

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 (stainless steel with rubber cover)**
to handle beakers etc.



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