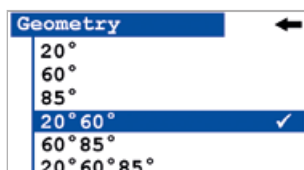


micro-TRI-gloss

See changes under the right angle

High – medium – low gloss: What is your application?

The micro-TRI-gloss combines 20°, 60°, 85° in one glossmeter – as handy as the one angle unit. Having three geometries in one unit allows you to be in compliance with international standards and to quickly recognize quality variations.



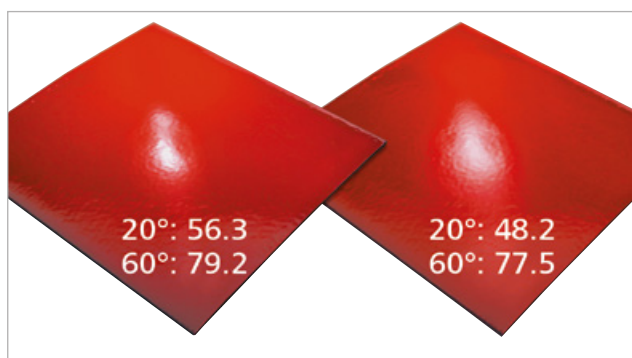
All selected angles measure at the same location and the results are displayed instantly – including Statistics, Difference, or Pass/Fail.

The different gloss of these two samples is more clearly shown in the 20° readings.

STD-RED			
	value	diff	p/f
20°	48.2	-8.1	FAIL
60°	77.5	-1.7	PASS



In order to obtain differences clearly, over the whole range from matte to high gloss, three measurement geometries were specified in international glossmeter standards. Each geometry is optimized for a specific gloss range.



micro-TRI-gloss μ

Gloss and Film Thickness in one Instrument

An efficient coatings process should use as little paint as possible and fulfill the quality specifications given by the customer. Gloss and film thickness are important QC criteria for coatings. The micro-TRI-gloss M measures both, at the same position and in seconds. This saves time and is ideal for checks in the field – only one instrument to carry.

- Simultaneous display 20°, 60°, 85° – for high gloss to matte coatings
- Dual sensor Fe/NFe – measures thickness on steel as well as on aluminum



Standards

	Gloss	Thickness
ISO	2813, 7668	2178, 2360, 2808
ASTM	D523	B499, D1400
DIN	675301	

In compliance with:

Standards

ISO	2813, 7668
ASTM	D 523, D 2457
DIN	67530
JIS	Z 8741

Ordering Information

Cat. No.	Description
4560	micro-gloss 20°
4561	micro-gloss 60°
4562	micro-gloss 85°
4563	micro-TRI-gloss
4564	micro-TRI-gloss μ
4565	micro-gloss 60° S
4566	micro-TRI-gloss S
4567	micro-gloss 45°
4568	micro-gloss 75°
4569	micro-gloss 60° XS
4570	micro-gloss 60° XS-S
4573	micro-gloss 60° robotic
4576	micro-gloss 60° S robotic

Comes complete with:

Glossmeter
 Holder with integrated calibration tile
 Traceable certificate
 USB-cable, Battery
 Operating manual
 Carrying case
 Software for download:
 smart-lab Gloss or smart-process Gloss with 2 licenses

Note: After software download both software packages can be used for 30 days free trial. Thereafter, the user needs to decide and register for one software package.

System Requirements:

Operating system: Windows® 7 SP1, 8.1 or 10
 Microsoft® .NET Framework 4.5.2
 Hardware: Core 2 Duo, 2.5 GHz, i7 recommended or equivalent
 Memory: 4 GB RAM, 8 GB recommended
 Hard-disc capacity: 2 GB during installation
 Monitor resolution: 1280 x 1024 pixel or higher
 Interface: free USB-port

Technical Specifications

Geometry	Application	Measuring Area
20°	high gloss	10 x 10 mm (0.4 x 0.4 in)
60°	semi gloss	9 x 15 mm (0.35 x 0.6 in)
85°	low gloss	5 x 38 mm (0.2 x 1.5 in)
20°, 60°, 85°	universal	see single angle
20°, 60°, 85°	universal	see single angle
60°	semi gloss	9 x 15 mm (0.35 x 0.6 in)
20°, 60°, 85°	universal	see single angle
45°	Ceramic, Plastic, Film	9 x 13 mm (0.35 x 0.5 in)
75°	Paper, Vinyl Siding	7 x 24 mm (0.3 x 0.95 in)
60°	semi gloss	2 x 4 mm (0.08 x 0.16 in)
60°	semi gloss	2 x 4 mm (0.08 x 0.16 in)
60°	semi gloss	9 x 15 mm (0.35 x 0.6 in)
60°	semi gloss	9 x 15 mm (0.35 x 0.6 in)
Measurement range¹	0 - 100 GU	100 - 2000 GU
Repeatability²	± 0.2 GU	± 0.2 %
Reproducibility²	± 0.5 GU	± 0.5 %
Spectral sensitivity	CIE standard observer for illuminant CIE-C	
Measuring time	0.5 seconds / geometry	
Thickness:		
Substrate	Fe: magnetic, NFe: non-magnetic	
Measurement Range	0 - 500 μ m (0 - 20 mils)	
Accuracy	$\pm (1.5 \mu\text{m} + 2\%$ of measured value)	
Memory	999 readings with date and time	
Interface	USB	
Power supply	one 1.5V AA Alkaline Battery 4,000 readings or via USB-port	
Dimensions	155 x 73 x 48 mm (6.1 x 2.9 x 1.9 in)	
Weight	0.4 kg (0.9 lbs)	
Operating temperature	15 - 40 °C (60 - 104 °F)	
Relative humidity	up to 85 %, non-condensing	

¹ for 45° and 75° glossmeters see previous pages

² for S-Type glossmeters see previous page

Ordering Information

Cat. No.	Description
4405	USB-Cable micro-gloss family
4866	Software smart-lab Gloss
4867	Software smart-process Gloss

Note: smart-chart license fee for more than two installations is quantity dependent. Please contact your local BYK-Gardner representative.

Accessories

For data transfer from the glossmeter to a PC, USB-A	
Software for professional analysis and documentation in the laboratory	
Process QC Software for analysis of multi-component products	
Export / Import	Standards (.xml format) Organizer (.xml format)
Languages	English, German, French, Italian, Spanish, Chinese, Japanese