

## Elcometer 501 Pencil Hardness Tester



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#### At a glance

- Applies a constant force of 7.5N at the required angle to meet the test methods.
- Supplied with 14 pencils from 6B to 6H hardness values in a plastic storage case.

Can be used in accordance with:			
ASTM D 3363	BS 3900 E19		
ECCA T4	EN 4.45.1		
ISO 15184			

## Elcometer 501 Pencil Hardness Tester

Using the same technique of evaluation with pencils as the Elcometer 3080, this instrument enables the pencil lead to be maintained at a constant force of 7.5N, and at the appropriate angle - which increases the reproducibility of the test.

The Elcometer 501 is supplied in a plastic carrying case and comes complete with a set of pencils in each of the 14 hardnesses from 6B to 6H, two pencil sharpeners and a sandpaper block.

Also known as the Wolff-Wilborn test method.

#### **Hardness Testers**

Improved mechanical resistance is part of many quality requirements. One important criteria for assessing this feature is hardness.

Depending on the requirements there are various methods for testing hardness. Some are dedicated to characterise coatings and others are more suitable for testing bulk materials such as metals, plastics, rubber or elastomers.

Elcometer manufacture and supply a wide range of instrumentation designed for the hardness tests most frequently used in the industry – these include pendulum, scratching, indentation or rebound measuring methods.

Model Number	Description	Part Number
Elcometer 501	Elcometer 501 Pencil Hardness Tester	H5011
Accessories Set of Pencils (6B – 6H)		T50115771
	Replacement Pencil Sharpener (6H to 2B)	T501190451
	Replacement Pencil Sharpener (3B to 6B)	T501190452
	Spare Pencils	See below
Packing List	Elcometer 501 Pencil Hardness Tester, Pencil Set (14 pencils, grades 6H – 6B), Setting Block, 2 x Pencil Sharpeners, Abrasive Paper Block, Carrying Case & Operating instructions	

Hardness Pencils (12 in each box)					
Hardness Pencils (6B)	KT003080P001	Hardness Pencils (F)	KT003080P008		
Hardness Pencils (5B)	KT003080P002	Hardness Pencils (H)	KT003080P009		
Hardness Pencils (4B)	KT003080P003	Hardness Pencils (2H)	KT003080P010		
Hardness Pencils (3B)	KT003080P004	Hardness Pencils (3H)	KT003080P011		
Hardness Pencils (2B)	KT003080P005	Hardness Pencils (4H)	KT003080P012		
Hardness Pencils (B)	KT003080P006	Hardness Pencils (5H)	KT003080P013		
Hardness Pencils (HB)	KT003080P007	Hardness Pencils (6H)	KT003080P014		

## data sheet

### Related products



Elcometer 3086



Elcometer 3080



Elcometer 3030/3040

Similar to the Elcometer 501 and using the same pencil hardness technique, this motorised wolff-wilborn test not only ensures the correct angle and force is applied to meet the standard, but also allows the user to ensure a constant and uniform speed - further increasing the reproducibility of the test.

The pencil hardness test is perhaps the most simple form of hardness test. Pencils are pushed into the sample and the coating hardness is identified by the trace generated. The Elcometer 3080 pencil hardness tester is supplied with a stand and a series of 14 pencils ranging from 6B to 6H.

The pendulum hardness tester works on the principle of the damping time of a pendulum oscillating on the sample. The amplitude of the oscillation reduces faster when the sample is soft. The Persoz and König methods differ by the dimension, time period and amplitude of the oscillation.

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