

Water Content in Bitumen - Distillation Method

DIN 1996-5

Product group(s): Bitumen, Oil

User group(s): Bitumen, Engine Oil, Fuel, Mastics, Paint, Varnish

Scope: For the determination of water in petroleum products, tars, and other bituminous materials by the distillation method.

The test arrangement consists of a set of glassware and a suitable heater.

As far as the standard taper joints fit together, many other individual combinations are possible, dependent upon customer's requirements.

Bituminous Material Methods:

The material to be tested is heated under reflux with a water-immiscible solvent, which co-distills with the water in the ample.

Condensed solvent and water are continuously separated in a trap, the water settling in the graduated section of the trap and the solvent returning to the still.

Emulsified Asphalts Methods:

They are determining the water content of an emulsified asphalt by reflux distillation, using a water trap to measure the amount of water present in the emulsified asphalt, as distinguished from either bitumen or petroleum solvent.



Bituminous Materials - Distillation Test Equipment

- Water Content Determination Apparatus

available with:

electric heater or heating mantle

Main Unit

16-0845 Water Content Determination Apparatus for Bituminous Materials

DIN 1996-5

Consisting of:

- 1 round flask (500 ml), standard taper (NS 45)
- 1 adapter, standard taper (NS 45 to NS 29)
- 1 glass trap (10 ml), standard taper (NS 29)
- 1 reflux condenser (400 mm), standard taper (NS 29)

Supplied with:

- 1 electric heater (800 W), stainless steel housing
- 1 heating board (center hole Ø 70 mm)
- 1 support rod (600 mm) with 4 adjustable clamps

Power supply: 230 V, 50/60 Hz

16-1845 Water Content Determination Apparatus for Bituminous Materials

Like 16-0845 but:
1 Heating Mantle instead of the electric heater
 Power supply: 230 V, 50/60 Hz

Options & Accessories

16-0897 Flask-Adapter, standard taper (NS 45/40 into NS 29/32)

50-7030 Sleeve (NS 45/40), PTFE, reusable
 improves the gas, liquid and vacuum tightness; prevents the air-inlet from jamming

50-7050 Sleeve (NS 45/40) with Gripping Ring, PTFE
 for multiple use, pack of 10

16-0834 Gas Heating Device
 Consisting of:
 universal gas burner, wire netting, base plate, rod 750 mm,
 2 adjustable clamps 40 mm Ø, 3 boss heads, and ring holder

17-0802 Circulation Air Oven
 Consisting of:
 thermostatically-controlled, includes of 2-hours & permanent time switch, thermometer for temperature inspection and perforated intermediate bottom.



Important: Not explosion protected!
Technical Data:
 Temperature range: +60 to +200 °C
 Temperature constancy: +/- 2-3 K
 Capacity: 14 l
 Inner dimensions (W x H x D): 19 x 20 x 36 cm
 Outer dimensions (W x H x D): 31 x 38.5 x 47 cm
 Weight: 17 kg
 Power supply: 230 V, 50/60 Hz

25-0700 Heating Mantle for flasks up to 500 ml
 (for 16-1839, 16-1850, 16-1844, 16-1845)
 Power supply: 230 V, 50 Hz

16-0825 Heating Mantle for flasks up to 2000 ml
 (max. Ø 166 mm) with support ring
 Power supply: 230 V, 50 Hz

16-0824 Support Stand
 Consisting of:
 base plate, rod 750 mm, 2 adjustable clamps Ø 40 mm and 3 boss heads

25-0001 Electronic Energy Regulator
 Consisting of:
 Potentiometer on/off switch, 10 A overload fuse;
 DIN-socket, 1,5 m connecting cable with DIN-plug.



Technical Data:
 Capacity: up to 2000 W
 Weight of thermoplastic casing: 500 g
 Dimension (L x W x H): 150 x 80 x 55 mm
 Power supply: 230 V, 50/60 Hz, 2000 W

25-0108 Electronic Energy Regulator
 Like 25-0001 but:
 Power supply: 115 V, 60 Hz

Spare Parts

16-0863	Erlenmeyer-Flask, 500 ml (NS 45/40) (DIN 12 387), borosilicate glass
16-0870	Round flask, 500 ml (NS 45/40) (DIN 12 348) with standard taper
16-0705	Measuring Cylinder (500 : 5 ml) borosilicate glass with plastic stand, ID 49 mm x H 342 mm
16-0742	Mixing Cylinder (500 : 5 ml) borosilicate glass, with plastic stand and stopper
16-0886	Trap (10 : 0.1 ml) (NS29/32) End of the measuring tube: <u>conical</u> 0-point ends: <u>at tip</u>
16-0887	Trap (10 : 0.1 ml) (NS29/32) End of the measuring tube: <u>round</u> 0-point ends: <u>above bottom</u>
16-0888	Trap (10 : 0.1 ml) (NS29/32) End of the measuring tube: <u>with cock</u> 0-point ends: <u>above cock</u>
16-0889	Trap (10 : 0.1 ml) (NS29/32) End of the measuring tube: <u>with cock</u> 0-point ends: <u>at cock</u>
16-0879	Liebig Reflux Condenser, 400 mm (NS 29/32) with special drip tip for easy counting of drops
11-0139	Support Board, center hole Ø 70 mm (2¾") glass ceramics (150 x 150 x 4 mm)
11-0018	Heater Rod 200 W, 115-230 V
11-0019	Heating Element with 4 heater rods Power supply: 230 V, 50/60 Hz, 800 W
25-0004	Control Module "m2" to regulate the heating power Power supply: 230 V, 50/60 Hz

Order Guideline

Minimum equipment: 1x Water Determination Apparatus
 Spares (approx. 1 year): Flask, Cylinder, Trap, Thermometer
 Additional requirements: