

611-2060 (30-090) Specific Gravity, set of 4



Introduction: Specific gravity is a dimensionless quantity that describes the ratio of the density of an object to the density of water. It is described by the formula:

$$SG = \frac{\rho_{\text{Substance}}}{\rho_{H_2O}}, \text{ where}$$

$\rho_{\text{Substance}}$ = the density of the substance,

ρ_{H_2O} = the density of water. The density of water is defined as 1 gram per cubic centimeter.

To determine specific gravity, one must first find the density of the object in question, which is calculated by dividing the mass of the object by its volume, or $D = \frac{M}{V}$.

Operation: The four cylinders in your set are made of copper, brass, steel, and aluminum. They are each 50mm long and 30mm in diameter. This means that the volume for each cylinder is the same, with mass as the variable component.

Once the density has been calculated, compute the specific gravity of each substance. The official values for these materials is below:

Copper: 8.94

Brass: 8.56

Steel: 7.93

Aluminum: 2.64

Compare your experimental results to the official ones, and conduct a percent error calculation.

Warranty and Parts:

We replace all defective or missing parts free of charge. Additional replacement parts may be ordered toll-free. We accept MasterCard, Visa, checks and School P.O.s. All products warranted to be free from defect for 90 days. Does not apply to accident, misuse or normal wear and tear. Intended for children 13 years of age and up. This item is not a toy. It may contain small parts that can be choking hazards. Adult supervision is required.