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Hardness Test Pencil

BGD 511 Hardness Test Pencil is designed to test the resistance of a coating to scratches (writing effect or metal marking) by a usually hand-held loaded stylus simply and quickly, especially on curved surfaces or on small test specimens (minimum dimensions 30mm × 50mm). It comfirms to ISO 22557《Paints and varnishes - Scratch test using a spring-loaded pen》.

The test can be carried out as method A using a point stylus (diameter 0,50mm, 0,75mm, or 1,00mm) or as method B using a disc stylus (made of stainless steel, copper, thermoset, or PMMA [Polymethyl methacrylate]). A stylus loaded with a test load between 0,5N to 20N is manually moved over the coating surface. The so introduced damage is visually (magnifier) examined and assessed.

The handling of the Hardness Test Pencil is extremely simple. The estimated or known spring tension is set with the help of the slider. Holding the instrument upright and placing its point on the test surface one draws a 5 to 10mm long line at a rate of approximately 10mm/sec. The stylus should produce a scratch which is just visible with the naked eye. If the spring pressure is too high, the scratch is clearly visible; if too low, no scratch appears. The applied pressure, fixed by locking the slider, is marked in Newton's.

Three scales are engraved into the test pencil for the three pressure ranges:

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

Main Technical Parameters:
★ Total length: 160mm; Net Weight: approx. 250g
★ Diameter: 16mm
★ Standard kit includes:
1 Test tip: (0.75mm dia.–Bosch)
3 Springs (0 – 3N; 0 – 10N; 0 – 20N)
1 Plastic carrying case



★ **Ordering information:**

BGD 511/1---Hardness Test Pencil (Method A)
BGD 511/2---Hardness Test Pencil (Method B)
BGD 1070---Head Piece with Supporting wheels
BGD 1071---Point Stylus A1 (0.5 mm, tungsten carbide)
BGD 1072--- Point Stylus A2 (0.75 mm, tungsten carbide)
BGD 1073--- Point Stylus A3 (1.0 mm, tungsten carbide)
BGD 1074/1--- Disc Stylus B1 (Stainless steel)
BGD 1074/2--- Disc Stylus B2 (Copper)
BGD 1075---Blue Spring (0–3N)
BGD 1076---Red Spring (0–10N)
BGD 1077---Yellow Spring (0–20N)