

RDC-174

Name ANODE BINDER CONTENT

Material type
**GRANULAR
PITCH
ELECTRODES
LINING**

Utilization
**R&D
IN-PLANT
LAB**

General description
To reach an optimum and stable electrode quality level, one of the main and important process parameter to determine the optimum binder content for a given dry aggregate recipe. This is not an easy task to perform, as almost all process steps can be of influence. Finding this optimum requires steady process conditions and ideally a process optimization (see RDC-160 equipment for more information). For research & development purposes, it is of interest to determine the actual binder content of a green paste or of a green electrode.

The measurement is conducted with the RDC-174 apparatus, where a given mass of green electrode or paste sample is washed by hot quinoline until all the binder is dissolved. The binder content is calculated as the dissolved part expressed as a percentage of the initial sample weight. To increase the accuracy of the test, the quinoline insoluble, measured with the RDC-171 equipment, needs to be considered.

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|-----------------------|----------------------|-------------------------------------|
| Technical information | Standard Method: | ISO 14423 |
| | Property: | |
| | Binder Content | [%] |
| | Maximum Temperature: | 250 °C |
| | Sample: | 200 g of green electrode (< 8 mm) |
| | Process Time: | ~ 2 days |
| | Installation: | Workbench under fume hood |
| | Dimensions (LxWxH): | 30 x 35 x 105 cm |
| | Weight: | 9 kg |
| | Electrical Property: | 230V 1/N/PE, 50 Hz 0.3 kW, 1.3 A |
| | Fluid Property: | Water |
| | Database Connection: | No |
| | Consumable: | Quinoline |

Additional Recommended Equipment:

- Quinoline Insoluble (RDC-171)
- Weighing scale with an accuracy of 0.01 g
- Oven (min. temperature 140 °C)
- Oven for cleaning (min. temperature 550 °C)
- Desiccator

