

Wettability & Wetting Power

RDC - 163

Granular Binder Lab

General Description

The manufacturing of high-quality electrodes requires a good interaction between the dry aggregate and the binder. Analysis of the individual raw material properties only does not provide direct information regarding the wetting behavior of a specific granular carbon with a specific binder material. The RDC-163 apparatus can be used for evaluating the Wettability of a coke (with use of a standard pitch) or the Wetting Power of a pitch binder (with use of a standard coke). For this purpose, a given mass of pitch is added to the top of the coke sample in a cylinder, firstly tapped for a given number of strokes in the bulk volumeter and then placed in a preheated air-forced cabinet for a given period of time. After cooling down, the weight of coke agglomerated with pitch is determined by calculating the Wettability or the Wetting Power [-].



Technical Information

Property	Wettability [-] Wetting Power [-]
Sample	15 g of granular carbon (0.5 - 0.25 mm) 5 g of pitch (2 - 1 mm)
Process Time	~ 3 hours
Installation	Workbench under fume hood
Dimensions (LxWxH)	Bulk Volumeter : 35 x 35 x 40 cm Air Forced Cabinet : 90 x 64 x 70 cm
Weight	Bulk Volumeter : 14 kg Air Forced Cabinet : 38 kg
Electrical Property	Bulk Volumeter : 230 V 1/N/PE, 50 Hz 0.05 kW, 0.2 A Air Forced Cabinet : 230 V 1/N/PE, 50 Hz 1.6 kW, 7.5 A
Certified Reference Material	RDC 1163
Database Connection	No

Additional Recommended Equipment

Weighing scale with an accuracy of 0.01 g
Crusher (< 1.5 mm)
Sieving machine (2, 1, 0.5 and 0.25 mm sieves)

Certified Reference Material

RDC 1163 is composed with



RDC 1163-C

Weight per unit	800 g
Number of tests	53

RDC 1163-P

Weight per unit	150 g
Number of tests	30