

# 40 C.F.R. § 63.5170

## How do I demonstrate compliance with the standards?

You must include all coating materials (as defined in § 63.5110) used in the affected source when determining compliance with the applicable emission limit in § 63.5120. To make this determination, you must use at least one of the four compliance options listed in Table 1 of this section. You may apply any of the compliance options to an individual coil coating line, or to multiple lines as a group, or to the entire affected source. You may use different compliance options for different coil coating lines, or at different times on the same line. However, you may not use different compliance options at the same time on the same coil coating line. If you switch between compliance options for any coil coating line or group of lines, you must document this switch as required by § 63.5190(a), and you must report it in the next semiannual compliance report required in § 63.5180.

Table 1 to § 63.5170—Compliance Demonstration Requirements Index

If you choose to demonstrate compliance by:	Then you must demonstrate that:
1. Use of “as purchased” compliant coatings	a. Each coating material used during the 12-month compliance period does not exceed 0.046 kg HAP per liter solids, as purchased. Paragraph (a) of this section.
2. Use of “as applied” compliant coatings	a. Each coating material used does not exceed 0.046 kg HAP per liter solids on a rolling 12-month average as applied basis, determined monthly. Paragraphs (b)(1) of this section; or
	b. Average of all coating materials used does not exceed 0.046 kg HAP per liter solids on a rolling 12-month average as applied basis, determined monthly. Paragraph (b)(2) of this section.
3. Use of a capture system and control device	Overall organic HAP control efficiency is at least 98 percent on a monthly basis for individual or groups of coil coating lines; or overall organic HAP control efficiency is at least 98 percent during performance tests conducted according to Table 1 to § 63.5170 and operating limits are achieved continuously for individual coil coating lines; or oxidizer outlet HAP concentration is no greater than 20 ppmv and there is 100-percent capture efficiency during performance tests conducted according to Table 1 to § 63.5170 and operating limits are achieved continuously for individual coil coating lines. Paragraph (c) of this section.
4. Use of a combination of compliant coatings and control devices and maintaining an acceptable equivalent emission rate	Average equivalent emission rate does not exceed 0.046 kg HAP per liter solids on a rolling 12-month average as applied basis, determined monthly. Paragraph (d) of this section.

(a) *As-purchased compliant coatings.* If you elect to use coatings that individually meet the organic HAP emission limit in § 63.5120(a)(2) as-purchased, to which you will not add HAP during distribution or application, you must demonstrate that each coating material applied during the 12-month compliance period contains no more than 0.046 kg HAP per liter of solids on an as-purchased basis.

(1) Determine the organic HAP content for each coating material in accordance with § 63.5160(b) and the volume solids content in accordance with § 63.5160(c).

(2) Combine these results using Equation 1 of this section and compare the result to the organic HAP emission limit in § 63.5120(a)(2) to demonstrate that each coating material contains no more organic HAP than the limit.

$$H_{siap} = \frac{C_{hi} D_i}{V_{si}} \quad (\text{Eq. 1})$$

Where:

$H_{siap}$  = as-purchased, organic HAP to solids ratio of coating material, i, kg organic HAP/liter solids applied.  $C_{hi}$  = organic HAP content of coating material, i, expressed as a weight-fraction, kg/kg.  $D_i$  = density of coating material, i, kg/l.  $V_{si}$  = volume fraction of solids in coating, i, l/l.

(b) *As-applied compliant coatings.* If you choose to use “as-applied” compliant coatings, you must demonstrate that the average of each coating material applied during the 12-month compliance period contains no more than 0.046 kg of organic HAP per liter of solids applied in accordance with (b)(1) of this section, or demonstrate that the average of all coating materials applied during the 12-month compliance period contain no more than 0.046 kg of organic HAP per liter of solids applied in accordance with paragraph (b)(2) of this section.

(1) To demonstrate that the average organic HAP content on the basis of solids applied for each coating material applied,  $H_{siyr}$ , is less than 0.046 kg HAP per liter solids applied for the 12-month compliance period, use Equation 2 of this section:

$$H_{siyr} = \frac{\sum_{y=1}^{12} \left[ V_i D_i C_{ahi} + \sum_{i=1}^q V_j D_j C_{hij} \right]}{\sum_{y=1}^{12} V_i V_{si}} \quad (\text{Eq. 2})$$

Where:

$H_{siyr}$  = average for the 12-month compliance period, as-applied, organic HAP to solids ratio of material, i, kg organic HAP/liter solids applied.  $V_i$  = volume of coating material, i, l.  $D_i$  = density of coating material, i, kg/l.  $C_{ahi}$  = monthly average, as-applied, organic HAP content of solids-containing coating material, i, expressed as a weight fraction, kilogram (kg)/kg.  $V_j$  = volume of solvent, j, l.  $D_j$  = density of solvent, j, kg/l.  $C_{hij}$  = organic HAP content of solvent, j, added to coating material, i, expressed as a weight fraction, kg/kg.  $V_{si}$  = volume fraction of solids in coating, i, l/l.  $y$  = identifier for months.  $q$  = number of different solvents, thinners, reducers, diluents, or other non-solids-containing coating materials applied in a month.

(2) To demonstrate that the average organic HAP content on the basis of solids applied,  $H_{siyr}$ , of all coating

materials applied is less than 0.046 kg HAP per liter solids applied for the 12-month compliance period, use Equation 3 of this section:

$$H_{S_{yr}} = \frac{\sum_{y=1}^{12} \left[ \sum_{i=1}^p V_i D_i C_{ahi} + \sum_{j=1}^q V_j D_j C_{hij} \right]}{\sum_{y=1}^{12} \left[ \sum_{i=1}^p V_i V_s \right]} \quad (\text{Eq. 3})$$

Where:

$H_{S_{yr}}$  = average for the 12-month compliance period, as-applied, organic HAP to solids ratio of all materials applied, kg organic HAP/liter solids applied.  $V_i$  = volume of coating material, i, l.  $D_i$  = density of coating material, i, kg/l.  $C_{ahi}$  = monthly average, as-applied, organic HAP content of solids-containing coating material, i, expressed as a weight fraction, kilogram (kg)/kg.  $V_j$  = volume of solvent, j, l.  $D_j$  = density of solvent, j, kg/l.  $C_{hij}$  = organic HAP content of solvent, j, added to coating material, i, expressed as a weight fraction, kg/kg.  $V_{si}$  = volume fraction of solids in coating, i, l/l.  $p$  = number of different coating materials applied in a month.  $q$  = number of different solvents, thinners, reducers, diluents, or other non-solids-containing coating materials applied in a month.  $y$  = identifier for months.

(c) *Capture and control to reduce emissions to no more than the allowable limit.* If you use one or more capture systems and one or more control devices and demonstrate an average overall organic HAP control efficiency of at least 98 percent for each month to comply with § 63.5120(a)(1); or operate a capture system and oxidizer so that the capture efficiency is 100 percent and the oxidizer outlet HAP concentration is no greater than 20 ppmv on a dry basis to comply with § 63.5120(a)(3), you must follow one of the procedures in paragraphs (c)(1) through (4) of this section. Alternatively, you may demonstrate compliance for an individual coil coating line by operating its capture system and control device and continuous parameter monitoring system according to the procedures in paragraph (i) of this section.

(1) If the affected source uses one compliance procedure to limit organic HAP emissions to the level specified in § 63.5120(a)(1) or (3) and has only always-controlled work stations, then you must demonstrate compliance with the provisions of paragraph (e) of this section when emissions from the affected source are controlled by one or more solvent recovery devices.

(2) If the affected source uses one compliance procedure to limit organic HAP emissions to the level specified in § 63.5120(a)(1) or (3) and has only always-controlled work stations, then you must demonstrate compliance with the provisions of paragraph (f) of this section when emissions are controlled by one or more oxidizers.

(3) If the affected source operates both solvent recovery and oxidizer control devices, one or more never-controlled work stations, or one or more intermittently-controllable work stations, or uses more than one compliance procedure, then you must demonstrate compliance with the provisions of paragraph (g) of this section.

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