

TABLE 1 TO SUBPART WWW OF PART 63—EQUATIONS TO CALCULATE ORGANIC HAP EMISSIONS FACTORS FOR SPECIFIC OPEN MOLDING AND CENTRIFUGAL CASTING PROCESS STREAMS—Continued

[As required in §§ 63.5796, 63.5799(a)(1) and (b), and 63.5810(a)(1), to calculate organic HAP emissions factors for specific open molding and centrifugal casting process streams you must use the equations in the following table:]

If your operation type is a new or existing . . .	And you use . . .	With . . .	Use this organic HAP Emissions Factor (EF) Equation for materials with less than 33 percent organic HAP (19 percent organic HAP for nonatomized gel coat) ^{1 2 3} . . .	Use this organic HAP Emissions Factor (EF) Equation for materials with 33 percent or more organic HAP (19 percent for nonatomized gel coat) ^{1 2 3} . . .
	c. Nonatomized mechanical resin application.	iii. Vacuum bagging/ closed-mold curing with roll-out. iv. Vacuum bagging/ closed-mold curing without roll-out. v. Nonvapor-suppressed resin. vi. Vapor-suppressed resin	EF = $0.169 \times \% \text{HAP} \times 2000 \times 0.85$. EF = $0.169 \times \% \text{HAP} \times 2000 \times 0.55$. EF = $0.107 \times \% \text{HAP} \times 2000$. EF = $0.107 \times \% \text{HAP} \times 2000 \times (1 - (0.45 \times \text{VSE factor}))$.	EF = $((0.714 \times \% \text{HAP}) - 0.18) \times 2000 \times 0.85$ EF = $((0.714 \times \% \text{HAP}) - 0.18) \times 2000 \times 0.55$ EF = $((0.157 \times \% \text{HAP}) - 0.0165) \times 2000$ EF = $((0.157 \times \% \text{HAP}) - 0.0165) \times 2000 \times (1 - (0.45 \times \text{VSE factor}))$ EF = $((0.157 \times \% \text{HAP}) - 0.0165) \times 2000 \times 0.85$ EF = $((0.157 \times \% \text{HAP}) - 0.0165) \times 2000 \times 0.55$
	d. Atomized mechanical resin application with robotic or automated spray control ⁴ .	vii. Closed-mold curing with roll-out.	EF = $0.107 \times \% \text{HAP} \times 2000 \times 0.85$.	EF = $((0.157 \times \% \text{HAP}) - 0.0165) \times 2000 \times 0.85$
	e. Filament application ⁵	viii. Vacuum bagging/ closed-mold curing without roll-out. Nonvapor-suppressed resin.	EF = $0.107 \times \% \text{HAP} \times 2000 \times 0.55$. EF = $0.169 \times \% \text{HAP} \times 2000 \times 0.77$.	EF = $((0.157 \times \% \text{HAP}) - 0.0165) \times 2000 \times 0.55$ EF = $0.77 \times ((0.714 \times \% \text{HAP}) - 0.18) \times 2000$
	f. Atomized spray gel coat application.	i. Nonvapor-suppressed resin.	EF = $0.184 \times \% \text{HAP} \times 2000$.	EF = $((0.2746 \times \% \text{HAP}) - 0.0298) \times 2000$
	g. Nonatomized spray gel coat application.	ii. Vapor-suppressed resin	EF = $0.12 \times \% \text{HAP} \times 2000$	EF = $((0.2746 \times \% \text{HAP}) - 0.0298) \times 2000 \times 0.65$
	h. Manual gel coat application ⁶ .	Nonvapor-suppressed gel coat.	EF = $0.446 \times \% \text{HAP} \times 2000$.	EF = $((1.03646 \times \% \text{HAP}) - 0.195) \times 2000$.
		Nonvapor-suppressed gel coat.	EF = $0.185 \times \% \text{HAP} \times 2000$.	EF = $((0.4506 \times \% \text{HAP}) - 0.0505) \times 2000$.
		Nonvapor-suppressed gel coat.	EF = $0.126 \times \% \text{HAP} \times 2000$ (for emissions estimation only, see footnote 6).	EF = $((0.286 \times \% \text{HAP}) - 0.0529) \times 2000$ (for emissions estimation only, see footnote 6)
2. Centrifugal casting operations. ^{7 8} .	Heated air blown through molds. Vented molds, but air vented through the molds is not heated.	Nonvapor-suppressed resin. Nonvapor-suppressed resin.	EF = $0.558 \times (\% \text{HAP}) \times 2000$. EF = $0.026 \times (\% \text{HAP}) \times 2000$.	EF = $0.558 \times (\% \text{HAP}) \times 2000$. EF = $0.026 \times (\% \text{HAP}) \times 2000$.

Footnotes to Table 1

¹ To obtain the organic HAP emissions factor value for an operation with an add-on control device multiply the EF above by the add-on control factor calculated using Equation 1 of § 63.5810. The organic HAP emissions factors have units of lbs of organic HAP per ton of resin or gel coat applied.

² Percent HAP means total weight percent of organic HAP (styrene, methyl methacrylate, and any other organic HAP) in the resin or gel coat prior to the addition of fillers, catalyst, and promoters. Input the percent HAP as a decimal, i.e. 33 percent HAP should be input as 0.33, not 33.

³ The VSE factor means the percent reduction in organic HAP emissions expressed as a decimal measured by the VSE test method of appendix A to this subpart.

⁴ This equation is based on a organic HAP emissions factor equation developed for mechanical atomized controlled spray. It may only be used for automated or robotic spray systems with atomized spray. All spray operations using hand held spray guns must use the appropriate mechanical atomized or mechanical nonatomized organic HAP emissions factor equation. Automated or robotic spray systems using nonatomized spray should use the appropriate nonatomized mechanical resin application equation.

⁵ Applies only to filament application using an open resin bath. If resin is applied manually or with a spray gun, use the appropriate manual or mechanical application organic HAP emissions factor equation.

⁶ Do not use this equation for determining compliance with emission limits in Tables 3 or 5 to this subpart. To determine compliance with emission limits you must treat all gel coat as if it were applied as part of your gel coat spray application operations. If you apply gel coat by manual techniques only, you must treat the gel coat as if it were applied with atomized spray and use Equation 1.f. to determine compliance with the appropriate emission limits in Tables 3 or 5 to this subpart. To estimate emissions from manually applied gel coat, you may either include the gel coat quantities you apply manually with the quantities applied using spray, or use this equation to estimate emissions from the manually applied portion of your gel coat.

⁷ These equations are for centrifugal casting operations where the mold is vented during spinning. Centrifugal casting operations where the mold is completely sealed after resin injection are considered to be closed molding operations.