

SAE Inc. Standard No. 104

Density of Uncured Latex-Based Products

ABSTRACT

This test method is used to calculate the density of SAE's uncured latex-based products in slurry form. The volume per pail of products such as ConduFlow or ConduForm can also be calculated.

1. EQUIPMENT REQUIRED

- 1.1 Electronic balance accurate to 0.005 kg
- 1.2 Tape measure or ruler
- 1.3 Beaker

2. PROCEDURE

- 2.1 Weigh an empty 5 US gallon pail on a scale accurate to +/- 0.005 kg and leave the pail on the scale.
- 2.2 Pour the required amount of the product into the 5 US gallon pail, e.g. 19.2 kg for ConduFlow or 19.4 kg for ConduForm, and record the height of product in the pail and the weight of the product.
- 2.3 Pour the product out of the pail and dispose accordingly.
- 2.4 Fill the pail with water, keeping a record of the volume of water added in liters, until the height of the water reaches the height that the product was in the pail.

3. CALCULATIONS

- 3.1 To calculate the volume of the product convert the volume of water from liters to cubic meters:

$$V_{product} = m^3_{water} = \frac{L_{water}}{1000}$$

where,

$V_{product}$ is the volume of the product in m^3

m^3_{water} = cubic meters

L_{water} = liters

- 3.2 Calculate the density of the uncured product:

$$D = \frac{m}{V}$$

where,

D = Density in kg/m^3

m = Mass in kg

V = Volume in m^3

- 3.3 Calculate the density of the uncured product in lbs/ft^3 :

$$1 \text{ kg} / m^3 = 0.0624 \text{ lbs}/ft^3$$

- 3.4 Report the density of the uncured product in kg/m^3 and lbs/ft^3 .

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