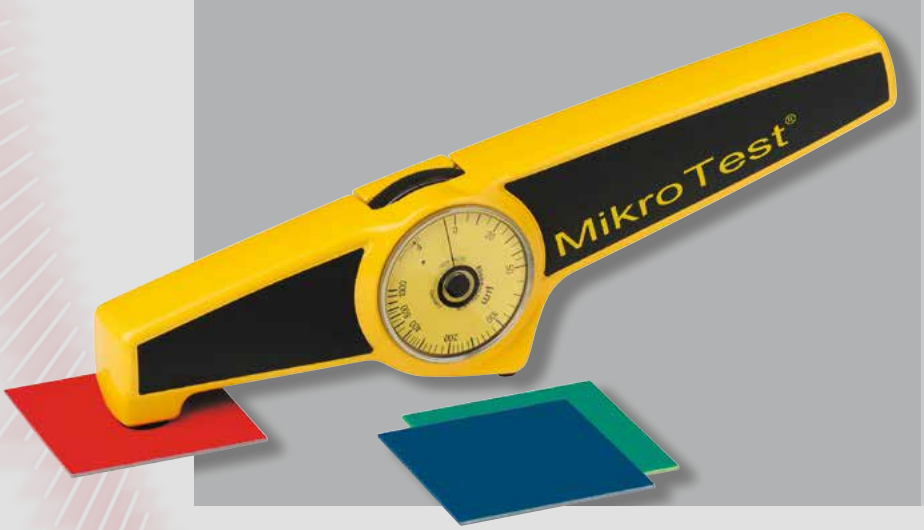
Advancing with Technology ElektroPhysik

Coating thickness measurement

MikroTest®



A coating thickness gauge for quick, precise and non-destructive measurement of:

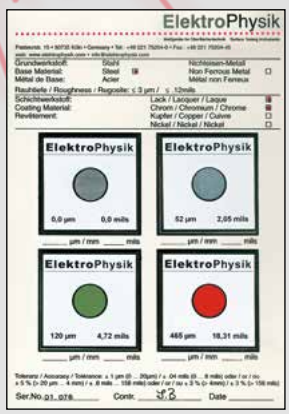
- electroplating
- nickel coatings
- phosphating
- paint
- plastic
- enamel etc. on steel

No power supply
No calibration
Measurement at any angle
Fully automatic

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TESTING
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MikroTest® Magnetic coating thickness measurement

The MikroTest® has been the most widely used coating thickness gauge in the world over the last 40 years. International patents and our production "know-how" ensure that the gauge has the highest technical standards of all analogue magnetic coating thickness gauges.
All instruments conform to national and international standards: DIN EN ISO 2178, DIN 50982, ASTM B 499, E 376, D 1186, G 12, B 530, BS 5411, ISO 2361



Coating thickness standards for checking the accuracy of MikroTest

Application

11 Models – a MikroTest® for every application (see table)

The balanced measuring system ensures accurate readings at any angle

- Horizontal, vertical, overhead
- The gauge allows measurements on curved surfaces
- Precise measurements in tubes and on round parts due to the automatic operation

Measuring principle

The measurement of the coating thickness is based on magnetic attraction. The attractive force is related to the distance between a permanent magnet and a steel substrate. This distance represents the thickness of the coating to be measured. The magnet is lifted from the surface by means of a spring connected to the magnet arm. The force needed to lift the magnet is directly related to the angle of rotation of the torsion spring. This measuring principle is also especially suited for electroplated nickel on copper, aluminium and other non-ferrous metals.

Technical data

Features to make your quality control more precise and accurate

- Highest accuracy with simplest operation
- No calibration necessary
  Simple set-up and measurement
- All gauges are without power or battery
- One point measurement
- Robust metal case to protect from mechanical shocks
- Precision measuring system resistant to solvents

Useful accessories

- Belt pouch for safe transport of the MikroTest®
- Wet film gauge for measuring the thickness of wet coatings
- Coating thickness standards for checking accuracy

Supply schedule

- MikroTest® gauge with hand strap
- Soft pouch
- Operating instructions

Technical data

Type	Range	Application	Tolerance*	Minimum surface	Minimum curvature radius of the sample	Minimum base thickness
5/6 G	0 …100 µm	Electroplating and paint coatings on steel**	± 1 µm or 5% of reading	Ø 20 mm	5 mm convex/ 25 mm concave	0.5 mm
5/6 F	0 …1000 µm	Paint on steel**	± 5 µm or 5% of reading	Ø 30 mm	8 mm convex/ 25 mm concave	0.5 mm
6 S3	0.2…3 mm	Enamel, plastic, rubber on steel**	± 5% of reading	Ø 30 mm	15 mm convex/ 25 mm concave	1.0 mm
6 S5	0.5…5 mm		± 5% of reading	Ø 50 mm	15 mm convex/ 25 mm concave	1.0 mm
6 S10	2.5…10 mm		± 5% of reading	Ø 50 mm	15 mm convex/ 25 mm concave	2.0 mm
6 S20	7.5…20 mm		± 5% of reading	Ø 100 mm	100 mm convex/150 mm concave	7.0 mm
6 Ni50	0…50 µm	electroplated nickel on non-ferrous substrates	± (1 µm + 5% of reading)	Ø 15 mm	5 mm convex/ 25 mm concave	–
6 Ni100	0…100 µm		± (1 µm + 5% of reading)	Ø 15 mm	5 mm convex/ 25 mm concave	–
6 NiFe50	0 …50 µm	Electroplated nickel on steel**	± (2 µm + 8% of reading)	Ø 20 mm	10 mm convex/ 25 mm concave	0.5 mm

Ambient temperature: –20°C…100°C · Dimensions: Gauge 215 mm x 55 mm x 29 mm · Plastic carrying case 235 mm x 185 mm x 46 mm · Weight: Case incl. gauge approx. 560 g

* Referring to ElektroPhysik standards
** Steel: ST 33 to ST 60
(Type 5 = Standard version, Type 6 = Automatic version)

ElektroPhysik

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