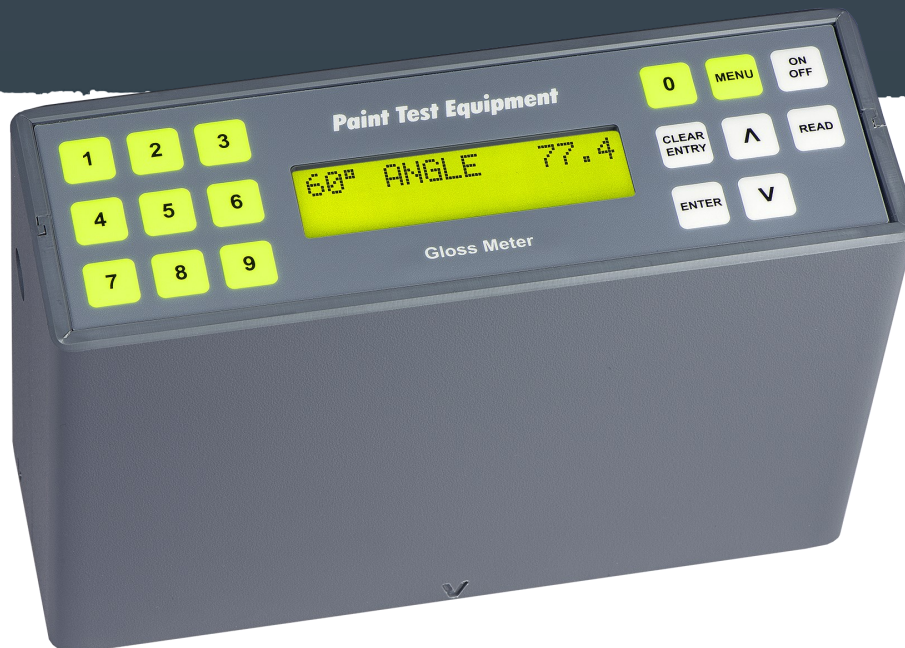# *Paint Test Equipment*

Gloss Meter

Gloss

Gloss Meter

Information

Gloss and Haze measurement is essential where an aesthetic appearance of the coating finish is required and to ensure uniformity of the surface finish.

The gloss value is determined by directing a light, which has a similar wavelength to the human eye, at the test surface and measuring the amount of specular reflection.

Gloss is measured with angles of 60° and 20°. The 60° angle is universal for all applications. The 20° angle gives improved differentiation of measurement on high-gloss coatings above 70 gloss units.

Haze measurement is required where high-gloss surfaces have a low reflection contrast.

The haze measurement is the difference between readings taken with the 60° and 20° angles, complying with International Standard ASTM D 4039. The haze function is only available on combined 60°/20° models.

By using tungsten halogen lamps and optical filters the light source has a similar spectro-response to the human eye, giving true human photo-optic performance, which is essential for ensuring exact compliance to International Standards.

Available in models of Standard and Top. All functions are easily accessible through a menu-driven back-lit display.

Standard Model

Calibration. Calibrate on the supplied Gloss Tile or any other value Gloss Tile.

Statistics. Continually shows Mean, Number of Readings, Max/Min, Coefficient of Variation and Standard Deviation.

Limits. Pass and fail with audible and visual alarm.

Top Model

All the functions of the Standard Model plus the following:

Batching. Measurements that are taken can be stored into batches which incorporate batch number, unique job number, and date and time. You can also go back to previous batches and look at the statistics and add or cancel readings from previous batches.

Download. Enables all measurements, statistics and out-of-limit readings to be downloaded to a computer either by batch number or job number into Microsoft Word or Excel.

Gloss Meter Operation

ISO 2813: Paints and varnishes. Determination of specular gloss of non-metallic paint films at 20 degrees and 60 degrees.

The Calibration Certificates with traceability to UKAS are an optional extra. The Certificates are supplied as hard copy and are available online through the Calibration Management Cloud (under Calibration) on our website.

All models are supplied in an industrial foam-filled Carrying Case with Gloss Tile and Charger. The Top Model is also supplied with USB Download Cable and Download Software.

Gloss Meter Specifications

Part No	Model Type	Angle	Range	Resolution	Repeatability	Accuracy	Cal Cert Part No	Tile Cert Part No
G2001	Standard	60°	0–100GU	0.1GU	0.2GU	±1%	NG001	NG002
G2002	Standard	60°/20°/Haze	0–100GU 0–100HU	0.1GU 0.1HU	0.2GU 0.2HU	±1%	NG001	NG002
G2101	Top	60°	0–100GU	0.1GU	0.2GU	±1%	NG001	NG002
G2102	Top	60°/20°/Haze	0–100GU 0–100HU	0.1GU 0.1HU	0.2GU 0.2HU	±1%	NG001	NG002

Gloss Meter Operation

General

Switch On/Off

To switch the Gloss Meter on, press the On/Off button for approximately 1 second. The display will show the last reading taken.

The instrument will automatically switch off after approximately 5 minutes if no readings have been taken. The instrument can also be switched off by pressing the On/Off button again.

Taking Readings

Observe the location of the oval measuring hole (25mm x 12mm) on the base of the instrument, which is where the gloss readings will be made. The location is identified by the arrow on the front and the arrows each side of the case.

Place the Gloss Meter onto the object to be measured and press the Read button. The reading will be held on the display until another reading has been taken.

Always ensure that the surface being measured is flat, and large enough to cover the oval measuring hole.

Readings on the same surface can vary if the light angle onto the surface is changed (the light source is from the left when looking at the front of the Gloss Meter).

Menu

All functions are accessed through a menu-driven display. To scroll through the menus use the up and down arrows and enter where indicated.

To exit from the menu, press the Menu button again and the Gloss Meter will revert back to normal measurement mode.

Gloss Meter Operation

Angle Menu Functions

This function is only available on combined 60°/20°/Haze models. On the Gloss Meter Top Model with Batching On, when the angle is being changed there will be a request for Enter Job No, as different angles cannot be contained in the same batch.

Select 60°
The 60° angle is universal for all applications.

Select 20°
The 20° angle gives improved differentiation of measurement on high-gloss coatings above 70 gloss units.

Select Haze
Haze measurement is required where high-gloss surfaces have a low reflection contrast.

Calibration Menu Functions

Always ensure that the Gloss Tile and the base of the Gloss Meter are clean before calibrating.

To clean the Gloss Tile, wipe with a soft paper towel moistened in warm water containing a small amount of detergent, then wipe dry with a soft paper towel.

Operator Cal
For the highest accuracy of measurement, the Gloss Meter has a variable calibration facility.

The calibration is carried out by placing the Gloss Meter in the Gloss Standard ensuring that the measurement area is correctly located on the Gloss Tile. Calibration can then be carried out by entering the Gloss Tile value.

Factory Cal
When selected, this will reset the instrument to a standard calibration.

If you are using a combined 60°/20°/Haze instrument, the calibration is only reset to the angle selected. The Gloss Tile is not required for this calibration. Limit settings, if selected, will be cleared.

Gloss Meter Operation

Clear Memory Menu Function

Clears the Gloss Meter memory of all batches and stored readings. Does not affect calibration values.

Statistics Menu Function

The statistics can be displayed on the lower line of the display. The statistics will be automatically updated when additional readings are taken.

Mean

Average of all readings.

Number Readings

Number of readings taken.

SDV

Standard Deviation of readings taken.

Coefficient

Coefficient of Variation of readings taken.

Maximum

Maximum reading.

Minimum

Minimum reading.

Statistics Off

Removes the displayed Statistics.

Gloss Meter Operation

Batching Menu Function

This function is only available on the Gloss Meter Top Model. Multiple batches can be stored to a maximum of 10,000 readings.

Batching On/Off

Always ensure that Batching On is switched on if you need to store readings. When you do not need to store readings switch the batching off, this will enable
readings to be taken above 100 without automatically being stored into a batch.

When changing angles on 60°/20°/Haze instruments with batching on, your readings will automatically be entered into a batch and you will be asked to enter the job number.

Batch Store

Readings taken can be stored in a batch and a job number allocated (up to 12 digits). Multiple batches can be stored with a maximum of 100 readings per batch. The 100th reading taken will automatically enter into a batch and you will be asked to enter the job number.

Batch Recall

Previous batches stored can be recalled either by batch number or by job number, so that further readings can be added, statistics viewed or job number changed.

Auto Batch

A batch quantity can be allocated and the instrument will automatically enter the batch and you will be asked to enter the job number when this quantity of readings has been taken (the maximum batch limit is 100 readings).

Gloss Meter Operation

Download Menu Function

This function is only available on the Gloss Meter Top Model. This enables the batches stored to be downloaded to a computer with the Paint Test Equipment Download Software installed.

Connection is made using the USB Download Cable(download instructions are available on the Help file in the program).

The batches downloaded can then be entered into Microsoft Word or Excel.

By Batch Number
Download single or multiple batches by batch number. By entering a zero batch, all batches will be downloaded.

By Job Number
Download single or multiple batches by job number.

Gloss Meter Operation

Control Menu Function

Check Bat Life

Battery life can be examined to determine the percentage of the battery life available. Low Battery will appear on the display when recharging is required.

To charge the Gloss Meter, plug the charger into the circular hole on the side of the unit and charge for approximately 12 hours.

Set Limits

Limits can be set to establish a high and also a low pass/fail threshold.

For out-of-limit readings an error display will be shown and the alarm will be sounded. The error amount will be shown as a percentage, which is the difference between the set high or low limit and the particular reading.

To remove limits press Clear Entry instead of entering numbers when setting limits.

Set Date/Time

The date and time can be set. This will be recorded with every batch stored, and appear on all batches downloaded.

Eng Mode

This function is for Paint Test Equipment use only.

Install Name

The Gloss Meter can be personalised with your company, department or operator's name. This will appear on every download and on the display when the instrument is switched on.

By entering the following ascii codes the name can be entered:

A-65, B-66, C-67, D-68, E-69, F-70, G-71, H-72, I-73, J-74, K-75, L-76, M-77, N-78, O-79, P-80, Q-81, R-82, S-83, T-84, U-85, V-86, W-87, X-88, Y-89, Z-90.

a-97, b-98, c-99, d-100, e-101, f-102, g-103, h-104, i-105, j-106, k-107, l-108, m-109, n-110, o-111, p-112, q-113, r-114, s-115, t-116, u-117, v-118, w-119, x-120, y-121, z-122.

Space character is 32.

When Enter is pressed without a character input, the display will exit to normal measurement mode.

About Us

Paint Test Equipment is a global leader in the manufacture of specialist test equipment specifically for the industrial painting and coating industries for the protection of steel assets from corrosion, mainly in the oil, renewables and steel construction sectors. We have over 30 years experience and extensive knowledge in delivering practical solutions in supporting our customers with world class products for corrosion prevention.

Prevention of corrosion on steel is essential to extend the asset lifetime, optimise performance and minimise downtime for expensive maintenance work. Using Paint Test Equipment products ensures that industrial coatings are applied to the highest achievable quality standards of ISO compliance.

We supply small, medium and multinational companies with the full range of technologies and innovations in our unrivalled portfolio of products for our customers to grow their business and enhance profits through cost effective corrosion management equipment.

Paint Test Equipment is committed to providing proactive and innovative solutions to meet customer requirements for the highest quality, user friendly inspection equipment. Paint Test Equipment is the partner of choice.

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