



www.rhopointinstruments.com



sales@rhopointinstruments.com



RHOPOINT 
Concrete Clarity Meter

Concrete Clarity Meter

- DOI Meter
- Haze Meter
- 20/60° Glossmeter

Quantifying surface quality



The Rhopoint IQ Concrete Clarity Meter measures Reflected Image Quality; it is the only hand held instrument that profiles *how* light is reflected from a surface. Glossmeters are usually used to measure the shininess of a surface but are not sensitive to other effects which reduce appearance quality.

The Rhopoint IQ Concrete Clarity Meter can measure:

- 20/60° Gloss
- RSpec
- Reflectance haze
- Reflected Image Quality (RIQ)
- Distinctness of Image (DOI)

Unlike a standard glossmeter the IQ Concrete Clarity Meter has the unique capability of measuring and detecting quality problems caused by microscopic texture in the surface that cause haze and orange-peel effects which lead to poor Distinctness of Image (DOI).

These factors can seriously affect the visual impact and reflective quality of many coated, painted and polished surfaces. By measuring the quality of the reflected image it accurately profiles how light is reflected from a surface.



Distinctness of Image (DOI)

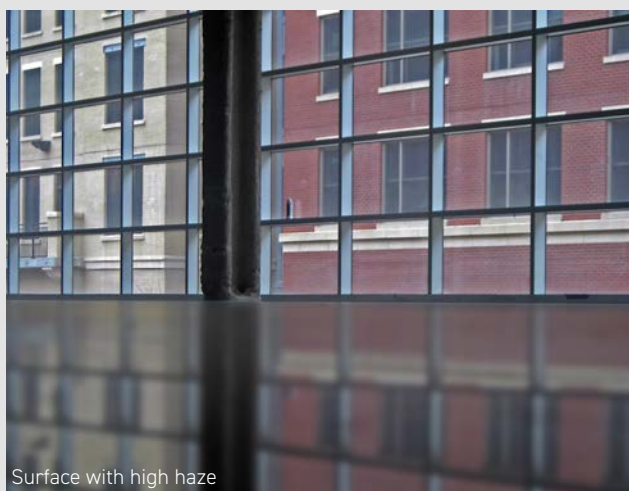
A measure of how clearly a reflected image will appear in a reflective surface and is used to quantify effects such as orange peel and surface waviness.

Orange peel dramatically reduces appearance quality without affecting gloss readings. The Rhopoint IQ Concrete Clarity Meter with DOI measurement can quantify the differences.



Surface with poor DOI

Haze is a common problem associated with coatings and polished materials. Surfaces with haze have a “milky” finish with a “shallow” reflected image. This important characteristic is directly measured with the Concrete Clarity Meter.



Surface with high haze

Images courtesy of Curviello Concrete



Reflectance Haze

An optical effect caused by microscopic texture or residue on a surface.

Visible Symptoms: A milky finish is apparent on the surface with a loss of reflected contrast. Halos and patterns can be seen around reflections of high intensity light sources.

Causes: Resin transfer, lack of refinement, burnish and polishing marks, fine scratches, poor cleanliness/ surface residue.



Distinctness of Image (DOI) Gloss

DOI is the sharpness of images of objects produced by reflection at a polished surface, sometimes called image clarity.

Measurement by Image Clarity Meter: The DOI, Image Clarity Value, obtained from this test method, range from 0 to 100 with a value of 100 representing perfect DOI (image clarity).

Haze

Haze is the cloudiness or milky appearance of images of objects produced by reflection in a polished surface.

Measurement by Glossmeter (ASTM D4039): The Haze Index, obtained from this test method, is computed using the numeric difference between the value of specular gloss at 60° and the value of specular gloss at 20°.

 **Concrete Polishing Council Polished Concrete Appearance Chart***
Replaces CAA finished gloss chart

Level	Name	Distinctness of Image (DOI) Gloss	Image Clarity Value, %	Level
1	Flat (Ground)	Images of objects being reflected have a flat appearance.	0-9	<10
2	Satin (Honed)	Images of objects being reflected have a matte appearance.	10-39	
3	Polished	Images of objects being reflected do not have a sharp and crisp appearance but can be easily identified.	40-69	
4	Highly Polished	Images of objects being reflected have a sharp and crisp appearance as would be seen in a near-mirror like reflection. May require grouting.	70-100	

*Reproduced with the permission of "Concrete Polishing Council of the American Society of Concrete Contractors"

Measurements for Compliance

The Image Clarity Meter and Glossmeter must be calibrated.

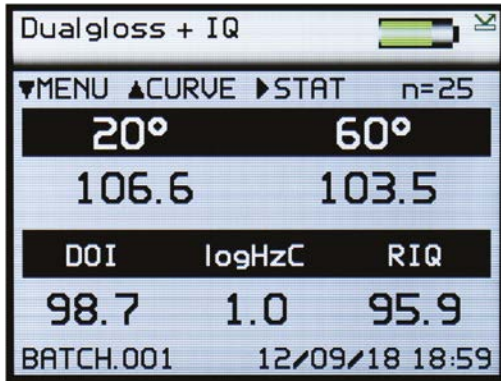
The minimum number of tests distributed across the polished surface should be three for areas up to

1000ft² and one additional test for each 1000ft² or fraction thereof. This applies to both the Image Clarity Value and Haze Index.

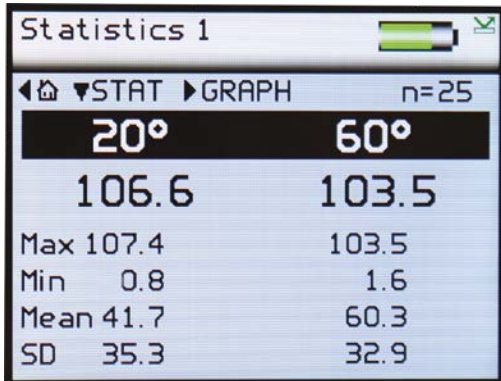
The mean (average) values of the test results should be used to evaluate compliance with the chart.

Features

Simultaneous measurement of all parameters, results are date/time stamped.



Statistics per measured parameter.



Graphical reporting for quick trend analysis.



Easy Batching

User definable batch names and batch sizes for quicker and more efficient reporting.



Software-free Rapid Data Transfer

USB connection to a computer instantly recognises the device as a drive location which facilitates the quick transfer of files using Windows File Explorer or similar programs.



Direct Data Input via Bluetooth

Instantly transmit measured readings directly to programs such as Microsoft Excel on your computer, tablet or smart phone to greatly simplify the reporting process.

	1	2	3	4	5	6
DATE	02/07/19	02/07/19	02/07/19	02/07/19	02/07/19	02/07/19
TIME	11:16:24	11:16:42	11:17:17	11:17:37	11:17:58	11:18:29
20	10.4	10.4	10.6	10.6	10.6	10.6
60	40.6	40.6	40.3	40.4	40.3	40.3
LogHAZE	222.2	221.9	225.5	225.7	225.5	225.5
DOI	10.4	10.4	9.7	9.7	9.7	9.8
RIQ	6.6	6.5	7.1	7.0	7.2	7.2
Cdiode	227	227	223	223	223	223
Calibrated	02/07/19	02/07/19	02/07/19	02/07/19	02/07/19	02/07/19
Serviced	02/07/19	02/07/19	02/07/19	02/07/19	02/07/19	02/07/19
S/N	1181180	1181180	1181180	1181180	1181180	1181180

Operation

- Full colour easy to read screen
- Adjustable brightness
- 6 button touch sensitive interface

Construction

- All aluminium construction - enclosure, voptics, standard holder
- Integrated calibration holder with in-position detector for error-free calibration

Specifications

Assign values to effects that are visible to the eye

20° Gloss		
Range	0-100 GU	100-2000 GU
Repeatability	0.2 GU	0.2%
Reproducibility	0.5 GU	0.5%
Resolution	0.1 GU	
Measurement Area	6mm x 6.4mm	
Standards	ISO 2813 ASTM D2457	ASTM D523 DIN 67530
	ISO 7668 JIS Z 8741	

60° Gloss			
Range	0-10 GU	10-100 GU	100-1000 GU
Repeatability	0.1 GU	0.2 GU	0.2%
Reproducibility	0.2 GU	0.5 GU	0.5%
Resolution	0.1 GU		
Measurement Area	6mm x 12mm		
Standards	ISO 2813 ASTM D2457	ASTM D523 DIN 67530	ISO 7668 JIS Z 8741

Haze	
Range	0 - 500 Log HU
Repeatability	1 Log HU
Reproducibility	10 Log HU
Resolution	0.1
Measurement Area	6mm x 6.4mm
Standards	ASTM E430 ASTM D4039

	RSpec	DOI	RIQ
Range	0 - 2000 GU	0 - 100 GU	0 - 100 GU
Repeatability	0.2% HU	0.2 HU	0.2 HU
Reproducibility	0.5% HU	0.5 HU	0.5 HU
Resolution	0.1	0.1	0.1
Measurement Area	6mm x 6.4mm	6mm x 6.4mm	6mm x 6.4mm
Standards	Rhpoint	ASTM E430	Rhpoint

Suitable for use by:

- Contractors
- Architects
- Building Owners



Single button push to initiate measurement of all parameters

Specifications

Instrument Information

Battery Type	Rechargeable lithium ion
Operation	17+ hours
Readings per charge	20,000+
Memory	8MB, 2,000 readings
Operating Temperature	15°C - 40°C (60°F - 104°F)
Operating Humidity	Up to 85% (non condensing)
Commodity Code	9027 5000

Dimensions & Weights

Dimensions	140mm (H) x 50mm (W) x 65mm (D)
Weight	390g
Packed weight	1.75 kg
Packed dimensions	360mm (H) x 290mm (W) x 140mm (D)

Included Accessories

Certificates	<ul style="list-style-type: none"> • Instrument calibration certificate • Tile calibration certificate
Cables	<ul style="list-style-type: none"> • USB data & mains cable • Wrist strap
USB Containing:	<ul style="list-style-type: none"> • Instruction manual • Bluetooth data app • Example Excel spreadsheets • Novo-Gloss Multi Gauge software • Instructional videos
Calibration tile	High gloss calibration tile with cleaning cloth
Sample positioning template	
Quick start guide	

Order Code

Rhopoint IQ Concrete Clarity Meter	A6000-013 CCM
------------------------------------	---------------

Free extended 2 year warranty: Requires registration at www.rhopointinstruments.com within 28 days of purchase. Without registration, 1 year standard warranty applies.

Free light source warranty: Guaranteed for the life of the instrument.

Calibration and service: Fast and economical service via our global network of accredited calibration and service centres. Please visit www.rhopointinstruments.com for detailed information.

Languages:



Ethically Sustainable

The Rhopoint IQ is made from an all aluminium construction which means it can be recycled at the end of its long life.





TRY BEFORE YOU BUY

We offer two options for you to try out the Concrete Clarity Meter before buying.

1

Online demonstration: Online presentation of the Concrete Clarity Meter with your samples measured LIVE on Zoom, Microsoft Teams or Skype. Includes a consultation with an application specialist

2

Factory sample testing: Send in samples of your material for testing and receive a comprehensive test report

[Arrange a demo](#)

Ready to receive a quote?

[Click here](#)

Rhopoint Instruments Ltd
Rhopoint House, Enviro 21 Park, Queensway Ave S,
St Leonards, TN38 9AG, UK

T: +44 (0)1424 739 622
E: sales@rhpointinstruments.com
www.rhpointinstruments.com

Rhopoint Americas Inc.
1000 John R Road, Suite 209, Troy,
MI, 48083, United States

T: 1.248.850.7171
E: sales@rhpointamericas.com
www.rhpointamericas.com

Rhopoint Instruments GmbH
An der Kanzel 2
D-97253 Gaukönigshofen, Deutschland

T: +49 (0)9337 900-4799
E: info@rhpointinstruments.de
www.rhpointinstruments.de



FS 695373

All images are for illustrative purposes only

E&OE ©Rhopoint Instruments Ltd. March 2022

0921-01