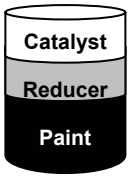
How to Calculate the Percent VOC and Density of a Multi-Part Coating

The MAERS A-101 form requires that you enter a VOC% and density for the coating used "as applied." Use this worksheet to determine the VOC% and density of a coating "as applied" when the component is made up of two or more components (e.g. reducer and/or a catalyst are being added to a paint to create the coating to be applied).

Complete the following fields for all components of the coating mixture.

Name of Componet in Coating *(Paint/Catalyst/Reducer)*	**VOC (% by wt)**	**Density (lbs/gal)**	**Mix Ratio***
Name of Paint:			
Name of Reducer:			
Name of Catalyst (if applicable):			
Other (if applicatble):			

**Mix ratio = the percentage of the paint, reducer, and/or catalyst in one gallon of coating. The sum of all components should equal 100.*



What's the % *VOC* and Density?

VOC % by wt of Multi-Part Coating=

Paint		**Reducer**		**Catalyst/Other**
$\left[\frac{\text{(VOC\% by wt) x (\%Mix Ratio)}}{100}\right]$	+	$\left[\frac{\text{(VOC\% by wt) x (\%Mix Ratio)}}{100}\right]$	+	$\left[\frac{\text{(VOC\% by wt) x (\%Mix Ratio)}}{100}\right]$

Density of Multi-Part Coating=

Paint		**Reducer**		**Catalyst/Other**
[(Density) x (%Mix Ratio/100)]	+	[(Density) x (%Mix Ratio/100)]	+	[(Density) x (%Mix Ratio/100)]

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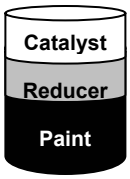
EXAMPLE

How to Calculate the VOC% by Weight and Density of a Multi-Part Coating

Use this fact sheet to help you determine the VOC content of a coating "as applied" when a reducer and/or a catalyst are being added to a paint to create the coating to be applied.

Complete the following fields for all components of the coating mixture.

Name of Componet in Coating *(Paint/Catalyst/Reducer)*	**VOC (% by wt)**	**Density (lbs/gal)**	**Mix Ratio***
Name of Paint: **SuperCoat 2000**	**62**	**10.5**	**60**
Name of Reducer: **R1234Q**	**100**	**7.5**	**30**
Name of Catalyst (if applicable): **G-1234Z5**	**49**	**6.75**	**10**
Other (if applicatble):			



What's the % VOC and Density?

**Mix ratio = the percentage of the paint, reducer, and/or catalyst in one gallon of coating. The sum of all components should equal 100.*

VOC % by wt of Multi-Part Coating=

Paint **Reducer** **Catalyst/Other**

$$\left[\frac{(\text{VOC\% by wt}) \times (\%\text{Mix Ratio})}{100}\right] + \left[\frac{(\text{VOC\% by wt}) \times (\%\text{Mix Ratio})}{100}\right] + \left[\frac{(\text{VOC\% by wt}) \times (\%\text{Mix Ratio})}{100}\right]$$

$$\left[\frac{(62) \times (60)}{100}\right] + \left[\frac{(100) \times (30)}{100}\right] + \left[\frac{(49) \times (10)}{100}\right]$$

37.2 + 30.0 + 4.9 = 72.1% VOC by weight

Density of Multi-Part Coating=

Paint **Reducer** **Catalyst/Other**

[(Density) x (%Mix Ratio/100)] + [(Density) x (%Mix Ratio/100)] + [(Density) x (%Mix Ratio/100)]

[(10.5) x (0.60)] + [(7.5) x (0.30)] + [(6.75) x (0.10)]

6.3 + 2.3 + 0.68 = 9.28 lbs/gal