

Softening Point - Wilhelmi Method (manual)

DIN 1996-15, EN 1871-F

Product group(s): Bitumen

User group(s): Batteries, Bitumen, Road Research

Scope: To determine the temperature at which a hot casting substance used in road construction attains a particular degree of softness.

Suitable for joint sealing compounds in road construction and thermoplastic materials for pavement marking.

A horizontal disk of a sample casted in a ring supports a steel ball and is heated at a controlled rate in a liquid bath (up to 80°C in distilled water or silicon oil, above +80°C in glycerin or silicon oil).

The softening point is reported as the temperature at which the softening disk experiences a plastic deformation.

- Ready-to-Go Unit
- single test-place
- electric heating
- electronic power regulator



Wilhelmi Test Equipment

More details are mentioned in the "Order Number" section

Technical Data

<u>Test place:</u>	1
<u>Working range:</u>	approx. +25 to +200 °C
<u>Dimensions:</u>	16 x 18.5 x 20.5 cm (WxDxH)
<u>Weight:</u>	3 kg

Main Unit

10-0071 Manual Softening-Point Tester, Wilhelmi Method

Bituminous materials: DIN 1996-15
Thermoplastic materials: EN 1871-F

Consisting of:
electric heater (800 W) in stainless steel housing with electronic power regulator "M2", 4 heater rods, laboratory stand (1 bar, 1 special clamp, 1 ring support)

Supplied with:
1 Wilhelmi-ring
10 load balls
2 thermometers
(precision made, 1 x ASTM 15C, 1 x ASTM 16C)
1 glass beaker (1000 ml)
1 heater support board (bored, 50 mm / 2")
1 pouring plate (glass)

Power supply: 230 V, 50/60 Hz, 800 W, EU-plug

Options & Accessories

50-9167	Bath Liquid, silicon oil AR 200 1 kg, water clear, heat resistant up to approx. +250 °C, viscosity at +25 °C: 190 till 210 mPa-s
50-5315	Tongs for beaker (stainless steel)
10-0061	Thermometer ASTM 15C / IP 60C Range: -2 to +80 : 0.2 °C Length: 395 mm, Immersion: total, Ø 7 mm
10-0062	Thermometer ASTM 15C / IP 60C Range: -2 to +80 : 0.2 °C (officially certified)
10-0063	Thermometer ASTM 15F Range: +30 to +180 : 0.5 °F Length: 395 mm, Immersion: total, Ø 7 mm
10-0064	Thermometer ASTM 15F Range: +30 to +180 : 0.5 °F (officially certified)
10-0065	Thermometer ASTM 16C / IP 61C Range: +30 to +200 : 0.5 °C Length: 395 mm, Immersion: total, Ø 7 mm
10-0066	Thermometer ASTM 16C / IP 61C Range: +30 to +200 : 0.5 °C (officially certified)
10-0067	Thermometer ASTM 16F Range: +85 to +392 : 1.0 °F Length: 395 mm, Immersion: total, Ø 7 mm
10-0068	Thermometer ASTM 16F Range: +85 to +392 : 1.0 °F (officially certified)

Spare Parts

10-0077	Load Balls (Wilhelmi), steel (Ø 15 mm, 13.9 g), pack of 10
10-0075	Ring (Wilhelmi) with bayonet lock
10-0076	Ring-Holder (Wilhelmi) with rod
10-0106	Beaker, 1000 ml , borosilicate glass, low shape with spout
10-0057	Plate, glass, 120 x 120 x 6 mm
11-0138	Support Board, center hole Ø 50 mm (2") 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 10-0071
Spares (approx. 1 year):	10-0077, 10-0057, 10-0106, Thermometer
Additional requirements:	Bath liquid