

RDC-172

Name TOLUENE INSOLUBLE

Material type
**GRANULAR
PITCH
ELECTRODES
LINING**

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

General description
The quality of the pitch binder used during the electrode production has a strong impact on the final electrode quality. To characterize it, different solvents, mainly quinoline and toluene, are used for evaluating the composition of different fractions:

- Alpha resins: corresponding to the heavy fraction or the quinoline insoluble (determined with RDC-171 apparatus).
- Gamma resins: corresponding to the light fraction or toluene soluble (100% - toluene insoluble).
- Beta resins: corresponding to the intermediate fraction (calculated from the difference of the toluene insoluble and the quinoline insoluble).

The measurement is conducted with the RDC-172 apparatus. A given mass of a pitch sample is heated and dissolved in hot toluene, before being filtered under vacuum. After drying, the quantity of undissolved particles remaining on the filter is weighed to calculate the toluene insoluble content expressed as a percentage of the initial sample weight.

Technical information	Standard Method:	ISO 6376
	Property:	Toluene Insoluble [%]
	Sample:	1 g of pitch (< 0.25 mm)
	Process Time:	~ 3 hours
	Installation:	Workbench under fume hood
	Dimensions (LxWxH):	50 x 30 x 100 cm
	Weight:	8 kg
	Electrical Property:	230V 1/N/PE, 50 Hz 0.15 kW, 0.7 A
	Database Connection:	No
	Consumable:	Toluene

Additional Recommended Equipment:

Weighing scale with an accuracy of 0.001 g
Oven for cleaning (min. temperature 550 °C)
Oven (min. temperature 140 °C)
Crusher (< 4 mm)
Hot plate

