

### Density, Voids and Bulking

As with any porous material, the value obtained for the particle density of an aggregate will depend on the method of test and apparatus used. Different particle sizes within a sample often have different particle densities. The term particle density expressed in Mg/m<sup>3</sup> is numerically equal to the specific gravity. Various methods, depending upon the type and size of material to be tested, are specified in standards for testing aggregate.

### Particle Density (specific gravity) and Water Absorption

BS 812; ASTM C127; AASHTO T85; EN 1097-6, 12697-6

**Method for aggregate between 63 mm and 5 mm**



EL42-1000/01 Buoyancy Balance with Accessory

### Buoyancy Balance 6000 g

The buoyancy balance system developed by ELE consists of a rigid support frame, incorporating a water tank mounted on a platform.

A mechanical lifting device is used to raise the water tank through the frame height immersing the specimen suspended below the balance.

The balance supplied may also be used as a standard weighing device, thus providing a versatile and comprehensive weighing system in the laboratory.

#### Ordering Information

**EL42-1000/01**

**Buoyancy Balance, 6000 g x 0.1 g** supplied with frame, water tank and suspension hook.

For 220 – 240 V AC, 50 – 60 Hz, 1 ph.

#### Accessory

**EL42-1005**

**Wire Basket** with handle for BS 812 Relative Density. 200 mm diameter x 190 mm deep, 1.70 mm wire mesh.



EL42-1700 Sand Absorption Cone with EL42-1720 Tamping Rod

### Particle Density (specific gravity) and Water Absorption

BS 812; ASTM C128; AASHTO T84

**Method for aggregate 20 mm and smaller**

The gas jar method described in BS 812 is suitable for all aggregates smaller than 20 mm in size and is particularly suited to friable aggregates. The pycnometer method described in ASTM C128 is suitable for determining the particle density of samples of fine aggregates. The particle density of fillers can be determined using the density bottle method specified for testing cement.

#### Ordering Information

**EL42-1700**

**Sand Absorption Cone** made of brass to the dimensions given in BS 812, ASTM C128 and AASHTO T84. *Weight 250 g*

**EL42-1720**

**Tamping Rod** for use with cone. Tamping face is 25 mm diameter and complies with BS 812, ASTM C128 and AASHTO T84.

*Weight 400 g*

#### Accessory

**EL42-1240**

**Absorbent Cloths**, pack of 3.

### Bulk Density Measures

Manufactured from heavy gauge steel these bulk density measures comply with the requirements of either BS 812 or ASTM C-29. Other than the 3 litre size all measures incorporate carrying handles as standard.

Catalogue no.	Capacity	Standard
EL42-1995	3 litre	BS 812; ASTM C29
EL42-2000	7 litre	BS 812
EL34-2830	10 litre	BS 812-2, 3797, EN 1097-3 12350-6, ASTM C138
EL34-2820	15 litre	BS 812; ASTM C138
EL34-2800	30 litre	BS 812; ASTM C138