# data sheet

# elcometer

### Elcometer 501 Pencil Hardness Tester



Elcometer 501 Pencil Hardness Tester

### 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	

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### **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.

## elcometer

ENGLAND Elcometer Instruments Ltd Edge Lane Manchester M43 6BU

Tel: +44 (0) 161 371 6000 Fax: +44 (0) 161 371 6010 e-mail: sales@elcometer.com www.elcometer.com

### USA

Elcometer Instruments Inc 1893 Rochester Industrial Drive Rochester Hills Michigan 48309

Tel: +1 248 650 0500 Toll free: 800 521 0635 Fax: +1 248 650 0501 e-mail: inc@elcometer.com www.elcometer.com

### CANADA

Elcometer Canada Ltd PO Box 622, 401 Ouelette Avenue Windsor, Ontario N9A 6N4

Tel: +1 248 650 0500 Toll Free: 800 521 0635 Fax: +1 248 650 0501 e-mail: ca\_info@elcometer.com www.elcometer.com

### ASIA & THE FAR EAST

Elcometer (Asia) Pte Ltd 896 Dunearn Rd Sime Darby Centre #3-09 Singapore 589472, Republic of Singapore

Tel: +65 6462 2822 Fax: +65 6462 2860 e-mail: asia@elcometer.com www.elcometer.com

#### BELGIUM

Elcometer SPRL Rue Vallée 13 B-4681 Hermalle /s Argenteau

Tel: +32 (0)4 379 96 10 Fax: +32 (0)4 374 06 03 e-mail: be\_info@elcometer.be www.elcometer.be

#### FRANCE

Elcometer SARL 97 Route de Chécy 45430 BOU

Tel: +33 (0)2 38 86 33 44 Fax: +33 (0)2 38 91 37 66 e-mail: fr\_info@elcometer.fr www.elcometer.fr

#### GERMANY

Elcometer Instruments GmbH Himmlingstraβe 18 D-73434 Aalen

Tel: +49 (0) 7366 91 92 83 Fax: +49 (0) 7366 91 92 86 e-mail: de\_info@elcometer.de www.elcometer.de