# RDC-145

Name **AIR PERMEABILITY**

Material type

GRANULAR
PITCH
**ELECTRODES**
**LINING**

Utilization

R&D
IN-PLANT
**LAB**

General description

The air permeability, corresponding to the open pores larger than 50 µm, strongly influences the burning reaction that can occur due to the presence of both air and $CO_2$ gases. For minimum excess carbon consumption in the electrolysis cells, low permeability is important, which reduces the anode surface area in direct contact with air or $CO_2$. The air permeability is also a good indicator of some process parameters, such as the mixing conditions, the variations of recycled anode butts or the binder pitch used during the electrode production process. The measurement is conducted with the RDC-145 apparatus, where the time required by a certain volume of air to pass through a sample with a 50 mm diameter and a height of 20 mm is measured. The method is based on a comparative measurement: the actual time is compared to the time required from a reference material with a known permeability. The calculated permeability is expressed in nanoperm (nPm).

Technical information

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|---|---|
| **Standard Method:** | ISO 15906 |
| **Property:** Air Permeability | [nPm] |
| **Sample:** | Core Ø50 x 20 mm |
| **Process time:** | 1–5 minutes |
| **Installation:** | Workbench |
| **Dimensions (LxWxH):** | 60 x 62 x 69 cm |
| **Weight:** | 53 kg |
| **Electrical Property:** | 230 V 1/N/PE, 50 Hz<br>0.5 kW, 2.2 A |
| **Certified Reference Material:** | RDC 1145 |
| **Database Connection:** | Yes |

Watch our Carbon Test Equipment in action

**Additional Recommended Equipment:**
Drilling machine (RDC–157 or RDC–179)
Saw (RDC–140 or RDC–148 or RDC–149)
Drying oven (min. temperature 180°C)


# RDC 1145

Technical information

| | |
|---|---|
| **Weight per unit:** | N/A |
| **Number of tests:** | N/A |