

Step-by-Step B2 Compliance Demonstration

Monthly Average, As-Applied Coating Materials

' 63.3370(c)(3) and (4)

Overview: This approach can be used when some individual coatings exceed MACT limits as-purchased or as-applied and some are below the limits, but when all are averaged over a month, the result is below the MACT limits.

In this approach, a facility needs to:

1. Identify all coatings and additives used in process.
2. Gather “NESHAP quality” data for each coating.
3. Calculate the monthly average as-applied organic HAP mass fractions (H_L or H_S).
4. Demonstrate monthly compliance with the applicable MACT limits.
5. Maintain compliance records.

MACT limits

Existing Affected Sources
 $H_L \leq 0.04$ kg HAP/kg coating

or

$H_S \leq 0.20$ kg HAP/kg solids

New Affected Sources

$H_L \leq 0.016$ kg HAP/kg coating

or

$H_S \leq 0.08$ kg HAP/kg solids

See separate listing of
all variables

Detailed Approach	Citation
<p>1. Identify all coatings and additives used in process.</p> <ul style="list-style-type: none"> • Maintain records of organic HAP content data. • Maintain records of material usage, volatile matter, coating solids, organic HAP usage, and compliance demonstrations. 	<p>§63.3410(a)(1)(iii) §63.3410(a)(1)(vi)</p>
<p>2. Gather “NESHAP quality” data for each coating and additive, as-purchased, using one of the following methods:</p> <p><u>Method 311</u></p> <ul style="list-style-type: none"> • Organic HAPs that are OSHA defined carcinogens present at $\geq 0.1\%$ percent by weight. • Organic HAPs that are present at concentrations $\geq 1.0\%$ by weight. • Express mass fraction of organic HAPs to four places after the decimal point. • Calculate total mass fraction of organic HAPs by summing the individual mass fractions and express to three places after the decimal point. <p>OR</p> <p><u>Method 24</u></p> <ul style="list-style-type: none"> • Determine the VOC as a mass fraction of non-aqueous volatile matter and substitute for organic HAP content. • Calculate solids content from measured volatile content, if needed. <p>OR</p> <p><u>Formulation data</u></p> <ul style="list-style-type: none"> • Provided by the manufacturer of the material. • Method 311 data takes precedence when available. 	<p>§63.3360(c)(1) and App. A of Part 63.</p> <p>§63.3360(c)(2), (d)(1) and App. A of Part 60</p> <p>§63.3360(c)(3) and (d)(2)</p>

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Detailed Approach	Citation
<ul style="list-style-type: none"> Formulation data must represent all organic HAP present \geq 0.1% for OSHA defined carcinogens and \geq 1.0% for other organic HAP compounds. 	
<p>3. Calculate one or both of the monthly average organic HAP as-applied mass fractions (H_L and/or H_S). Use Equations 4 and 5 to calculate compliance ratios.</p> <ul style="list-style-type: none"> Equation 4 calculates the weighted average HAP content, H_L, (kg HAP/kg coating) of all coatings used in the reporting month. Equation 5 calculates the weighted average HAP content per unit of solids, H_S, (kg HAP/kg solids) of all coatings used in the reporting month. 	<p>§63.3370(c)(3)</p> <p>§63.3370(c)(4)</p>
<p>Recommendation: Review a representative data set (e.g. 12 months) and compare the values of H_L and H_S versus the MACT limits prior to compliance deadline.</p> <ul style="list-style-type: none"> Make a determination based on the representative data set which MACT limit provides the most operational flexibility while maintaining compliance. <i>If your coating solids content averages < 20 percent, the “kg HAP / kg coating” limits are the least stringent of the two.</i> <i>If your coating solids content averages > 20 percent, the “kg HAP/ kg solids” limits are the least stringent of the two.</i> 	<p>While not required to evaluate both, only one additional data point (i.e., solids content) is needed to evaluate H_S. Facilities may find greater flexibility by evaluating both</p>
<p>4. Demonstrate monthly compliance with the applicable MACT limit.</p> <ul style="list-style-type: none"> Monthly calculations must be made to demonstrate that the previous month was in compliance with the applicable limit. As discussed in the Q&A document, since no specific date was established, the calculations for each month must be completed by the end of the following month. 	
<p>5. Maintain compliance records.</p> <ul style="list-style-type: none"> Maintain records of organic HAP content data Maintain records of volatile matter and coating solids content data. Maintain records of material usage, volatile matter usage, and coating solids usage, and compliance demonstrations. 	<p>§63.3410(a)(1)(iii)</p> <p>' 63.3410(a)(1)(iv)</p> <p>' 63.3410(a)(1)(vi)</p>

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