

Paint Test Equipment

Surface Roughness Comparator Data Sheet





Complies with International Standards

ISO 8503-1	ASTM D 4417-A
ISO 8503-2	

Surface Roughness Comparator

A precision Nickel Comparator Plate that conforms to International Standard ISO 8503 and ASTM D4417 for grit and shot-blast surface roughness comparison measurement.

When steel has been blast-cleaned, the surface consists of random irregularities with peaks and valleys that are not easily characterised. Experts have recommended that the profile should be identified as dimpled (shot-blast) or angular (grit-blast), and that they should be graded as Fine, Medium or Coarse with each grade being defined by limits specified in ISO 8503. These characteristics are considered to give sufficient distinguishing features for most painting requirements.

Easy to use, place the Comparator against an area of the test surface. Compare in turn the four sectors of the Comparator against the test surface using the x10 Illuminated Magnifier, placed so that the test surface is viewed simultaneously with a segment of the Comparator. The nearest profile to the Comparator determines the grade.

The different grades are defined as follows: Fine-grade profiles equal to segment 1 and up to but excluding segment 2; Medium-grade profiles equal to segment 2 and up to but excluding segment 3; and Coarse-grade profiles equal to segment 3 and up to but excluding segment 4.

Supplied in a Protective Wallet.

Surface Roughness Comparator Specifications

Part No	Model Type	Section Profiles Metric	Section Profiles Imperial	Conformance Cert Part No
R2006	Grit	25µm, 60µm, 100µm, 150µm	1mils, 2.4mils, 4mils, 6mils	NRC01
R2007	Shot	25µm, 40µm, 70µm, 100µm	1mils, 1.6mils, 2.8mils, 4mils	NRC01
RA001	x10 Illuminated Magnifier (for viewing the Surface Comparator)			

Operation

Evaluation

Select the appropriate surface profile reference comparator.
The Grit Comparator is for comparing profiles after blast-cleaning with grit abrasives, and the Shot Comparator is for comparing profiles after blast-cleaning with shot abrasives.

Place the selected Comparator against an area of the test surface. Compare in turn the test surface with the four sectors of the Comparator. This can be done with the unaided eye, using the x10 Illuminated Magnifier or by touch. The Comparator should be placed so that the test surface is viewed simultaneously with a segment of the comparator. Assess the profiles on the comparator that are nearest to the profile of the test surface and determine its grade from the following:

Fine-grade profiles equal to segment 1 and up to but excluding segment 2.
Medium-grade profiles equal to segment 2 and up to but excluding segment 3.
Coarse-grade profiles equal to segment 3 and up to but excluding segment 4.

If any profile is assessed as below the lower limit for the Fine grading, assess this grading as Finer than Fine. If any profile is assessed as greater than the upper limit for the Coarse grading, assess this grading as Coarser than Coarse.

About us

Paint Test Equipment are manufacturers of a comprehensive range of specialist instruments for the Industrial Coatings and Finishings Industries and have been supplying instruments to customers worldwide for over 25 years.

During this time Paint Test Equipment have established a reputation for manufacturing quality instruments to the highest specification, to meet the demanding requirements of the Industrial Painting Industry.

Recalibration

Paint Test Equipment can service and recalibrate all applicable products that we supply.

We recommend that the equipment is returned on a 12-monthly basis to Paint Test Equipment for service and recalibration.

Calibration Certificates will have traceability to UKAS or BAM. The Certificate is supplied in a paper format and is available online through the Calibration Portal (under Browse Categories) on our website. The Calibration Portal will list all your equipment that is calibrated by Paint Test Equipment, showing the renewal dates and allowing Calibration Certificates to be viewed at any time.

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