



**MAR RESISTANCE
TESTER**

STANDARDS

ASTM D2197

ASTM D5178

ISO 12137

APPLICATIONS

Application of Mar Resistance Tester

Mar Resistance Tester

What is "Mar"? It's a blemish on the surface of a coating, extending over a particular area and visible due to differences in light reflection compared to adjacent areas.

The Mar Resistance Tester from Qualitest for coatings operates similar to a scratch resistance tester. However, instead of a straight stylus, this Mar resistance tester uses an arc (loop-shaped or ring-shaped) stylus to assess the mar resistance of a single coating of paint, varnish, or related product, or the upper layer of a multi-coat system.

To conduct the test, the product or system under examination is applied at a uniform thickness to flat panels with uniform surface textures. After drying/curing, the mar resistance is evaluated by passing the panels beneath a curved (loop-shaped or ring-shaped) stylus mounted to press down on the test panel's surface at a 45° angle. The load on the test panel is gradually increased until the coating shows signs of marring.

This test is valuable for comparing the mar resistance of different coatings, especially for providing relative ratings for coated panels that display significant differences in mar resistance. It's important to note that this test does not specify a method using a pointed stylus, unlike the methods outlined in ISO 1518-1 and ISO 1518-2, respectively. The choice of method depends on the specific practical requirements.

The Qualitest QualiMar™ Mar Resistance Tester complies with the latest international standards ISO 12137-2011, ASTM D 2197, and ASTM D 5178. It offers a load range from 100g to 5,000g for testing panels.

FEATURES

Mar Resistance Tester Features:

- Adjustable working speed from 3mm/s to 10mm/s.
- Double-adjusting balance device to minimize test errors due to uneven surfaces.
- Moveable working table for conducting tests in different areas on the same panel.
- Lifiable balance arm for conducting mar tests on panels of various thicknesses, ranging from 0mm to 12mm.

TECHNICAL SPECIFICATIONS

Mar Resistance Tester Technical Specifications:

Motor Power	15 W
Working Distance	80 mm
Weights	1×100 gram, 2×200 gram, 1×500 gram, 2×1000 gram, 1×2000 gram
Ring-shaped Stylus	<ul style="list-style-type: none">• Diameter: (6.5±0.1)mm• R0.8±0.02• Thickness: (1.6±0.02)mm• Smooth surface, hardness is Rockwell HRC56 to HRC58• Surface smoothness: roughness ≤ 0.05 μm

Stylus Moving Speed	3 mm/s □ 10 mm/s (step: 0.5mm/s)
Angle Between Stylus with Test Panels	45°
Suitable Test Panels Width	40 mm □ 110 mm
Suitable Test Panels Thickness	0 mm □ 12 mm
Power	Input 110 □ 240V AC 50/60Hz (Power adapter output 24V, 2A)
Overall Size	540mm×250mm×375mm (L×W×H)
Weight	15kg
Ordering Information	<ul style="list-style-type: none"> • QualiMar™ —Mar Resistance Tester • QualiMar™ ACC 1009---Ring-shaped Stylus

