Step 1: Appearance control after E-coat

The same E-coat system was applied on rough and smooth steel. The influence of rougher steel can be seen in increased Wb and Wc-values.

Step 2: Appearance control after Primer Surfacer

The primer surfacer was applied on both panels. The roughness of the steel quality can still be detected in increased Wb and Wc-values. This primer system could not completely cover the steel influence.

Step 3: Appearance control after Topcoat

The final appearance shows higher shortwave values on the rougher steel panel. Therefore, the smooth panel will appear more brilliant.

Example: Influence of Steel Quality on Final Appearance

Step 1: Appearance Control after E-coat

Same E-coat system was applied on rough and smooth steel. The influence of rougher steel can be seen in increased Wb and Wc-values.

Step 2: Appearance Control after Primer Surfacer

The primer surfacer was applied on both panels. The roughness of the steel quality can still be detected in increased Wb and Wc-values. This primer system could not completely cover the steel influence.

Step 3: Appearance Control after Topcoat

The final appearance shows higher shortwave values on the rougher steel panel. Therefore, the smooth panel will appear more brilliant.
Objective and reliable appearance data

- Good correlation to wave-scan DOI on high gloss surfaces
- Good correlation to mechanical profilometer readings on medium gloss surfaces

Easy to use with one hand

- For flat and curved areas
- Small and light weight
- Scroll wheel operation and multilingual menu
- Selectable scales and scan lengths
- Full statistics with saving in selectable memories
- USB port for data transfer to PC
- Software auto-chart:
  - Organizer files for sample identification
  - Data management with Access DB
  - Standard QC Reports in Excel®

Always ready

The orange peel meter is operated with a rechargeable battery pack (Li-ion). The docking station automatically charges the battery pack and transfers the measured data to the PC. Optionally, the instrument can be operated with 3 standard mignon alkaline or rechargeable batteries – good for 1000 readings.
Appearance  Color

Physical Properties

Technical Specifications

Application
High to Semi Gloss du < 65, linear range

Structure Spectrum
du <0.1 mm
Wa 0.1 to 0.3 mm
Wb 0.3 to 1 mm
Wc 1 to 3 mm
Wd 3 to 10 mm
We 10 to 30 mm

Repeatability¹
du < 40: 4% or > 0.4
du > 40: 6% or > 0.6

Reproducibility¹
du < 40: 6% or > 0.6
du > 40: 8% or > 0.8

Object Curvature
radius > 500 mm

Min. Sample Size
35 mm x 150 mm

Scan Length
5 / 10 / 20 cm

Resolution
375 points/cm

Memory
1500 readings

Interface
USB 1.1

Languages
English, French, German, Italian, Japanese, Portuguese, Spanish

Light Source
Laser diode, LED and IR-SLED

Laser Energy
< 1 mW (Laser class 2)

Dimensions
150 x 110 x 55 mm (5.9 x 4.3 x 2.2 in.)

Weight
650 g (1.5 lbs)

Power Supply
rechargeable battery pack or 3 alkaline AA Batteries, approx. 1000 readings

Temperature Range
operation: +10 °C to 40 °C (+50 °F to 104 °F)
storage: 0 °C to 60 °C (+32 °F to 140 °F)

Rel. Humidity
up to 85 % at 35 °C (95 °F) non-condensing

¹Standard deviation
Training wave-scan dual
BYK-Gardner offers you more than just an instrument. We assist you in operating the wave-scan system and understanding your appearance readings. As a result you will be able to use the orange peel meter to save time and money and at the same time improve your quality.
Therefore, the instrument comes with a one day training course including:

1. Orange Peel and DOI Theory
   - Visual perception and instrumental measurement of Orange Peel and DOI
   - Data interpretation: How can the structure spectrum be used to optimize process / material parameters

2. Operation and Software Training
   - Set-up of an “Organizer” to create a routine measurement procedure
   - Programming of the instrument with “organizer” and measurement of several samples
   - Direct data transfer to Excel for documentation of individual readings
   - Data transfer to auto-chart software and saving in a database for routine QC

Data analysis using standard QC-reports:
   - Summary by lines to show at one glance how various colors are running at different paint lines
   - Trend chart to show how specified zones perform over a defined time range
   - SPC-chart for daily process control of your critical colors and highrunners: XR-chart
   - Zone profile for trouble shooting using the structure spectrum

Create your own reports in Excel®
   - Transfer data from the database to Excel®
   - Pivot function to define layout in Excel®

The training can be performed in one day or two half days. It is recommended to split the training into two half days:
Day 1: Theory and basic operation (set-up organizer, taking readings and saving data in a database)
Day 2: 3-4 weeks later to ensure readings were taken and in a database. Data analysis and standard QC reports can be explained using customer specific data.

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**Ordering Information**

<table>
<thead>
<tr>
<th>Cat. No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AW-4843</td>
<td>Reference Tile wave-scan dual</td>
</tr>
<tr>
<td>AW-4841</td>
<td>Docking Station</td>
</tr>
<tr>
<td>AW-4842</td>
<td>Battery Pack</td>
</tr>
<tr>
<td>AW-4809</td>
<td>auto-chart</td>
</tr>
</tbody>
</table>

**Accessories**

<table>
<thead>
<tr>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>To check performance of the orange peel meter, with certificate</td>
</tr>
<tr>
<td>Incl. USB interface cable, and recharger 100 – 240 V self adapting</td>
</tr>
<tr>
<td>Rechargeable battery for automatic charge in docking station</td>
</tr>
<tr>
<td>Software for analysis and professional documentation in Excel®</td>
</tr>
</tbody>
</table>

[Certified]

For Certification Services and Preventive Maintenance see pages 268 – 270.