

DECLARATION OF CONFORMITY

Product : Surface Profile Comparator for Assessment of Abrasive Blast Cleaned Surfaces, Conforming to Draft International Standard 8503 Part 1

Models : Type G for profiles after blast cleaning with grit abrasives.
Type S for profiles after blast cleaning with shot abrasives.

Catalogue reference(s) : LD2040 Grit comparator
LD2050 Shot comparator

Ref. standards : This comparators conforms to the requirements of internal Standard 8503 Part 1 and is designed to define the grading specified therein in terms of 'FINE', 'MEDIUM' or 'COARSE'

Name of producer : Rubert & Co, UK

Technical Information :

ISO committee TC35 have prepared a group of Specifications under the general title - "preparation of Steel Substances before application of paint and related products". ISO 8503 covers "Surface characteristics of steel substrates.

Irrespective of the procedures and the type of abrasive that are used, the surface after blast cleaning consists of random irregularities with peaks and valleys that are not easily characterized. Experts have therefore concluded that because of this random nature no method is capable of giving a precise value for this profile. They have recommended that the profile should be identified as either dimpled (where shot abrasives have been used) or angular (where grit abrasives have been used) and that they should be graded as 'FINE', 'MEDIUM' or 'COARSE'; each grade being defined by limits, specified in ISO 8503/1. These characteristics are considered to give sufficient distinguishing features for most painting requirements.

This comparator has been electroformed in high purity nickel from a mild steel Master Coupon whose segments meet the requirements of ISO 8503 Part 1 when measured by the methods prescribed in ISO 8503 Part 3 (Microscope Method) and ISO 8503 Part 4 (Stylus Method).

Method of Use

ISO 8503 Part 2 specifies the following procedure:

1. Remove all loose dust and debris from the test surface.
2. Select the appropriate surface profile reference comparator Type G or S and place it against an area of the test surface. Compare, in turn, the test surface with the four sectors of the comparator directly or by using a hand lens with magnification not exceeding X7, 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, from these, determine its grade.

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

3. Record the grades for all areas of the test surface. If any profile is assessed as below the lower limit for the

'Fine' grading, report the grading as 'finer than fine'.

If any profile is assessed as greater than the upper limit for the 'Coarse' grading, report the grading as 'coarser than coarse'.

**Maintenance and
Calibration of Comparators:**

The calibration of a comparator shall be carried out (see ISO 8503/1) at intervals not exceeding six months. Comparators require careful handling and if any surface wear is observed re-calibration shall be carried out before further use. As a guide, comparators in daily use may require re-calibration at three monthly intervals. In all cases of dispute the re-calibration shall be carried out prior to a re-assessment of the test surface.

Additional Guidance Notes

1. This comparator is only applicable for blast cleaned surfaces to Sa2 1/2 and Sa3 cleanliness standard.
2. If visual assessment proves difficult, tactile assessment may provide a useful guide. It is possible to assess the closest grade by passing either the back of the finger nail or a wooden stylus held between thumb and forefinger, alternately over the test surface and the segments of the comparator.
3. When surfaces are subject to re-blasting operations the initial profile may override the secondary profile normally expected from the abrasive and conditions used in the re-blasting operations

This comparator has been reproduced from a specially prepared and numbered master block using certified segments.

Segment No.	ISO 8503/1 Specification	ISO 8503/3 Microscope h Max Micro- metres	ISO 8503/3 Micro- metres	ISO 8503/4 Stylus Rv5 Micro- metres	ISO 8503/4 Stylus Rv5 Deviation
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Master Coupon Shot 5101

1	23-28	33%	26.15	21.8%	24.9	9.07%
2	35-45	33%	35.65	16.1%	39.06	8.16%
3	60-80	33%	63.2	14.92%	75.19	8.0%
4	85-115	33%	96.45	17.03%	98.28	11.62%

Master Coupon Grit G201

1	23-28	33%	24.95	20.76%	26.46	11.45%
2	50-70	33%	64.3	13.14%	62.7	7.91%
3	85-115	33%	103.95	17.8%	90.8	7.09%
4	130-170	33%	153.1	16.63%	147.71	11.42%

All measurements were as defined in ISO 8503 Parts 3 and 4 with no deviations. The measurements were performed and certified by R.W. Green Consultants, Beaconsfield, England on 29/3/84 and authenticated by the Paint Research Association, Teddington, England.



George N. Moonen, Zevenhuizen, 06-03-2013