MicroCoat Technologies

1316 Somerset Drive McKinney, TX 75070 www.m-coat.com +1-972-678-4950 Fax +1-214-257-8890

Unparalleled in Polymer Coatings and Adhesives Technology ™

Product Data Sheet

Determining Specific Gravity: This was the discovery that had Archimedes running down the street nude shouting "Eureka! Eureka!"

What Archimedes had discovered was that the volume of an irregular solid could be measured by immersion in water. Since the immersed object displaces exactly its own volume, and 1 cubic centimeter of water weighs 1 gram, the volume of an object in cubic centimeters will be the difference in gram weight for the solid when it's mass is determined dry, then determined while suspended in water. The measured mass in water will be reduced by a number of grams exactly equivalent to its volume in cubic centimeters due to the bouying effect of the displaced water. Hence, volume in cubic centimeters = weight (in grams) dry less weight (in grams) suspended in water.

Specific Gravity is expressed as grams per cubic centimeter, so if we divide the dry weight (in grams) by the volume (in cubic centimeters), we get the specific gravity.

Specific Gravity (g/cc) = weight dry (in grams) / volume (in cc)

Recalling the volume equation above, we get:

Specific Gravity = weight dry / weight in water - weight dry