Hardness & Scratch Resistance

elcometers inspection equipment

Elcometer 501 Pencil Hardness Tester

The pencil hardness test, also referred to as the Wolff-Wilborn test, uses the varying hardness values of graphite pencils to evaluate a coating's hardness.

The Elcometer 501 has been designed to ensure that the cylindrical pencil lead is maintained at a constant angle of 45° and exerts a force of 7.5N (1.68lbF).

The pencil lead, prepared beforehand using the special sharpener and abrasive paper, is inserted into the Elcometer 501 and pushed over the smooth, flat coated surface.

The lowest hardness value of the pencil which marks the coating determines the coating's hardness rating.



STANDARDS: ASTM D 3363, ECCA T4, EN 13523-4, ISO 15184:2012, JIS K 5600-5-4

Technical Specification		Non-Destructive Test (NDT) Equipment
Part Number	Description	
H5011	Elcometer 501 Pencil Hardness Tester	
Dimensions (with Pencils)	130 x 130 x 50mm (5 x 5 x 2")	تامین تجهیزات و مواد مصرفی تست های غیر مخرب ایران
Weight	2.1kg (4lb)	· 11- 11- 27777 - 411- 1991 - 411-
Packing List	Elcometer 501 Pencil Hardness Tester, pe positioning block, 2 x pencil sharpeners, a instructions	encil set (14 pencils, grades 6B - 6H), brasive paper block, carry case and operating

Accessories				
Part Number	Description	Part Number	Description	
T99923042-1	12 Hardness Pencils (6B)	T99923042-8	12 Hardness Pencils (F)	
T99923042-2	12 Hardness Pencils (5B)	T99923042-9	12 Hardness Pencils (H)	
T99923042-3	12 Hardness Pencils (4B)	T99923042-10	12 Hardness Pencils (2H)	
T99923042-4	12 Hardness Pencils (3B)	T99923042-11	12 Hardness Pencils (3H)	
T99923042-5	12 Hardness Pencils (2B)	T99923042-12	12 Hardness Pencils (4H)	
T99923042-6	12 Hardness Pencils (B)	T99923042-13	12 Hardness Pencils (5H)	
T99923042-7	12 Hardness Pencils (HB)	T99923042-14	12 Hardness Pencils (6H)	
T99923039	Set of 14 Pencils (6B to 6H)			
T501190451	Pencil Sharpener (6H to 2B)			
T501190452	Pencil Sharpener (3B to 6B)			

Optional Calibration Certificate available.

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