

Hardness Test Pencil (method A)

BGD 511-1

Product Description

The BGD 511 Hardness Test Pencil is designed to simply and quickly test the resistance of a coating to scratches (such as writing marks or metal marking) using a usually hand-held, loaded stylus. This instrument is especially suitable for curved surfaces or small test specimens (minimum dimensions 30 mm × 50 mm). It conforms to ISO 22557 "Paints and Varnishes – Scratch Test Using a Spring-Loaded Pen."

The test can be performed by **Method A**, using a pointed stylus (diameter 0.50 mm, 0.75 mm, or 1.00 mm), or by **Method B**, using a disc stylus (made of stainless steel, copper, thermoset, or PMMA [Polymethyl methacrylate]). The stylus, loaded with a test force between 0.5 N and 20 N, is manually moved over the coating's surface. The resulting damage is then visually examined and assessed, often with a magnifier.



Standards

- ISO 22557

Technical Specification

Operating the Hardness Test Pencil is extremely straightforward. The desired spring tension is set using the slider. Holding the instrument vertically, place the tip on the test surface and draw a line 5 to 10 mm long at a speed of approximately 10 mm/sec. The stylus should produce a scratch that is just visible to the naked eye. If the spring tension is too high, the scratch will be clearly visible; if it is too low, no scratch will appear. The applied pressure is fixed by locking the slider and is marked in Newtons.

Three scales are engraved on the test pencil for the different pressure ranges:

- **No. 1:** 0-3 N (blue marking, graduation 0.1 N)
- **No. 2:** 0-10 N (red marking, graduation 0.5 N)
- **No. 3:** 0-20 N (yellow marking, graduation 1 N)

Hardness Test Pencil (method A)

BGD 511-1

Main Technical Parameters

Total length	160 mm
Diameter	16 mm
Net weight	Approx. 250 g
Standard kit includes	1 Point Stylus: 0.75mmØ 3 Springs (0-3N; 0-10N; 0-20N) 1 Plastic carrying case
Ordering information	BGD 511 - Hardness Test Pencil

Accessories

- BGD 1071 - Point Stylus A1 for BGD 511 (0.5mm)
- BGD 1072 - Point Stylus A2 for BGD 511 (0.75 mm)
- BGD 1073 - Point Stylus A3 for BGD 511 (1.00 mm)
- BGD 1075 - Blue Spring (0-3N)
- BGD 1076 - Red Spring (0-10N)
- BGD 1077 - Yellow Spring (0-20N)
- BGD 1070 - Head Piece with Supporting wheels

Disclaimer

The information given in this sheet is not intended to be exhaustive and any person using the product for any purpose other than that specifically recommended in this sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at his own risk. Whilst we endeavour to ensure that all advice we give about the product (whether in this sheet or otherwise) is correct we have no control over either the quality or condition of the product or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing to do so, we do not accept any liability whatsoever or howsoever arising for the performance of the product or for any loss or damage (other than death or personal injury resulting from our negligence) arising out of the use of the product. The information contained in this sheet is liable to modification from time to time in the light of experience and our policy of continuous product development