



Surface Coating of Miscellaneous Metal Parts and Products

National Emission Standards for Hazardous Air Pollutants (NESHAP) Subpart M MMMM Technical Guidance for Small Businesses

Subpart M MMMM, is an air regulation applicable to major sources of Hazardous Air Pollutants (HAPs). This technical guidance document briefly summarizes the rule and compliance options, but is not a substitute for the regulations. The regulations are found in the code of federal regulations at 40 CFR part 63, subpart M MMMM. Online they can be found in the [official electronic code of federal regulations](#). It can be helpful to save as a pdf file, so you can highlight text that applies to your facility.

Am I considered an affected source subject to this regulation?

Applicability criteria are the same for existing, new, and reconstructed sources. This “4M” or “quad M” rule applies to air emission sources that are a major source, located at a major source, or is part of a major source of hazardous air pollutants (HAPs). In addition to being “major,” an affected source also uses 250 or more gallons/year of coatings that contain HAPs to coat metal parts and products. Coating materials include, but are not limited to, paints, stains, sealers, topcoats, basecoats, primers, inks, caulks, maskants and adhesives. Coating also includes associated activities such as surface preparation, cleaning, mixing, and storage when directly related to the coating application. Coating can be applied using spray guns or dip tanks.

A **major source** emits or has the potential to emit 10 or more tons/year of a single HAP, or 25 or more tons/year of a combination of HAPs. HAPs are known to cause cancer and other health impacts and are a regulated list of 187 pollutants found at this website, www.epa.gov/haps. Use safety data sheets and environmental data sheets from your coating and solvent vendors to determine whether your materials contain HAPs.

Sources not covered under this regulation include—

- A coating operation conducted at a facility where the facility uses only coatings, thinners and other additives, and cleaning materials that contain no organic HAP, as determined according to §63.3941(a).
- Surface coating operations that occur at research or laboratory facilities, or is part of janitorial, building, and facility maintenance operations, or that occur at hobby shops that are operated for noncommercial purposes.
- Coatings used in volumes of less than 189 liters (50 gal) per year, provided that the total volume of coatings exempt under this paragraph does not exceed 946 liters (250 gal) per year at the facility.
- The surface coating of metal parts and products performed on-site at installations owned or operated by the Armed Forces of the United States (including the Coast Guard and the National Guard of any such State) or the National Aeronautics and Space Administration, or the surface coating of military munitions manufactured by or for the Armed Forces of the United States (including the Coast Guard and the National Guard of any such State).
- Surface coating where plastic is extruded onto metal wire or cable or metal parts or products to form a coating.
- Surface coating of metal components of wood furniture that meet the applicability criteria for wood furniture manufacturing (40 CFR Part 63 subpart JJ).
- Surface coating of metal components of large appliances that meet the applicability criteria for large appliance surface coating (40 CFR Part 63 subpart NNNN).

- Surface coating of metal components of metal furniture that meet the applicability criteria for metal furniture surface coating (40 CFR Part 63 subpart RRRR).
- Surface coating of metal components of wood building products that meet the applicability criteria for wood building products surface coating (40 CFR Part 63 subpart QQQQ).
- Surface coating of metal components of aerospace vehicles that meet the applicability criteria for aerospace manufacturing and rework (40 CFR part 63, subpart GG).
- Surface coating of metal parts intended for use in an aerospace vehicle or component using specialty coatings as defined in appendix A to 40 CFR Part 63 subpart GG.
- Surface coating of metal components of ships that meet the applicability criteria for shipbuilding and ship repair (40 CFR Part 63 subpart II).
- Surface coating of metal using a web coating process that meets the applicability criteria for paper and other web coating (40 CFR Part 63 subpart JJJJ).
- Surface coating of metal using a coil coating process that meets the applicability criteria for metal coil coating (40 CFR Part 63 subpart SSSS).
- Surface coating of boats or metal parts of boats (including, but not limited to, the use of assembly adhesives) where the facility meets the applicability criteria for boat manufacturing facilities (40 CFR Part 63 subpart VVVV), except where the surface coating of the boat is a metal coating operation performed on personal watercraft or parts of personal watercraft. This subpart does apply to metal coating operations performed on personal watercraft and parts of personal watercraft.
- Surface coating of assembled on-road vehicles that meet the applicability criteria for the assembled on-road vehicle subcategory in plastic parts and products surface coating (40 CFR part 63, subpart PPPP).
- Surface coating of metal components of automobiles and light-duty trucks that meets the applicability criteria in §63.3082(b) for the Surface Coating of Automobiles and Light-Duty Trucks NESHAP (40 CFR part 63, subpart IIII) at a facility that meets the applicability criteria in §63.3081(b).

When do I have to comply?

An affected source is a new affected source that commences construction after August 13, 2002 and the construction is of a completely new miscellaneous metal parts and products surface coating facility where previously no miscellaneous metal parts and products surface coating facility had existed.

An affected source is existing if it is not new or reconstructed.

Existing affected sources should have been in compliance by January 2, 2007. *New and reconstructed* sources should be in compliance on the date of the initial startup of the affected source.

If you have been an area source, you have one year after becoming a major source to get in compliance.

The Kansas Department of Health and Environment will enforce applicable MMMM regulations through the State's Class I air operating permit.

Options for meeting emission limits

Your goal is for the organic HAP emission rate in all coatings, thinners/additives, and cleaning materials used in an affected source will be equal to or less than its applicable emission limit.

The following table summarizes the HAP emission limits for subcategories of coating types:

Organic HAP Emission Limits (lb. organic HAP/gal. coating solids)*		
Coating subcategory	Existing sources 40 CFR Part 63.3890(b)(1)-(5)	New & reconstructed sources 40 CFR Part 63.3890(a)(1)-(5)
General use	2.6	1.9
High performance	27.5	27.5
Magnet wire	1.0	0.44
Rubber-to-metal	37.7	6.8
Extreme performance fluoropolymer	12.4	12.4

The EPA has outlined three methods with which to comply with these HAP emission limits:

1. Compliant material option - Use compliant coatings (the HAP content of each coating is less than or equal to the HAP emission limits). Each thinner and cleaning material must contain no organic HAP.
2. Emission rate without add-on controls - Use an averaging approach (each month, the rolling 12-month average HAP content of all coatings is less than or equal to the HAP emission limits).
3. Emission rate with add-on controls - Use a capture system and control device that limits the HAP emissions from the affected processes to less than or equal to the HAP emission limits.

The simplest option is the first listed, use all compliant coatings plus thinner and cleaning materials void of organic HAP. If the second option is needed, Kansas small business environmental assistance program (SBEAP) has a spreadsheet tool for calculating rolling 12-month averages of HAP emissions. Go to the Air Quality Rules webpage at www.sbeap.org/aqrules and click on the *Painting and coating* icon. Click on the “4M MACT” jump link and download the spreadsheet. Follow the instructions in the first tab. Call 800-578-8898 for assistance.

If possible, avoid the third compliance option as it entails emission capture systems and add-on control devices. It is the only option that establishes operating limits, which means conducting performance tests. It is also the only compliance option that has work practices requirements.

Notification, recordkeeping, and reporting requirements

Like other NESHAPs, this one requires an initial notification (no later than 120 days after initial startup) and a notification of compliance status (no later than 30 calendar days following the end of the initial compliance period). Information to be included in the initial notification are found in the General Provisions (40 CFR part 63, subpart A), more specifically at §§63.7(b) and (c), 63.8(f)(4), and 63.9(b) through (e) and (h). The notification of compliance status must contain the information specified in paragraphs (c)(1) through (11) of subpart MMMM and in §63.9(h) of the General Provisions.

Submit the notifications to KDHE Bureau of Air, 1000 SW Jackson, Suite 310, Topeka, Kansas 66612-1366. If you have not previously obtained a construction approval or permit for the process, you may be asked to submit potential to emit (PTE) information for the process and obtain permits. If you have an existing Class I permit, it will get modified during the next permit renewal, or sooner if the change is a major modification to your facility.

After the initial compliance period, each affected source must submit semiannual compliance reports. The semiannual reporting periods cover the first and the last six months of a calendar year. Each report is due by the last day of the month following the six-month compliance period (July 31 or January 31).

Keep records of reported information, calculations demonstrating compliance or deviations, and permit information for at least five years.

*This Surface Coating of Miscellaneous Metal Parts and Products document is intended as guidance, if a conflict exist between the regulation 40 CFR Part 63, Subpart Mmmm and this checklist the regulation shall take precedence.

Questions? Call SBEAP at 1-800-578-8898 or email at sbeap@ksu.edu.

This publication was created by Kansas State University's Pollution Prevention Institute through the Small Business Environmental Assistance Program (SBEAP). SBEAP's mission is to help Kansas small businesses comply with environmental regulations and identify pollution prevention opportunities. SBEAP is funded through a contract with the Kansas Department of Health and Environment. SBEAP services are free and confidential. For more information, call 800-578-8898, send an e-mail to sbeap@ksu.edu, or visit our Web site at www.sbeap.org. Kansas State University is an EEO/AA provider.



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