



elcometer® 121-2 Universal Paint Inspection Gauge

Can be used in accordance with:
ISO 2808-5B, ISO 2409

ASTM D 4138, ASTM D 3359-B, BS EN 3900-C5-5B, BS EN ISO 2815, DIN 53151, DIN 53153



The Elcometer 121/2 Universal P.I.G. provides the User with a destructive coating thickness gauge and more:

- Built-in microscope with illumination
- Three cutters supplied (1, 2 and 3)
- Adhesion - cross hatch cutter technique
- Hardness Tester - Buchholz Hardness Test

Three in one gauge, simply turn the wheel to change the function.

Technical Specifications

Thickness Cutters	No. 1 Coating thickness between 20 – 2000µm No. 2 Coating thickness between 10 – 1000µm No. 3 Coating thickness between 2 – 200µm
Special Cutters are also available	Special Cutter A: Coating thickness between 0 – 100µm Special Cutter B: Coating thickness between 0 – 3000µm
Buchholz Hardness Test	Indentation Tool
Microscope Magnification	x50 magnification
(Optional Accessory)	Slip-on Weight

Model	Description	Part Number
Elcometer 121/2	Elcometer 121/2 Universal P.I.G. complete with Cutter No. 1, 2 and 3	A121----2
Accessories	Cutter No. 1	T12112191
	Cutter No. 2	T12112192
	Cutter No. 3	T12112193
	Special Cutter A (0 – 100µm)	T12112189
	Special Cutter B (0 – 3000µm)	T12112190
	Cross Hatch Tool 1mm (ASTM)	T12112183
	Cross Hatch Tool 1.5mm (ASTM)	T12112184
	Cross Hatch Tool 1mm (ISO/DIN)	T12112185
	Cross Hatch Tool 1mm (ISO/DIN)	T12112186
	Buchholz Indentation Tool	T12112187
	Buchholz Slip-On Weight	T12112188



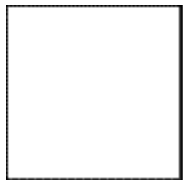
BAMR (Pty) Ltd, PO Box 23973, Claremont, 7735, South Africa
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Test Method - Elcometer Paint Inspection Gauge

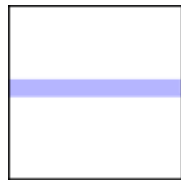
The PIG test method is a destructive test to measure the thickness of a coating which is over certain coating/substrate combinations and to also measure individual layers of a multi-layer coating system.

Procedure

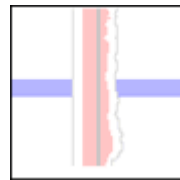
The surface (or test panel) under examination is marked with one stroke from the Koki / Felt marker pen. Then a cut is made at right – angles to this mark and the coating examined through the 50 x's graduated microscope. The blade cuts one “clean” edge (at (1) above) and one ragged edge (at (3) above) ie “substrate edge”. The thickness of each layer is measured from the “clean” edge at (1) to (2) & total thickness from (1) to (3). See the diagrams below.



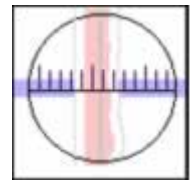
Take the coated product



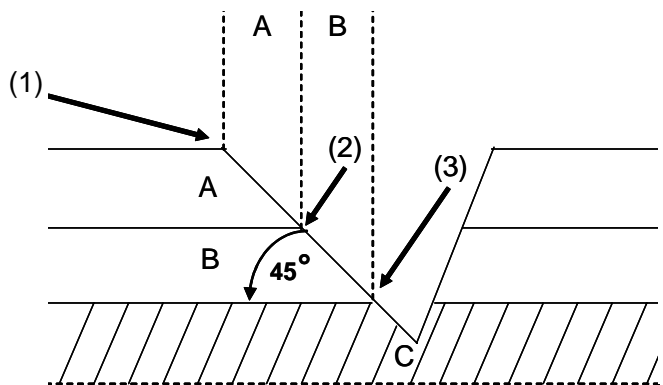
Using the marker, mark a line across the coating



Using the PIG, make a cut at right angles to the marker line, all the way down to the substrate

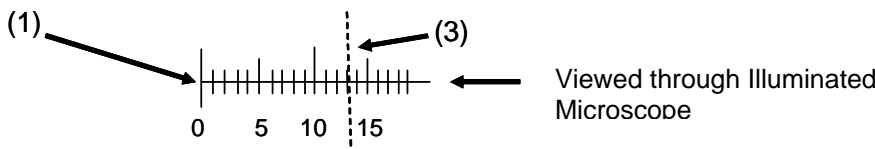


Using the microscope, measure the number of graticule divisions across a coating layer, using the sharp cut



A = Topcoat
B = Undercoat
C = Substrate

(1) = Marker Pen / Koki
(2) = Paint Line
(3) = Ragged Edge



Using the Scale factor (number of microns per division, calculate the coating thickness)

eg	No 1 Blade	13 divisions	x 20	= 260 mic
	No 4	13	x 10	= 130 mic
	No 6	13	x 2	= 26 mic

From the appearance of the cut, Adhesion, Elasticity of the coating, Cleanliness of the substrate, and Adhesion of each separate coating can also be determined.

- NOTE :**
- 1) All images, when looking through the Microscope are reversed
 - 2) The 141 replaces the old 121 at a much lower price. The 121 has **paid for itself** many times over for both authorities below & Paint Manufactures etc.

MAJOR USERS of the model 121 (PIG or “V” Cutter)

PUBLIC WORKS, POST OFFICE, PLASCON, DULUX all use the 121 to measure PVA & Coatings on Plaster, Concrete, Wood, Asbestos etc

The MOTOR ASSEMBLERS measure PAINT on SAMPLES of PLASTIC HUB CAPS & BUMPERS PASSED THRO' THE PAINT BOOTH



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