were conducted for EPA Method 311 of 40 CFR part 63, appendix A. During the search, if the title or

abstract (if provided) of the VCS described technical sampling and analytical procedures that are like the EPA's reference method, the EPA considered it as a potential equivalent method. All potential standards were reviewed to determine the practicality of the VCS for this final rule. This review requires significant method validation data which meets the requirements of EPA Method 301 for accepting alternative methods or scientific, engineering and policy equivalence to procedures in EPA reference methods. The EPA may reconsider determinations of impracticality when additional information is available for particular VCS. One voluntary consensus standard was identified as an acceptable alternative to the EPA test method for the purposes of this rule. The voluntary consensus standard, CARB Method 310, "Determination of Volatile Organic Compounds in Consumer Products and Reactive Organic Compounds in Aerosol Coating Products" amended May 25, 2018 is an acceptable alternative to EPA Method 311 for determining speciated ingredients and weight percentage of each ingredient of each aerosol coating product. This method is used to determine the weight percent of VOC in consumer products and reactive organic compounds in aerosol coating products and is available from the California Air Resources Board (CARB), 1001 I Street, Sacramento, CA 95814. See ww2.arb.ca.gov. In addition, the EPA is incorporating by reference the ASTM D523-08, Standard Test Method for Specular Gloss. This test method is used to measure light reflectiveness of paints, coatings and smooth surface materials and is referenced in CARB Method 310. It covers the measurement of the specular gloss of nonmetallic specimens for glossmeter geometries of 60, 20 and 85 degrees and is available at ASTM, International, 1850 M Street NW, Suite 1030, Washington, DC 20036. See www.astm.org. *J. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income*

Populations and Executive Order 14096: Revitalizing Our Nation's Commitment to Environmental Justice for All

The EPA believes that the human health and environmental conditions that existed prior to this action do not result in disproportionate and adverse effects on communities with environmental justice concerns. As stated in section V.A. of the preamble of this action, there are no anticipated adverse environmental impacts and no adverse economic impacts anticipated from compliance with this final rule.

The EPA believes that this action is not likely to result in new disproportionate and adverse effects on communities with environmental justice concerns. As stated in section I. of this action, section 183(e) of the CAA requires the control of VOC emissions from certain categories of consumer and commercial products for purposes of reducing VOC emissions contributing to ozone formation and nonattainment of the ozone NAAQS. The health and environmental risks associated with ozone were considered in the establishment of the ozone NAAQS. The level is designed to be protective of the public with an adequate margin of safety. Accordingly, these actions would help increase the level of environmental protection to populations in affected ozone nonattainment areas without having any disproportionately high and adverse human health or environmental effects on any populations, including communities with environmental justice concerns.

K. Congressional Review Act (CRA)

This action is subject to the CRA, and the EPA will submit a rule report to each House of the Congress and to the Comptroller General of the United States. This action is not a "major rule" as defined by 5 U.S.C. 804(2).

List of Subjects in 40 CFR Part 59

Environmental protection, Administrative practice and procedure, Aerosol coatings, Air pollution control, Coatings, Incorporation by reference, Reactivity.

Jane Nishida,

Acting Administrator.

For the reasons stated in the preamble, the Environmental Protection Agency is amending part 59 of title 40, chapter I, of the Code of Federal Regulations as follows:

PART 59—NATIONAL VOLATILE ORGANIC COMPOUND EMISSION STANDARDS FOR CONSUMER AND COMMERCIAL PRODUCTS

1. The authority citation for part 59 continues to read as follows:

Authority: 42 U.S.C. 7414 and 7511b(e).

Subpart E—National Volatile Organic Compound Emission Standards for Aerosol Coatings

2. Amend § 59.502 by revising paragraph (a) and adding paragraph (d) to read as follows:

§ 59.502 When do I have to comply with this subpart?

(a) Except as provided in § 59.509 and paragraphs (b) and (c) of this section, you must be in compliance with all provisions of this subpart by **[INSERT DATE 181 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

* * * * *

(d) Until **[INSERT DATE 181 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]** appendix A – table 1, appendix A – table 2A, appendix A – table 2B, appendix A – table 2C and the test methods listed in appendix A table 3 to subpart E of part 59 are applicable to this subpart. Prior to **[INSERT DATE 181 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]** regulated entities may elect to use tables 1, 2A, 2B, and 2C. If a regulated entity elects to do so, it shall use the test methods specified in § 59.508 of this subpart. After **[INSERT DATE 181 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]** tables 1, 2A, 2B, and 2C, and the test methods specified in § 59.508 of this subpart are applicable.

3. Revise § 59.503 to read as follows:

§ 59.503 What definitions apply to this subpart?

The following terms are defined for the purposes of this subpart only.

Administrator means the Administrator of the United States Environmental Protection Agency (EPA) or an authorized representative.

Aerosol coating product means a pressurized coating product containing pigments or resins that is dispensed by means of a propellant and is packaged in a disposable container for hand-held application, or for use in specialized equipment for ground traffic/marking applications. For this regulation, applicable aerosol coatings categories are listed in table 1 of this subpart.

Art fixative or sealant means a clear coating, including art varnish, workable art fixative and ceramic coating, which is designed and labeled exclusively for application to paintings, pencil, chalk, or pastel drawings, ceramic art pieces or other closely related art uses, in order to provide a final protective coating or to fix preliminary stages of artwork while providing a workable surface for subsequent revisions.

ASTM means ASTM International.

Autobody primer means an automotive primer or primer surfacer coating designed and labeled exclusively to be applied to a vehicle body substrate for the purposes of corrosion resistance, increased intercoat adhesion, or building a repair area to a condition in which, after drying, it can be sanded to a smooth surface.

Automotive bumper and trim product means a product, including adhesion promoters and chip sealants, designed, and labeled exclusively to repair and refinish automotive bumpers and plastic trim parts.

Aviation or marine primer means a coating designed and labeled exclusively to meet federal specification TT-P-1757.

Aviation propeller coating means a coating designed and labeled exclusively to provide abrasion resistance and corrosion protection for aircraft propellers.

Clear coating means a coating which is colorless or transparent, containing resins but no pigments except flatting agents, and is designed and labeled to form a transparent or translucent solid film.

Coating means a material applied onto or impregnated into a substrate for protective, decorative, or functional purposes.

Coating solids means the nonvolatile portion of an aerosol coating product, consisting of the film-forming ingredients, including pigments and resins.

Commercial application means the use of aerosol coating products in the production of goods, or the providing of services for profit, including touch-up and repair.

Corrosion resistant brass, bronze, or copper coating means a clear coating designed and labeled exclusively to prevent tarnish and corrosion of uncoated brass, bronze, or copper metal surfaces.

Distributor means any person who purchases or is supplied aerosol coating product for the purposes of resale or distribution in commerce. Retailers who fall within this definition are distributors. Importers are not distributors.

Electrical/electronic/conformal coating means a coating designed and labeled exclusively to coat electrical or electronic components or devices.

Enamel means a coating which cures by chemical cross-linking of its base resin and is not resoluble in its original solvent.

Engine paint means a coating designed and labeled exclusively to coat engines and their components.

Exact match finish, automotive means a topcoat which meets all of the following criteria:

(1) The product is designed and labeled exclusively to exactly match the color of an original, factory-applied automotive coating during the touch-up of automobile finishes;

(2) The product is labeled with the manufacturer's name for which it is formulated; and

(3) The product is labeled with one of the following:

(i) The original equipment manufacturer's (O.E.M.) color code number;

(ii) The color name; or

(iii) Other designation identifying the specific O.E.M. color to the purchaser.

Notwithstanding the foregoing, automotive clear coatings designed and labeled exclusively for use over automotive exact match finishes to replicate the original factory-applied finish shall be considered to be automotive exact match finishes.

Exact match finish, engine enamel coating means an enamel coating which meets all of the following criteria:

(1) The product is designed and labeled exclusively to exactly match the color of an original, factory-applied engine paint;

(2) The product is labeled with the manufacturer's name for which it is formulated; and

(3) The product is labeled with one of the following:

(i) The O.E.M. color code number;

(ii) The color name; or

(iii) Other designation identifying the specific O.E.M. color to the purchaser.

Exact match finish, industrial means a coating which meets all of the following criteria:

(1) The product is designed and labeled exclusively to exactly match the color of an original, factory-applied industrial coating during the touch-up of manufactured products;

(2) The product is labeled with the manufacturer's name for which it is formulated; and

(3) The product is labeled with one of the following:

(i) O.E.M. color code number;

(ii) The color name; or

(iii) Other designation identifying the specific O.E.M. color to the purchaser.

Extender means an ingredient added to an "Aerosol Coating Product" to increase coating solids.

Flat coating means a coating which, when fully dry, registers specular gloss less than or equal to 15 on an 85° gloss meter, or less than or equal to 5 on a 60° gloss meter, or which is labeled as a flat coating.

Flatting agent means a compound added to a coating to reduce the gloss of the coating without adding color to the coating.

Flexible coating means a coating including, but not limited to, rubberized, mastic, or asphaltic products designed and labeled exclusively to protect surfaces.

Floral spray means a coating designed and labeled exclusively for use on fresh flowers, dried flowers, or other items in a floral arrangement for the purpose of coloring, preserving, or protecting their appearance.

Fluorescent coating means a coating labeled as such, which converts absorbed incident light energy into emitted light of a different hue.

Formulation data, unless otherwise specified, means the recipe used to formulate or

manufacture a coating product in terms of the weight fraction (g compound/g product) of each individual VOC in the product.

General coating means the following aerosol coating products: "Clear Coating," "Flat Coating," "Fluorescent Coating," "Metallic Coating," "Non-flat Coating," or "Primer."

Glass coating means a coating designed and labeled exclusively for use on glass or other transparent material to create a soft, translucent light effect, or to create a tinted or darkened color while retaining transparency.

Ground traffic/marking coating means a coating designed and labeled exclusively to be applied to dirt, gravel, grass, concrete, asphalt, warehouse floors, or parking lots. Such coatings must be in a container equipped with a valve and spray head designed to direct the spray toward the surface when the can is held in an inverted vertical position.

High temperature coating means a coating, excluding engine coating, which is designed and labeled exclusively for use on substrates which will, in normal use, be subjected to temperatures in excess of 400 °F.

Hobby/model/craft coating means a coating which is designed and labeled exclusively for hobby applications and is sold in aerosol containers of 6 ounces by weight or less.

Importer means any person who brings an aerosol coating product that was manufactured, filled, or packaged at a location outside of the United States into the United States for sale or distribution in the United States.

Impurity means an individual chemical compound present in a raw material which is incorporated in the final aerosol coatings formulation, if the compound is present in amounts below the following in the raw material:

(1) For individual compounds that are carcinogens, each compound must be present in an

amount less than 0.1 percent by weight;

(2) For all other compounds present in a raw material, a compound must be present in an amount less than 1 percent by weight.

Ingredient means a component of an aerosol coating product.

Label means any written, printed, or graphic matter affixed to, applied to, attached to, blown into, formed, molded into, embossed on, or appearing upon any consumer product or consumer product package, for purposes of branding, identifying, or giving information with respect to the product or to the contents of the package.

Manufacturer means any person who manufactures or processes an aerosol coating product for sale or distribution within the United States. Manufacturers include:

(1) Processors who blend and mix aerosol coatings;

(2) Contract fillers who develop formulas and package these formulations under a distributor's name; and

(3) Contract fillers who manufacture products using formulations provided by a distributor.

Marine spar varnish means a coating designed and labeled exclusively to provide a protective sealant for marine wood products.

Metallic coating means a topcoat which contains at least 0.5 percent by weight metallic pigment in the formulation, including propellant, and is labeled as "metallic," or with the name of a specific metallic finish such as "gold," "silver," or "bronze."

Mold release coating means a coating designed and labeled exclusively to be applied to molds to prevent products from sticking to the surfaces of the mold.

Multi-component kit means an aerosol spray paint system that requires the application of

more than one component, *e.g.*, foundation coat and topcoat, where both components are sold together in one package.

Non-flat coating means a coating that, when fully dry, registers a specular gloss greater than 15 on an 85° gloss meter or greater than five on a 60° gloss meter.

Ozone means a colorless gas with a pungent odor, having the molecular form O_3.

Person means an individual, corporation, partnership, association, state, any agency, department, or instrumentality of the United States, and any officer, agent, or employee thereof.

Photographic coating means a coating designed and labeled exclusively to be applied to finished photographs to allow corrective retouching, protection of the image, changes in gloss level, or to cover fingerprints.

Pigment means either a natural or synthetic insoluble material added to a coating to provide color, opacity, or corrosion inhibition to a coating film.

Plasticizer means an ingredient added to an aerosol coating product to aid in flexibility.

Pleasure craft means privately owned vessels used for noncommercial purposes.

Pleasure craft finish primer/ surfacer/undercoater means a coating designed and labeled exclusively to be applied prior to the application of a pleasure craft topcoat for the purpose of corrosion resistance and adhesion of the topcoat, and which promotes a uniform surface by filling in surface imperfections.

Pleasure craft topcoat means a coating designed and labeled exclusively to be applied to a pleasure craft as a final coat above the waterline, and below the waterline when stored out of water. This category does not include clear coatings.

Polyolefin adhesion promoter means a coating designed and labeled exclusively to be applied to a polyolefin or polyolefin copolymer surface of vehicular body parts, bumpers, or trim

parts to provide a bond between the surface and subsequent coats.

Primer means a coating labeled as such, which is designed to be applied to a surface to provide a bond between that surface and subsequent coats.

Product-Weighted Reactivity (PWR) Limit means the maximum allowed "product-weighted reactivity," as calculated in § 59.505, of an aerosol coating product that is subject to the limits specified in § 59.504 for a specific category, expressed as grams of ozone per gram of product (g O_3/g product).

Propellant means a liquefied or compressed gas that is used in whole or in part to expel a liquid or any other material from the same self-pressurized container or from a separate container.

Reactivity Factor (RF) is a measure of the change in mass of ozone formed by adding a gram of a VOC to the ambient atmosphere, expressed to hundredths of a gram of ozone per gram of VOC (g O3/g VOC). The RF values for individual compounds and hydrocarbon solvent mixtures are specified in tables 2A, 2B, and 2C to this subpart.

Resin means a substance that comprises the film-forming ingredients in an aerosol coating product. Examples of resin ingredients include acrylic, alkyd, enamel, epoxy, lacquer, polyurethane, polyvinyl chloride, shellac, silicone, and polystyrene.

Retailer means any person who sells, supplies, or offers aerosol coating products for sale directly to consumers. Retailers who fall within the definition of "distributor" in this section are distributors.

Retail outlet means any establishment where consumer products are sold, supplied, or offered for sale, directly to consumers.

Rust converter means a coating designed and labeled exclusively to convert rust to an

inert material and which contains a minimum acid content of 1.0 percent by weight, and a maximum coating solids content of 6.0 percent by weight.

Shellac sealer means a clear or pigmented coating formulated solely with the resinous secretion of the lac beetle (*Laccifer lacca*), thinned with alcohol, and formulated to dry by evaporation without a chemical reaction.

Slip-resistant coating means a coating designed and labeled exclusively as such, which is formulated with grit and used as a safety coating.

Small quantity manufacturer means a manufacturer whose total VOC by mass included in all aerosol coatings manufactured at all facilities in a given calendar year, in the aggregate, is less than 7,500 kilograms.

Spatter coating/multicolor coating/stucco coating means a coating labeled exclusively as such, wherein spots, globules, or spatters of contrasting colors appear on or within the surface of a contrasting or similar background.

Specialty coating means any aerosol coating product that is not a "General Coating" unless specifically exempted. An aerosol coating that does not meet all the criteria for a specific "Specialty Coating" or an aerosol coating that is not defined in this section is a "General Coating."

Stain means a coating which is designed and labeled to change the color of a surface but not conceal the surface.

Two-component coating means a coating packaged in an aerosol container with a separate integrated chamber for a hardener or activator.

Uniform finish coating means a coating designed and labeled exclusively for application to the area adjacent to a spot repair for the purpose of blending the spot repair's color or clear

coating to match the appearance of an adjacent area's existing coating. For the purpose of this rule, "spot repair" means repair of an area of less than 1 square foot (929 square centimeters).

United States means the United States of America, including the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands.

Vinyl/fabric/leather/polycarbonate coating means a coating designed and labeled exclusively to coat vinyl, fabric, leather, or plastic substrates or to coat flexible substrates including rubber or thermoplastic substrates.

Volatile Organic Compound (VOC) means any organic compound as defined in § 51.100(s) of this chapter. As provided in 40 CFR 51.100(s)(7), exemptions from the definition of VOC in 40 CFR 51.100(s) for certain compounds that are used in aerosol coatings are inapplicable for purposes of this subpart.

Webbing/veiling coating means a coating designed and labeled exclusively to provide a stranded or spider webbed appearance when applied.

Weight fraction means the weight of an ingredient divided by the total net weight of the product, expressed to thousandths of a gram of ingredient per gram of product (excluding container and packaging).

Weld-through primer means a coating designed and labeled exclusively to provide a bridging or conducting effect for corrosion protection following welding.

Wood stain means a coating which is designed and labeled exclusively as a wood stain and is used to change the color of a wood surface but not conceal the grain pattern or texture.

Wood touch-up/repair/restoration means a coating designed and labeled exclusively to provide an exact color or sheen match on finished wood products.

Working day means any day from Monday through Friday, inclusive, except for days that are Federal holidays.

4. Amend § 59.505 by revising paragraphs (c) through (e) and adding paragraph (h) to read as follows:

§ 59.505 How do I demonstrate compliance with the reactivity limits?

* * * * *

(c) You may use either formulation data (including information for both the liquid and propellant phases), CARB Method 310 (2018) (incorporated by reference, see § 59.515), or EPA's Method 311 (40 CFR part 63, appendix A), to calculate the PWR. However, if there are inconsistencies between the formulation data and the CARB Method 310 (2018) or EPA Method 311 results, the CARB Method 310 (2018) or EPA Method 311 results will govern.

(d) If you manufacture a coating containing either an aromatic or aliphatic hydrocarbon solvent mixture, you must use the appropriate RF for that mixture provided in table 2B or 2C to this subpart when calculating the PWR using formulation data. However, when calculating the PWR for a coating containing these mixtures using data from CARB Method 310 (2018) (incorporated by reference, see § 59.515), or EPA Method 311 - (40 CFR part 63, appendix A), you must identify the individual compounds that are present in the solvent mixture and use the weight fraction of those individual compounds and their RF from table 2A to this subpart in the calculation.

(e) The Reactivity Factor (RF) is assigned according to paragraphs (e)(1) through (4):

(1) If a VOC is used in a product and listed in table 2A, 2B, or 2C to this subpart, then the assigned RF shall be used;

(2) If a product contains a mixture and/or multiple isomers of a VOC, the highest RF of

the mixture or multiple isomers from table 2A to this subpart shall be used;

(3) If a VOC is used in a product but not listed in table 2A to this subpart, but more than one isomer or mixtures of isomers of the VOC is listed in table 2A to this subpart, then the highest RF associated with the listed isomers or isomer mixtures shall be used; and

(4) If a VOC is used in a product but not listed in table 2A to this subpart, the assigned default RF of 18.50 g O_3 /g VOC shall be used.

* * * * *

(h) Until **[INSERT DATE 181 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]** the test methods listed in table 3 of appendix A to subpart E of part 59 are applicable to this subpart.

5. Revise § 59.508 to read as follows:

§ 59.508 What test methods must I use?

(a) Except as provided in § 59.505(c), you must use the procedures in CARB Method 310 (2018) (incorporated by reference, see § 59.515) or EPA's Method 311 (40 CFR part 63, appendix A) to determine the speciated ingredients and weight percentage of each ingredient of each aerosol coating product. EPA Method 311 (40 CFR part 63, appendix A) must be used in conjunction with ASTM Method D3063-94 or D3074-94 for analysis of the propellant portion of the coating. Those choosing to use CARB Method 310 (2018) must follow the procedures specified in section 5.0 of that method with the exception of section 5.3.1, which requires the analysis of the VOC content of the coating. For the purposes of this subpart, you are not required to determine the VOC content of the aerosol coating. For both CARB Method 310 (2018) and EPA Method 311 (40 CFR part 63, appendix A), you must have a listing of the VOC ingredients in the coating before conducting the analysis.

(b) To determine the metal content of metallic aerosol coating products, you must use SCAQMD Method 318-95 (incorporated by reference, see § 59.515).

(c) To determine the specular gloss of flat and non-flat coatings, you must use ASTM Method D523-08 (incorporated by reference, see § 59.515).

6. Amend § 59.509 by revising paragraph (a) introductory text and adding paragraphs (a)(6) and (g) to read as follows:

§ 59.509 Can I get a variance?

(a) Any regulated entity that cannot comply with the requirements of this subpart because of circumstances beyond its reasonable control may apply in writing to the Administrator for a temporary variance. The variance application must include the information specified in paragraphs (a)(1) through (6) of this section.

* * * * *

(6) All identification information included in § 59.511(b)(1) and (2).

* * * * *

(g) Beginning on **[INSERT DATE 181 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, or once the notification/report template for this subpart has been available on the CEDRI website for six months, whichever date is later, submit the request for a variance with the information in paragraphs (a)(1) through (6) following the procedure specified in § 59.511(l).

7. Amend § 59.511 by:

a. Removing and reserving paragraph (b)(8);

b. Revising paragraphs (b)(9), (c), (d) introductory text, and (d)(5);

c. Adding paragraph (d)(6);

d. Revising paragraphs (i)(2) and (j); and

e. Adding paragraphs (k), (l), (m), and (n).

The revisions and additions read as follows:

§ 59.511 What notifications and reports must I submit?

* * * * *

(b) * * *

(8) [Reserved]

(9) For each product category, VOC formulation data for each formulation that you anticipate manufacturing, importing, or distributing for calendar year 2009 or for the first year that includes your compliance date, if different than 2009. If a regulated entity can certify that the reporting is being completed by another regulated entity for any product, no second report is required. The formulation data must include the weight fraction (g compound/g product) for each VOC ingredient used in the product in an amount greater than or equal to 0.1 percent. For each VOC ingredient reported, the formulation data must also include the information in either paragraph (b)(9)(i), (ii), or (iii) of this section.

(i) For compounds listed in table 2A to this subpart, the chemical name, CAS number, and the applicable reactivity factor;

(ii) For the hydrocarbon solvent mixtures listed in either table 2B or 2C to this subpart, the trade name, solvent mixture manufacturer, bin number, and the applicable reactivity factor; or

(iii) For compounds not listed in table 2A to this subpart, the chemical name, CAS number, and the default RF in § 59.505(e).

* * * * *

(c) If you change any information included in the initial notification required by

paragraph (b) of this section, including the list of aerosol categories, contact information, records location, the category or date coding system, you must notify the Administrator of such changes within 30 days following the change. You are not required to notify the Administrator within 30 days of changes to the information provided as required by paragraph (b)(9) of this section. Changes in formulation are to be reported in the triennial reporting required by paragraph (i) of this section.

(d) Upon 60 days written notice, you must submit to the Administrator a written report with all the information in paragraphs (d)(1) through (6) of this section for each product you manufacture, distribute, or import under your name or another company's name.

* * * * *

(5) For each product, formulation data for each formulation that manufactured, imported, or distributed in the requested time period. The formulation data must include the weight fraction (g compound/g product) for each VOC ingredient used in the product in an amount greater than or equal to 0.1 percent, plus the weight fraction of all other ingredients, including: Water, total solids, and any other compounds assigned an RF of zero. The formulation data must also include the information in either paragraph (d)(5)(i), (ii), or (iii) of this section.

(i) For compounds listed in table 2A to this subpart, the chemical name, CAS number, and the applicable reactivity factor;

(ii) For the hydrocarbon solvent mixtures listed in either table 2B or 2C to this subpart, the trade name, solvent mixture manufacturer, bin number, and the applicable reactivity factor; or

(iii) For compounds not listed in table 2A to this subpart, the chemical name, CAS number, and the default RF in § 59.505(e).

(6) All identification information included in paragraphs (b)(1) and (2) of this section.

* * * * *

(i) * * *

(2) For each product category, VOC formulation data for each formulation that was manufactured, imported, or distributed in the reporting year. If a regulated entity can certify that the reporting is being completed by another regulated entity for any product, no second report is required. The formulation data must include the weight fraction (g compound/g product) for each VOC ingredient used in the product in an amount greater than or equal to 0.1 percent. For each VOC ingredient reported, the formulation data must include the information in paragraph (i)(2)(i), (ii), or (iii) of this section.

(i) For compounds listed in table 2A to this subpart, the chemical name, CAS number, and the applicable reactivity factor;

(ii) For the hydrocarbon solvent mixtures listed in either table 2B or 2C to this subpart, the trade name, solvent mixture manufacturer, bin number, and the applicable reactivity factor; or

(iii) For compounds not listed in table 2A to this subpart, the chemical name, CAS number, and the default RF in § 59.505(e).

* * * * *

(j) If a regulated entity identifies a VOC that is needed for an aerosol formulation that is not listed in table 2A to this subpart, it is assigned a default RF of 18.50 g O_3/g VOC. Regulated entities may petition the Administrator to add a compound to table 2A, 2B, or 2C to this subpart. Petitions must include the chemical name, CAS number, a statement certifying the intent to use the compound in an aerosol coatings product, and adequate information for the Administrator to evaluate the reactivity of the compound and assign an RF consistent with the values for the other compounds listed in table 2A to this subpart. Any requests submitted to EPA on or before June

1, 2008, will be considered and, if appropriate, incorporated into table 2A, 2B, or 2C to this subpart on or before January 1, 2009.

(k) Beginning on **[INSERT DATE 181 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, or once the notification/report template for this subpart has been available on the CEDRI website for six months, whichever date is later, regulated entities shall submit all notifications, reports, and other information required in § 59.511 (b) through (j) following the procedure specified in paragraph (l) of this section.

(l) If you are required to submit notifications or reports following the procedure specified in this paragraph (l), you must submit reports to the EPA via CEDRI, which can be accessed through the EPA's Central Data Exchange (CDX) (https://cdx.epa.gov/). The EPA will make all the information submitted through CEDRI available to the public without further notice to you. Do not use CEDRI to submit information you claim as confidential business information (CBI). Anything submitted using CEDRI cannot later be claimed CBI. You must use the appropriate electronic report template on the CEDRI website (www.epa.gov/electronic-reporting-air-emissions/cedri) for this subpart. The date in which the report template becomes available will be listed on the CEDRI website. Unless the Administrator or delegated state agency or other authority has approved a different schedule for submission of reports, the report must be submitted by the deadline specified in this subpart, regardless of the method in which the report is submitted. Although we do not expect persons to assert a claim of CBI, if you wish to assert a CBI claim, submit a complete report, including information claimed to be CBI, to the EPA. The report must be generated using the appropriate template on the CEDRI website. The preferred method for CBI submittal is for it to be transmitted electronically using email attachments, File Transfer Protocol (FTP), or other online file sharing services. Electronic submissions must be

transmitted directly to the OAQPS CBI Office at the email address: oaqpscbi@epa.gov and should include clear CBI markings and be flagged to the attention of the Group Leader, Measurement Policy Group. If assistance is needed with submitting large electronic files that exceed the file size limit for email attachments, and if you do not have your own file sharing service, please email oaqpscbi@epa.gov to request a file transfer link. If you cannot transmit the file electronically, you may mail the electronic medium to U.S. EPA/OAQPS/CORE CBI Office, Attention: Aerosol Coatings Sector Lead, (C404-02), Research Triangle Park, North Carolina 27711. The same file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph (l). All CBI claims must be asserted at the time of submission. Furthermore, under CAA section 114(c), emissions data is not entitled to confidential treatment, and the EPA is required to make emissions data available to the public. Thus, emissions data will not be protected as CBI and will be made publicly available.

(m) If you are required to electronically submit a report through CEDRI in the EPA's CDX, you may assert a claim of EPA system outage for failure to timely comply with that reporting requirement. To assert a claim of EPA system outage, you must meet the requirements outlined in paragraphs (m)(1) through (7) of this section.

(1) You must have been or will be precluded from accessing CEDRI and submitting a required report within the time prescribed due to an outage of either the EPA's CEDRI or CDX systems.

(2) The outage must have occurred within the period of time beginning five business days prior to the date that the submission is due.

(3) The outage may be planned or unplanned.

(4) You must submit notification to the Administrator in writing as soon as possible

following the date you first knew, or through due diligence should have known, that the event may cause or has caused a delay in reporting.

(5) You must provide to the Administrator a written description identifying:

(i) The date(s) and time(s) when CDX or CEDRI was accessed, and the system was unavailable;

(ii) A rationale for attributing the delay in reporting beyond the regulatory deadline to EPA system outage;

(iii) A description of measures taken or to be taken to minimize the delay in reporting; and

(iv) The date by which you propose to report, or if you have already met the reporting requirement at the time of the notification, the date you reported.

(6) The decision to accept the claim of EPA system outage and allow an extension to the reporting deadline is solely within the discretion of the Administrator.

(7) In any circumstance, the report must be submitted electronically as soon as possible after the outage is resolved.

(n) If you are required to electronically submit a report through CEDRI in the EPA's CDX, you may assert a claim of force majeure for failure to timely comply with that reporting requirement. To assert a claim of force majeure, you must meet the requirements outlined in paragraphs (n)(1) through (5) of this section.

(1) You may submit a claim if a force majeure event is about to occur, occurs, or has occurred or there are lingering effects from such an event within the period of time beginning five business days prior to the date the submission is due. For the purposes of this section, a force majeure event is defined as an event that will be or has been caused by circumstances beyond the

control of the regulated entity, its contractors, or any entity controlled by the regulated entity that prevents you from complying with the requirement to submit a report electronically within the time period prescribed. Examples of such events are acts of nature (*e.g.*, hurricanes, earthquakes, or floods), acts of war or terrorism, or equipment failure or safety hazard beyond the control of the regulated entity (*e.g.*, large scale power outage).

(2) You must submit notification to the Administrator in writing as soon as possible following the date you first knew, or through due diligence should have known, that the event may cause or has caused a delay in reporting.

(3) You must provide to the Administrator:

(i) A written description of the force majeure event;

(ii) A rationale for attributing the delay in reporting beyond the regulatory deadline to the force majeure event;

(iii) A description of measures taken or to be taken to minimize the delay in reporting; and

(iv) The date by which you propose to report, or if you have already met the reporting requirement at the time of the notification, the date you reported.

(4) The decision to accept the claim of force majeure and allow an extension to the reporting deadline is solely within the discretion of the Administrator.

(5) In any circumstance, the reporting must occur as soon as possible after the *force majeure* event occurs.

8. Revise the section heading and § 59.512 to read as follows:

§ 59.512 Addresses of EPA Regional Offices.

(a) All requests (including variance requests), reports, submittals, and other

communications to the Administrator pursuant to this regulation shall be submitted to the Regional Office of the EPA through CEDRI which serves the State or territory for the address that is listed on the aerosol coating product in question. These areas are indicated in the following list of EPA Regional Offices:

(1) EPA Region I (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont) Director, Enforcement and Compliance Assurance Division, U.S. EPA Region I, 5 Post Office Square—Suite 100 (04-2), Boston, MA 02109-3912, Attn: Air Compliance Clerk.

(2) EPA Region II (New Jersey, New York, Puerto Rico, Virgin Islands), Director, Division of Enforcement and Compliance Assistance, 290 Broadway, New York, NY 10007-1866.

(3) EPA Region III (Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, West Virginia), Chief, Air Section, Enforcement & Compliance Assurance Division, Air, RCRA and Toxics Branch, US EPA Region 3, 1650 Arch Street – 3ED21, Philadelphia, PA 19103.

(4) EPA Region IV (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee), Director, Air and Radiation Division, 61 Forsyth Street, SW., Atlanta, GA 30303-3104.

(5) EPA Region V (Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin), Director, Air and Radiation Division, 77 West Jackson Blvd., Chicago, IL 60604-3507.

(6) EPA Region VI (Arkansas, Louisiana, New Mexico, Oklahoma, Texas), Chief, Air Enforcement Branch, Enforcement and Compliance Assurance Division, Mail Code ECDA, 1201 Elm Street, Suite 500, Dallas, Texas 75270-2102.

(7) EPA Region VII (Iowa, Kansas, Missouri, Nebraska), Director, Air and Waste Management Division, 11201 Renner Boulevard, Lenexa, Kansas 66219.

(8) EPA Region VIII (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming), Chief, Air and Toxics Enforcement Branch, 1595 Wynkoop Street, Denver, CO 80202-1129.

(9) EPA Region IX (American Samoa, Arizona, California, Guam, Hawaii, Nevada), Chief, Air Division, 75 Hawthorne Street, San Francisco, CA 94105.

(10) EPA Region X (Alaska, Oregon, Idaho, Washington), Chief, Air Permits and Toxics Branch, Air and Radiation Division, 1200 Sixth Avenue, Suite 155, Seattle, WA 98101.

(b) Beginning on [**INSERT DATE 181 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**], or once the notification/report template for this subpart has been available on the CEDRI website for six months, whichever date is later, regulated entities shall submit all notifications, reports, and other information required in § 59.511(b) through (j) following the procedure specified in § 59.511(l).

9. Revise § 59.515to read as follows:

§ 59.515 Incorporations by reference.

Certain material is incorporated by reference into this subpart with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. All approved incorporation by reference (IBR) material is available for inspection at the U.S. Environmental Protection Agency (EPA) and at the National Archives and Records Administration (NARA). Contact the EPA at: EPA Docket Center, Public Reading Room, EPA WJC West, Room 3334, 1301 Constitution Ave. NW, Washington, DC; phone: (202) 566-1744. For information on the availability of this material at NARA, visit www.archives.gov/federal-register/cfr/ibr-locations or email fr.inspection@nara.gov. The material may be obtained from the following sources:

(a) ASTM, International, 100 Barr Harbor Drive, P.O. Box CB700, West Conshohocken,

Pennsylvania 19428-2959; phone: (800) 262-1373; website: www.astm.org.

(1) ASTM Method D523-08, Standard Test Method for Specular Gloss (February 1, 2008), IBR approved for § 59.508(c).

(2) ASTM Method D523-89 (Reapproved 1999), Standard Test Method for Specular Gloss (May 10, 1999), IBR approved for table 3 of appendix A to subpart E of part 59.

(b) California Air Resources Board (CARB), 1001 I Street, P.O. Box 2815, Sacramento, CA 95812-2815, Telephone (916) 327-0900, www.arb.ca.gov.

(1) California Air Resources Board Method 310—Determination of Volatile Organic Compounds (VOC) in Consumer Products and Reactive Organic Compounds in Aerosol Coating Products (May 25, 2018) (CARB Method 310 (2018)), IBR approved for §§ 59.505(c) and 59.508(a).

(2) California Air Resources Board Method 310—Determination of Volatile Organic Compounds (VOC) in Consumer Products and Reactive Organic Compounds in Aerosol Coating Products (May 5, 2005) (CARB Method 310 (2005)), IBR approved for table 3 of appendix A to subpart E of part 59.

(c) South Coast Air Quality Management District (SCAQMD), 21865 Copley Dr, Diamond Bar, CA 91765, Telephone (909-396-2000), www.aqmd.gov.

(1) South Coast Air Quality Management District Test Method 318-95, Determination of Weight Percent Elemental Metal in Coatings by X-ray Diffraction, (July, 1996) (SCAQMD Test Method 318-95), IBR approved for § 59.508(b) and table 3 of appendix A to subpart E of part 59.

(2) [Reserved]

* * * * *

10. Revise tables 1, 2A, 2B, and 2C to subpart E of part 59 to read as follows:

Table 1 to Subpart E of Part 59—Product-Weighted Reactivity Limits by Coating Category

Coating category	Category code[a]	Reactivity limit (g O_3/g product)
Art Fixatives or Sealants	AFS	1.75
Auto Body Primers	ABP	0.95
Automotive Bumper and Trim Products	ABT	1.70
Aviation or Marine Primers	AMP	1.25
Aviation Propeller Coatings	APC	1.40
Clear Coatings	CCP	0.85
Corrosion Resistant Brass, Bronze, or Copper Coatings	CRB	1.80
Electrical/Electronic/Conformal Coatings	ECC	2.00
Exact Match Finish—Automotive	EFA	0.95
Exact Match Finish—Engine Enamel	EEE	0.95
Exact Match Finish—Industrial	EFI	1.20
Flat Coatings	FCP	0.80
Flexible Coatings	FCC	1.60
Floral Sprays	FSP	0.85
Fluorescent Coatings	FLP	1.30
Glass Coatings	GCP	1.35
Ground Traffic/Marking	GTM	0.85
High Temperature Coatings	HTC	1.85
Hobby/Model/Craft Coatings	HMC	1.60

Table 1 to Subpart E of Part 59—Product-Weighted Reactivity Limits by Coating Category		
Coating category	**Category code[a]**	**Reactivity limit (g O_3/g product)**
Marine Spar Varnishes	MSV	0.90
Metallic Coatings	MCP	1.25
Mold Release Coating	MRC	1.10
Non-Flat Coatings	NFP	0.95
Photograph Coatings	PHC	0.75
Pleasure Craft Primers, Surfacers or Undercoaters	PCS	0.90
Pleasure Craft Topcoats	PCT	0.60
Polyolefin Adhesion Promoters	PAP	2.50
Primers	PCP	0.70
Rust Converter Coating	RCC	1.10
Shellac Sealers	SSC	1.00
Slip-Resistant Coatings	SRC	2.10
Spatter/Multicolor Coatings	SMC	1.05
Two Component Coating	TWC	1.20
Uniform Finish Coating	UFC	1.30
Vinyl/Fabric/Leather/Polycarbonate Coatings	VFL	1.45
Webbing/Veiling Coatings	WFC	0.75
Weld-Through Primers	WTP	1.00
Wood Stains	WSP	0.90
Wood Touch-up/Repair or Restoration Coatings	WTR	1.45

[a] Regulated entities may use these category codes or define their own in accordance with § 59.511(b)(6).

Table 2A to Subpart E of Part 59—Reactivity Factors		
Compound	**CAS No.**	**Reactivity factor (g O_3/gVOC)**
Formaldehyde	50–00–0	9.46
Glycerol (1,2,3-Propanetriol)	56–81–5	3.15
Propylene Glycol	57–55–6	2.58
Ethanol	64–17–5	1.53
Formic Acid	64–18–6	0.06
Acetic Acid	64–19–7	0.68
Methanol	67–56–1	0.67
Isopropyl Alcohol (2-Propanol)	67–63–0	0.61
Acetone (Propanone)	67–64–1	0.36
n-Propanol (n-Propyl Alcohol)	71-23-8	2.50
n-Butyl Alcohol (Butanol)	71–36–3	2.88
n-Pentanol (Amyl Alcohol)	71–41–0	2.83
Benzene	71–43–2	0.72
1,1,1-Trichloroethane	71–55–6	0.01
Propane	74–98–6	0.49
Vinyl Chloride	75–01–4	2.83
Acetaldehyde	75–07–0	6.54
Methylene Chloride (Dichloromethane)	75–09–2	0.04
Ethylene Oxide	75–21–8	0.03

Table 2A to Subpart E of Part 59—Reactivity Factors		
Compound	**CAS No.**	**Reactivity factor (g O_3/gVOC)**
Isobutane	75–28–5	1.23
HFC–152A (1,1-Difluoroethane)	75–37–6	0.02
Propylene Oxide	75–56–9	0.29
t-Butyl Alcohol	75–65–0	0.41
Methyl t-Butyl Ketone	75–97–8	0.65
Isophorone (3,5,5-Trimethyl-2-Cyclohexenone)	78–59–1	4.63
Isopentane	78–78–4	1.45
Isobutanol	78–83–1	2.51
2-Butanol (s-butyl alcohol)	78–92–2	1.36
Methyl Ethyl Ketone (2-Butanone)	78–93–3	1.48
Monoisopropanol Amine (1-Amino-2-Propanol)	78–96–6	5.42
Trichloroethylene	79–01–6	0.64
Propionic Acid	79–09–4	1.22
Acrylic Acid	79–10–7	11.38
Methyl Acetate	79–20–9	0.07
Nitroethane	79–24–3	0.06
Methacrylic Acid	79–41–4	18.50
2-Nitropropane	79–46–9	0.11
a-Pinene (Pine Oil)	80–56–8	4.51
Methyl Methacrylate	80–62–6	15.61

Table 2A to Subpart E of Part 59—Reactivity Factors		
Compound	**CAS No.**	**Reactivity factor (g O_3/gVOC)**
Diethyl Phthalate	84–66–2	1.62
Dibutyl Phthalate	84–74–2	1.25
Naphthalene	91–20–3	3.34
2-Ethyl-1,3-hexanediol	94–96–2	2.05
Xylene, ortho-	95–47–6	7.64
o-Cresol	95–48–7	2.40
1,2,4-Trimethylbenzene	95–63–6	8.87
3-Pentanone	96–22–0	1.24
Methyl Ethyl Ketoxime (Ethyl Methyl Ketone Oxime)	96–29–7	1.58
gamma-Butyrolactone	96–48–0	0.96
Ethyl Lactate	97–64–3	2.48
Isobutyl Isobutyrate	97–85–8	0.60
Isobutyl Methacrylate	97–86–9	8.62
Butyl Methacrylate	97–88–1	8.70
Tert-butyl benzene	98–06–6	1.95
Benzotrifluoride	98–08–8	0.29
PCBTF (p-Trifluoromethyl-Cl-Benzene)	98–56–6	0.13
Cumene (Isopropyl Benzene)	98–82–8	2.52
a-Methyl Styrene	98–83–9	1.53
Ethyl Benzene	100–41–4	3.04

Table 2A to Subpart E of Part 59—Reactivity Factors		
Compound	**CAS No.**	**Reactivity factor (g O_3/gVOC)**
Styrene	100–42–5	1.73
Benzyl Alcohol	100–51–6	5.11
Benzaldehyde	100–52–7	0.00
Triethanolamine	102–71–6	4.21
2-Ethyl-Hexyl Acetate	103–09–3	0.66
2-Ethyl-Hexyl Acrylate	103–11–7	2.52
2-Ethyl-1-Hexanol (Ethyl Hexyl Alcohol)	104–76–7	2.00
Ethyl Propionate	105–37–3	0.77
s-Butyl Acetate	105–46–4	1.32
Diethyl Carbonate	105–58–8	0.71
n-Propyl Propionate	106–36–5	0.84
Xylene, para-	106–42–3	5.84
p-Dichlorobenzene	106–46–7	0.18
Dimethyl Succinate	106–65–0	0.23
1,2-Epoxybutane (Ethyl Oxirane)	106–88–7	0.91
n-Propyl Bromide	106–94–5	0.42
Butane	106–97–8	1.15
1,3-Butadiene	106–99–0	12.61
Ethylene Glycol	107–21–1	3.13
2-Methyl-2,4-Pentanediol	107–41–5	1.45

Table 2A to Subpart E of Part 59—Reactivity Factors		
Compound	**CAS No.**	**Reactivity factor (g O_3/gVOC)**
Hexamethyldisiloxane	107–46–0	0.00
Isohexane Isomers	107–83–5	1.50
Methyl n-Propyl Ketone (2-Pentanone)	107–87–9	2.81
Propylene Glycol Monomethyl Ether (1-Methoxy-2-Propanol)	107–98–2	2.44
n,n-Dimethylethanolamine	108–01–0	5.62
1-Nitropropane	108–03–2	0.22
Vinyl Acetate	108–05–4	3.20
Methyl Isobutyl Ketone	108–10–1	3.88
Isopropyl Acetate	108–21–4	1.07
Propylene Carbonate (4-Methyl-1,3-Dioxolan-2one)	108–32–7	0.28
Xylene, meta-	108–38–3	9.75
Propylene Glycol Monomethyl Ether Acetate (1-Methoxy-2-Propyl Acetate)	108–65–6	1.70
1,3,5-Trimethyl Benzene	108–67–8	11.76
Di-Isobutyl Ketone (2,6-Dimethyl-4-Heptanone)	108–83–8	2.68
Methylcyclohexane	108–87–2	1.70
Toluene	108–88–3	4.00
Monochlorobenzene	108–90–7	0.32
Cyclohexanol	108–93–0	1.95
Cyclohexanone	108–94–1	1.35
n-Butyl Butyrate	109–21–7	1.08

Table 2A to Subpart E of Part 59—Reactivity Factors		
Compound	**CAS No.**	**Reactivity factor (g O_3/gVOC)**
Propyl Acetate	109–60–4	0.78
Pentane	109–66–0	1.31
Ethylene Glycol Monomethyl Ether (2-Methoxyethanol)	109–86–4	2.93
Dimethoxy Methane	109–87–5	0.94
Tetrahydrofuran	109–99–9	4.31
Methyl Isoamyl Ketone (5-Methyl-2-Hexanone)	110–12–3	2.41
Isobutyl Acetate	110–19–0	0.62
Methyl Amyl Ketone	110–43–0	2.36
Hexane	110–54–3	1.24
n-Propyl Formate	110–74–7	0.78
2-Ethoxyethanol	110–80–5	3.71
Cyclohexane	110–82–7	1.25
Morpholine	110–91–8	1.98
Dipropylene Glycol	110–98–5	2.31
Ethylene Glycol Monoethyl Ether Acetate (2-Ethoxyethyl Acetate)	111–15–9	1.84
Diethylenetriamine	111–40–0	15.53
Diethanolamine	111–42–2	2.47
Diethylene Glycol	111–46–6	3.35
n-Octane	111–65–9	0.90
2-Butoxy-1-Ethanol (Ethylene Glycol Monobutyl Ether)	111–76–2	2.90

Table 2A to Subpart E of Part 59—Reactivity Factors		
Compound	**CAS No.**	**Reactivity factor (g O_3/gVOC)**
Diethylene Glycol Methyl Ether (2-(2-Methoxyethoxy) Ethanol)	111–77–3	2.66
n-Nonane	111–84–2	0.78
2-(2-Ethoxyethoxy) Ethanol	111–90–0	3.26
Ethylene Glycol Monobutyl Ether Acetate (2-Butoxyethyl Acetate)	112–07–2	1.62
2-(2-Ethoxyethoxy) Ethyl Acetate	112–15–2	1.48
2-(2-Butoxyethoxy)-Ethanol	112–34–5	2.39
Dimethyl Ether	115–10–6	0.81
Triethylamine	121–44–8	3.84
2-Phenoxyethanol; Ethylene Glycol Phenyl Ether	122–99–6	4.49
Diacetone Alcohol	123–42–2	0.60
2,4-Pentanedione	123–54–6	1.01
Butanal	123–72–8	5.97
Butyl Acetate, n	123–86–4	0.83
3-Methyl-Butyl Acetate	123–92–2	1.09
2-(2-Butoxyethoxy) Ethyl Acetate	124–17–4	1.38
2-Amino-2-Methyl-1-Propanol	124–68–5	0.25
Perchloroethylene	127–18–4	0.03
Ethanolamine	141–43–5	6.81
Ethyl acetate	141–78–6	0.63
Heptane	142–82–5	1.07

Table 2A to Subpart E of Part 59—Reactivity Factors		
Compound	**CAS No.**	**Reactivity factor (g O_3/gVOC)**
n-Hexyl Acetate (Hexyl Acetate)	142–92–7	0.69
2-Ethyl Hexanoic Acid	149–57–5	3.32
trans-1,2-Dichloroethene	156–60–5	1.70
1,2,3-Trimethyl Benzene	526–73–8	11.97
t-Butyl Acetate	540–88–5	0.18
Methyl Isobutyrate	547–63–7	0.61
Methyl Lactate	547–64–8	2.67
Methyl Propionate	554–12–1	0.66
1,2-Butanediol	584–03–2	2.52
n-Butyl Propionate	590–01–2	0.84
Methyl n-Butyl Ketone (2-Hexanone)	591–78–6	3.14
Dimethyl carbonate	616–38–6	0.06
2-Methyl-1-Butyl Acetate	624–41–9	1.08
n-Pentyl Propionate	624–54–4	0.71
Ethyl Isopropyl Ether	625–54–7	3.74
Dimethyl Adipate	627–93–0	1.80
Methyl n-Butyl Ether	628–28–4	3.15
Amyl Acetate (Pentyl Ethanoate, Pentyl Acetate)	628–63–7	0.84
Ethyl n-Butyl Ether	628–81–9	3.48
Ethyl t-Butyl Ether	637–92–3	2.01

Table 2A to Subpart E of Part 59—Reactivity Factors		
Compound	**CAS No.**	**Reactivity factor (g O_3/gVOC)**
1,3-Dioxolane	646–06–0	4.96
Ethyl-3-Ethoxypropionate	763–69–9	3.58
Methyl Pyrrolidone (n-Methyl-2-Pyrrolidone)	872–50–4	2.41
Dimethyl Gluterate	1119–40–0	0.42
C8 Disubstituted Benzenes	1330–20–7	7.76
Ethylene Glycol 2-Ethylhexyl Ether [2-(2-Ethylhexyloxy) Ethanol]	1559–35–9	1.55
Propylene Glycol Monopropyl Ether (1-Propoxy-2-Propanol)	1569–01–3	2.68
Propylene Glycol Monoethyl Ether (1-Ethoxy-2-Propanol)	1569–02–4	3.09
2-Methoxy-1-Propanol	1589–47–5	3.01
Methyl t-Butyl Ether	1634–04–4	0.73
trans-1,3,3,3-tetrafluoropropene (HFO-1234ze)	1645–83–6	0.10
Ethylcyclohexane	1678–91–7	1.47
Isoamyl Isobutyrate	2050–01–3	0.82
2-Propoxy-ethanol (Ethylene Glycol Monopropyl Ether)	2807–30–9	3.30
n-Butoxy-2-Propanol	5131–66–8	2.72
d-Limonene (Dipentene or Orange Terpene)	5989–27–5	4.55
2,2,4-trimethyl-1,3-pentanediol diisobutyrate	6846–50–0	0.38
Dipropylene Glycol Methyl Ether Isomer (2-[2Methoxypropoxy]-1-Propanol)	13588–28–8	2.58
C9 Styrenes	25013–15–4	1.53
Texanol (1,3 Pentanediol, 2,2,4-Trimethyl, 1-Isobutyrate)	25265–77–4	0.81

Table 2A to Subpart E of Part 59—Reactivity Factors

Compound	CAS No.	Reactivity factor (g O_3/gVOC)
Isodecyl Alcohol (8-Methyl-1-Nonanol)	25339–17–7	1.06
Tripropylene Glycol Monomethyl Ether	25498–49–1	1.92
Glycol Ether DPNB (1-(2-Butoxy-1-Methylethoxy) 2-Propanol)	29911–28–2	1.83
Dipropylene Glycol Monomethyl Ether (mixture of isomers)	34590–94–8	2.58
Propylene Glycol t-Butyl Ether (1-tert-Butoxy-2-Propanol)	57018–52–7	1.61
2-Methoxy-1-Propyl Acetate	70657–70–4	1.12
Dipropylene Glycol Methyl Ether Acetate Isomers	88917–22–0	1.45
Oxo-Heptyl Acetate	90438–79–2	0.83
2-tert-Butoxy-1-Propanol	94023–15–1	1.81
trans-1-chloro-3,3,3-trifluoropropene (HFO-1233zdE)	102687–65–0	0.04
Oxo-Octyl Acetate	108419–32–5	0.81

Table 2B to Subpart E of Part 59—Reactivity Factors for Aliphatic Hydrocarbon Solvent Mixtures

Bin	Average boiling point* (degrees F)	Criteria	Reactivity factor (g O_3/g VOC)
1	80-205	Alkanes (<2% Aromatics)	1.42
2	80-205	N- & Iso-Alkanes (≥90% and <2% Aromatics)	1.31
3	80-205	Cyclo-Alkanes (≥90% and <2% Aromatics)	1.63
4	80-205	Alkanes (2 to <8% Aromatics)	1.47
5	80-205	Alkanes (8 to 22% Aromatics)	1.56

Table 2B to Subpart E of Part 59—Reactivity Factors for Aliphatic Hydrocarbon Solvent Mixtures

Bin	Average boiling point* (degrees F)	Criteria	Reactivity factor (g O_3/g VOC)
6	>205-340	Alkanes (<2% Aromatics)	1.17
7	>205-340	N- & Iso-Alkanes (≥90% and <2% Aromatics)	1.03
8	>205-340	Cyclo-Alkanes (≥90% and <2% Aromatics)	1.44
9	>205-340	Alkanes (2 to <8% Aromatics)	1.44
10	>205-340	Alkanes (8 to 22% Aromatics)	1.98
11	>340-460	Alkanes (<2% Aromatics)	0.70
12	>340-460	N- & Iso-Alkanes (≥90% and <2% Aromatics	0.62
13	>340-460	Cyclo-Alkanes (≥90% and <2% Aromatics)	0.86
14	>340-460	Alkanes (2 to <8% Aromatics)	0.99
15	>340-460	Alkanes (8 to 22% Aromatics)	1.57
16	>460-580	Alkanes (<2% Aromatics)	0.52
17	>460-580	N- & Iso-Alkanes (≥90% and <2% Aromatics)	0.48
18	>460-580	Cyclo-Alkanes (≥90% and <2% Aromatics)	0.60
19	>460-580	Alkanes (2 to <8% Aromatics)	0.66
20	>460-580	Alkanes (8 to 22% Aromatics)	0.95

Table 2C to Subpart E of Part 59—Reactivity Factors for Aromatic Hydrocarbon Solvent Mixtures			
Bin	**Boiling range (degrees F)**	**Criteria**	**Reactivity factor (g O_3/g VOC**
21	280-290	Aromatic Content (≥98%)	7.64
22	320-350	Aromatic Content (≥98%)	7.60
23	355-420	Aromatic Content (≥98%)	6.85
24	450-535	Aromatic Content (≥98%)	3.82

11. Add appendix A to subpart E of part 59 to read as follows:

Appendix A to Subpart E of Part 59— In compliance with 40 CFR Part 59, Subpart E, the following standards will remain applicable prior to **[INSERT DATE 181 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].**

I. Appendix A-Table 1 Under 40 CFR Part 59, Subpart E

Appendix A-Table 1 to Subpart E of Part 59—Product-Weighted Reactivity Limits by Coating Category–Applicable Prior to [INSERT DATE 181 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]

Coating category	**Category code[a]**	**Reactivity limit (g O_3/g product)**
Clear Coatings	CCP	1.50
Flat Coatings	FCP	1.20
Fluorescent Coatings	FLP	1.75
Metallic Coatings	MCP	1.90

Non-Flat Coatings	NFP	1.40
Primers	PCP	1.20
Ground Traffic/Marking	GTM	1.20
Art Fixatives or Sealants	AFS	1.80
Auto Body Primers	ABP	1.55
Automotive Bumper and Trim Products	ABT	1.75
Aviation or Marine Primers	AMP	2.00
Aviation Propellor Coatings	APC	2.50
Corrosion Resistant Brass, Bronze, or Copper Coatings	CRB	1.80
Exact Match Finish—Engine Enamel	EEE	1.70
Exact Match Finish—Automotive	EFA	1.50
Exact Match Finish—Industrial	EFI	2.05
Floral Sprays	FSP	1.70
Glass Coatings	GCP	1.40
High Temperature Coatings	HTC	1.85
Hobby/Model/Craft Coatings, Enamel	HME	1.45
Hobby/Model/Craft Coatings, Lacquer	HML	2.70
Hobby/Model/Craft Coatings, Clear or Metallic	HMC	1.60
Marine Spar Varnishes	MSV	0.90
Photograph Coatings	PHC	1.00
Pleasure Craft Primers, Surfacers or Undercoaters	PCS	1.05
Pleasure Craft Topcoats	PCT	0.60

Polyolefin Adhesion Promoters	PAP	2.50
Shellac Sealers, Clear	SSC	1.00
Shellac Sealers, Pigmented	SSP	0.95
Slip-Resistant Coatings	SRC	2.45
Spatter/Multicolor Coatings	SMC	1.05
Vinyl/Fabric/Leather/Polycarbonate Coatings	VFL	1.55
Webbing/Veiling Coatings	WFC	0.85
Weld-Through Primers	WTP	1.00
Wood Stains	WSP	1.40
Wood Touch-up/Repair or Restoration Coatings	WTR	1.50

[a] Regulated entities may use these category codes or define their own in accordance with § 59.511(b)(6).

II. Appendix A-Table 2A Under 40 CFR Part 59, Subpart E

Appendix A-Table 2A to Subpart E of Part 59—Reactivity Factors–Applicable Prior to [INSERT DATE 181 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]

Compound	**CAS No.**	**Reactivity factor (g O_3/g VOC)**
Formaldehyde	50–00–0	8.97
Glycerol (1,2,3-Propanetriol)	56–81–5	3.27
Propylene Glycol	57–55–6	2.75

Ethanol	64–17–5	1.69
Formic Acid	64–18–6	0.08
Acetic Acid	64–19–7	0.71
Methanol	67–56–1	0.71
Isopropyl Alcohol (2-Propanol)	67–63–0	0.71
Acetone (Propanone)	67–64–1	0.43
n-Propanol (n-Propyl Alcohol)	71–23–8	2.74
n-Butyl Alcohol (Butanol)	71–36–3	3.34
n-Pentanol (Amyl Alcohol)	71–41–0	3.35
Benzene	71–43–2	0.81
1,1,1-Trichloroethane	71–55–6	0.00
Propane	74–98–6	0.56
Vinyl Chloride	75–01–4	2.92
Acetaldehyde	75–07–0	6.84
Methylene Chloride (Dichloromethane)	75–09–2	0.07
Ethylene Oxide	75–21–8	0.05
Isobutane	75–28–5	1.35
HFC–152A (1,1-Difluoroethane)	75–37–6	0.00
Propylene Oxide	75–56–9	0.32
t-Butyl Alcohol	75–65–0	0.45
Methyl t-Butyl Ketone	75–97–8	0.78
Isophorone (3,5,5-Trimethyl-2-Cyclohexenone)	78–59–1	10.58
Isopentane	78–78–4	1.68

Isobutanol	78–83–1	2.24
2-Butanol (s-Butyl Alcohol)	78–92–2	1.60
Methyl Ethyl Ketone (2-Butanone)	78–93–3	1.49
Monoisopropanol Amine (1-Amino-2-Propanol)	78–96–6	13.42
Trichloroethylene	79–01–6	0.60
Propionic Acid	79–09–4	1.16
Acrylic Acid	79–10–7	11.66
Methyl Acetate	79–20–9	0.07
Nitroethane	79–24–3	12.79
Methacrylic Acid	79–41–4	18.78
a-Pinene (Pine Oil)	80–56–8	4.29
Methyl Methacrylate	80–62–6	15.84
Naphthalene	91–20–3	3.26
Xylene, ortho-	95–47–6	7.49
o-Cresol	95–48–7	2.34
1,2,4-Trimethylbenzene	95–63–6	7.18
3-Pentanone	96–22–0	1.45
Methyl Ethyl Ketoxime (Ethyl Methyl Ketone Oxime)	96–29–7	22.04
gamma-Butyrolactone	96–48–0	1.15
Ethyl Lactate	97–64–3	2.71
Isobutyl Isobutyrate	97–85–8	0.61
Isobutyl Methacrylate	97–86–9	8.99
Butyl Methacrylate	97–88–1	9.09

Benzotrifluoride	98–08–8	0.26
PCBTF (p-Trifluoromethyl-Cl-Benzene)	98–56–6	0.11
Cumene (Isopropyl Benzene)	98–82–8	2.32
a-Methyl Styrene	98–83–9	1.72
Ethyl Benzene	100–41–4	2.79
Styrene	100–42–5	1.95
Benzaldehyde	100–52–7	0.00
Triethanolamine	102–71–6	2.76
2-Ethyl-Hexyl Acetate	103–09–3	0.79
2-Ethyl-Hexyl Acrylate	103–11–7	2.42
2-Ethyl-1-Hexanol (Ethyl Hexyl Alcohol)	104–76–7	2.20
Ethyl Propionate	105–37–3	0.79
s-Butyl Acetate	105–46–4	1.43
n-Propyl Propionate	106–36–5	0.93
Xylene, para-	106–42–3	4.25
p-Dichlorobenzene	106–46–7	0.20
Dimethyl Succinate	106–65–0	0.23
1,2-Epoxybutane (Ethyl Oxirane)	106–88–7	1.02
n-Propyl Bromide	106–94–5	0.35
Butane	106–97–8	1.33
1,3-Butadiene	106–99–0	13.58
Ethylene Glycol	107–21–1	3.36
2-Methyl-2,4-Pentanediol	107–41–5	1.04

Hexamethyldisiloxane	107–46–0	0.00
Isohexane Isomers	107–83–5	1.80
Methyl n-Propyl Ketone (2-Pentanone)	107–87–9	3.07
Propylene Glycol Monmethyl Ether (1-Methoxy-2-Propanol)	107–98–2	2.62
n,n-Dimethylethanolamine	108–01–0	4.76
1-Nitropropane	108–03–2	16.16
Vinyl Acetate	108–05–4	3.26
Methyl Isobutyl Ketone	108–10–1	4.31
Isopropyl Acetate	108–21–4	1.12
Propylene Carbonate	107–46–0	0.00
(4-Methyl-1,3-Dioxolan-2one)	108–32–7	0.25
Xylene, meta-	108–38–3	10.61
Propylene Glycol Monomethyl Ether Acetate (1-Methoxy-2-Propyl Acetate)	108–65–6	1.71
1,3,5-Trimethyl Benzene	108–67–8	11.22
Di-Isobutyl Ketone (2,6-Dimethyl-4-Heptanone)	108–83–8	2.94
Methylcyclohexane	108–87–2	1.99
Toluene	108–88–3	3.97
Monochlorobenzene	108–90–7	0.36
Cyclohexanol	108–93–0	2.25
Cyclohexanone	108–94–1	1.61
n-Butyl Butyrate	109–21–7	1.12
Propyl Acetate	109–60–4	0.87

Pentane	109–66–0	1.54
Ethylene Glycol Monomethyl Ether (2-Methoxyethanol)	109–86–4	2.98
Tetrahydrofuran	109–99–9	4.95
Methyl Isoamyl Ketone (5-Methyl-2-Hexanone)	110–12–3	2.10
Isobutyl Acetate	110–19–0	0.67
Methyl Amyl Ketone	110–43–0	2.80
Hexane	110–54–3	1.45
n-Propyl Formate	110–74–7	0.93
2-Ethoxyethanol	110–80–5	3.78
Cyclohexane	110–82–7	1.46
Morpholine	110–91–8	15.43
Dipropylene Glycol	110–98–5	2.48
Ethylene Glycol Monoethyl Ether Acetate (2-Ethoxyethyl Acetate)	111–15–9	1.90
Diethylenetriamine	111–40–0	13.03
Diethanolamine	111–42–2	4.05
Diethylene Glycol	111–46–6	3.55
n-Octane	111–65–9	1.11
2-Butoxy-1-Ethanol (Ethylene Glycol Monobutyl Ether)	111–76–2	2.90
Diethylene Glycol Methyl Ether (2-(2-Methoxyethoxy) Ethanol)	111–77–3	2.90
n-Nonane	111–84–2	0.95
2-(2-Ethoxyethoxy) Ethanol	111–90–0	3.19

Ethylene Glycol Monobutyl Ether Acetate (2-Butoxyethyl Acetate)	112–07–2	1.67
2-(2-Ethoxyethoxy) Ethyl Acetate	112–15–2	1.50
2-(2-Butoxyethoxy)-Ethanol	112–34–5	2.70
Dimethyl Ether	115–10–6	0.93
Triethylamine	121–44–8	16.60
2-Phenoxyethanol; Ethylene Glycol Phenyl Ether	122–99–6	3.61
Diacetone Alcohol	123–42–2	0.68
2,4-Pentanedione	123–54–6	1.02
Butanal	123–72–8	6.74
Butyl Acetate, n	123–86–4	0.89
2-(2-Butoxyethoxy) Ethyl Acetate	124–17–4	1.38
2-Amino-2-Methyl-1-Propanol	124–68–5	15.08
Perchloroethylene	127–18–4	0.04
Ethanolamine	141–43–5	5.97
Ethyl acetate	141–78–6	0.64
Heptane	142–82–5	1.28
n-Hexyl Acetate (Hexyl Acetate)	142–92–7	0.87
2-Ethyl Hexanoic Acid	149–57–5	4.41
1,2,3-Trimethyl Benzene	526–73–8	11.26
t-Butyl Acetate	540–88–5	0.20
Methyl Isobutyrate	547–63–7	0.70
Methyl Lactate	547–64–8	2.75

Methyl Propionate	554–12–1	0.71
1,2 Butanediol	584–03–2	2.21
n-Butyl Propionate	590–01–2	0.89
Methyl n-Butyl Ketone (2-Hexanone)	591–78–6	3.55
Dimethyl carbonate	616–38–6	0.06
Ethyl Isopropyl Ether	625–54–7	3.86
Dimethyl Adipate	627–93–0	1.95
Methy n-Butyl Ether	628–28–4	3.66
Amyl Acetate (Pentyl Ethanoate, Pentyl Acetate)	628–63–7	0.96
Ethyl n-Butyl Ether	628–81–9	3.86
Ethyl t-Butyl Ether	637–92–3	2.11
1,3-Dioxolane	646–06–0	5.47
Ethyl-3-Ethoxypropionate	763–69–9	3.61
Methyl Pyrrolidone (n-Methyl-2-Pyrrolidone)	872–50–4	2.56
Dimethyl Gluterate	1119–40–0	0.51
Ethylene Glycol 2-Ethylhexyl Ether [2-(2-Ethylhexyloxy) Ethanol]	1559–35–9	1.71
Propylene Glycol Monopropyl Ether (1-Propoxy-2-Propanol)	1569–01–3	2.86
Propylene Glycol Monoethyl Ether (1-Ethoxy-2-Propanol)	1569–02–4	3.25
2-Methoxy-1-Propanol	1589–47–5	3.01
Methyl t-Butyl Ether	1634–04–4	0.78
Ethylcyclohexane	1678–91–7	1.75
Isoamyl Isobutyrate	2050–01–3	0.89

2-Propoxyethanol (Ethylene Glycol Monopropyl Ether)	2807–30–9	3.52
n-Butoxy-2-Propanol	5131–66–8	2.70
d-Limonene (Dipentene or Orange Terpene)	5989–27–5	3.99
Dipropylene Glycol Methyl Ether Isomer (2-[2Methoxypropoxy]-1-Propanol)	13588–28–8	3.02
Texanol (1,3 Pentanediol, 2,2,4-Trimethyl, 1-Isobutyrate)	25265–77–4	0.89
Isodecyl Alcohol (8-Methyl-1-Nonanol)	25339–17–7	1.23
Tripropylene Glycol Monomethyl Ether	25498–49–1	1.90
Glycol Ether DPNB (1-(2-Butoxy-1-Methylethoxy) 2-Propanol)	29911–28–2	1.96
Propylene Glycol t-Butyl Ether (1-tert-Butoxy-2-Propanol)	57018–52–7	1.71
2-Methoxy-1-Propyl Acetate	70657–70–4	1.12
Oxo-Heptyl Acetate	90438–79–2	0.97
2-tert-Butoxy-1-Propanol	94023–15–1	1.81
Oxo-Octyl Acetate	108419–32–5	0.96
C8 Disubstituted Benzenes	na	7.48
C9 Styrenes	na	1.72

III. Appendix A-Table 2B Under 40 CFR Part 59, Subpart E

Appendix A-Table 2B to Subpart E of Part 59—Reactivity Factors for Aliphatic Hydrocarbon Solvent Mixtures–Applicable Prior to [INSERT DATE 181 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]

Bin	Average boiling point* (degrees F)	Criteria	Reactivity factor (g O_3/g VOC)
1	80–205	Alkanes (<2% Aromatics)	2.08
2	80–205	N- & Iso-Alkanes (≥90% and <2% Aromatics)	1.59
3	80–205	Cyclo-Alkanes (≥90% and <2% Aromatics)	2.52
4	80–205	Alkanes (2 to <8% Aromatics)	2.24
5	80–205	Alkanes (8 to 22% Aromatics)	2.56
6	>205–340	Alkanes (<2% Aromatics)	1.41
7	>205–340	N- & Iso-Alkanes (≥90% and <2% Aromatics)	1.17
8	>205–340	Cyclo-Alkanes (≥90% and <2% Aromatics)	1.65
9	>205–340	Alkanes (2 to <8% Aromatics)	1.62
10	>205–340	Alkanes (8 to 22% Aromatics)	2.03
11	>340–460	Alkanes (<2% Aromatics)	0.91
12	>340–460	N- & Iso-Alkanes (≥90% and <2% Aromatics)	0.81

13	>340–460	Cyclo-Alkanes (≥90% and <2% Aromatics)	1.01
14	>340–460	Alkanes (2 to <8% Aromatics)	1.21
15	>340–460	Alkanes (8 to 22% Aromatics)	1.82
16	>460–580	Alkanes (<2% Aromatics)	0.57
17	>460–580	N- & Iso-Alkanes (≥90% and <2% Aromatics)	0.51
18	>460–580	Cyclo-Alkanes (≥90% and <2% Aromatics)	0.63
19	>460–580	Alkanes (2 to <8% Aromatics)	0.88
20	>460–580	Alkanes (8 to 22% Aromatics)	1.49

* Average Boiling Point = (Initial Boiling Point + Dry Point)/2(b) Aromatic Hydrocarbon Solvents.

IV. Appendix A-Table 2C Under 40 CFR Part 59, Subpart E

Appendix A-Table 2C to Subpart E of Part 59—Reactivity Factors for Aromatic Hydrocarbon Solvent Mixtures–Applicable Prior to [INSERT DATE 181 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]

Bin	**Boiling range (degrees F)**	**Criteria**	**Reactivity factor (g O_3/g VOC)**
21	280-290	Aromatic Content (≥98%)	7.37
22	320-350	Aromatic Content (≥98%)	7.51

23	355-420	Aromatic Content (≥98%)	8.07
24	450-535	Aromatic Content (≥98%)	5.00

V. Appendix A-Table 3 Under 40 CFR Part 59, Subpart E

Appendix A-Table 3 to Subpart E of Part 59-Methods–Applicable Prior to [INSERT DATE 181 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]

Method Name	Description
CARB 310 (2005) or	Determination of Volatile Organic Compounds (VOC) in Consumer Products and Reactive Organic Compounds in Aerosol Coating Products (May 5, 2005), (incorporated by reference, see § 59.515) or
Method EPA 311;	Analysis of Hazardous Air Pollutant Compounds in Paints and Coatings by Direct Injection into a Gas Chromatograph;
SCAQMD Method 318-95	Determination of Weight Percent Elemental Metal in Coatings by X-ray Diffraction, July, 1996, (incorporated by reference, see § 59.515)
ASTM Method D523-89 (Reapproved 1999)	Standard Test Method for Specular Gloss, (incorporated by reference, see § 59.515)