

Bulk Density Coke

RDC-153

Granular In-Plant Lab

General Description

The porosity of the different raw materials used for the production of electrodes has a very big impact on the electrode performance, not only for its quality but also in terms of process parameters to be optimized accordingly, such as the binder content. A simple and easy way to determine the porosity level is to determine the Bulk Density of the materials. Measuring fractions from different grain sizes allows having an overview of the material quality. Its information is vital for adequate process control.

The measurement is conducted with the RDC-153 apparatus, where a given quantity of grains from specific fractions is filled under controlled conditions into a graduated cylinder. This cylinder is then tapped for a given number of strokes and the volume of the sample is measured after the test. The bulk density is calculated and reported in kg/dm³, as the ratio of the sample's mass to its volume.

According to the ISO 10236 standard method, this measurement is done on natural sieved material (no crushing during the sample preparation) and five different fractions (8-4, 4-2, 2-1, 1-0.5 and 0.5-0.25 mm) are measured separately.



Technical Information

Standard Method	ISO 10236
Property	Tapped Bulk Density [kg/dm ³]
Sample	100 g of each natural fraction
Process Time	~ 6 minutes
Installation	Workbench
Dimensions (LxWxH)	45 x 37 x 84 cm
Weight	38 kg
Electrical Property	230 V 1/N/PE, 50 Hz 0.05 kW, 0.2 A
Certified Reference Material	RDC 1153
Database Connection	No

Additional Recommended Equipment

Drying oven (min. temperature 110°C)
Weighing scale with an accuracy of 0.1 g
Sieving machine (8, 4, 2, 1, 0.5 and 0.25 mm sieves)

Certified Reference Material



RDC 1153	
Weight per unit	400 g
Number of tests	N/A