## APPLICATION OF TQC PANELS

### In the laboratory:

- Physical tests (adhesion, elongation, impact-resistance, elasticity etc..) to test the formula
- Corrosion / saltspray testing
- Florida-test
- Appearance testing (colour, gloss, hiding power, surface texture…)

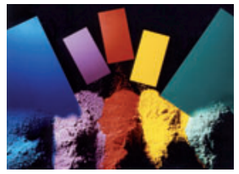
### In production (paint):

- Physical tests (adhesion, elongation, impact-resistance, elasticity etc..) to test the production quality / consistency
- Batch sampling for record keeping
- Appearance testing (colour, gloss, surface texture…)

### During coating application:

Fine tuning of application equipment (eg. Electrostats)

- Physical tests (adhesion, elongation, impact-resistance, elasticity etc..) to test the application quality / cure
- Batch sampling for record keeping
- Appearance testing (colour, gloss, surface texture…)



### In sales:

- Production of sample for demonstrating colours and textures

## WWW.TQC.EU

The products in this brochure are just a small selection of our comprehensive range of inspection equipment and instruments. Please visit our website www.tqc.eu for a compete overview.

For more information mail us at info@tqc.eu or please contact your local TQC dealer:

tp_v1.01_44_07-09

TQC bv. Nijverheidscentrum 14 2761 JP Zevenhuizen The Netherlands Tel. +31 (0)180-631344 Fax +31 (0)180-632917 E-mail info@tqc.eu http www.tqc.eu

TQC
WWW.TQC.EU
Vision on quality

# TQC STANDARD TEST PANELS FOR RESEARCH AND QUALITY CONTROL

## TQC STANDARD TEST PANELS ARE ESSENTIAL?

Testing of physical and chemical properties of coatings are often time- and labor consuming processes. Each alterations of a formula during the development of a new paint- or coating requires extensive testing in order to safeguard the performance, quality and reproducibility of that specific coating.

**During testing and development or QC of coatings many variables play their role:**

- Coating Formula (including subtle changes)
- Raw material quality and make
- Production process
- Application method
- Test Specimen / Surface consistency

Using repoducable TQC Standard Test Panels of consistent quality the variable of the “Test Specimen” can be excluded from the process.

## THE DIFFERENCE BETWEEN A TQC STANDARD TEST PANEL AND A RANDOM PIECE OF METAL

Metal comes in many types and species. The difference between ferrous and non-ferrous metals is obvious but within these groups many variations are found.

**To name a few:**

- Alloy
- Surface treatment (chromated, blasted, polished, galvanized…)
- Surface texture
- Production process (cold/hot rolled, casted …)
- Cleanliness (degreased, un-degreased…)
- Finishing, de-burred
- Heat treatment

## ADVANTAGES OF A TQC STANDARD TEST PANEL

- Relatively low cost due to large production batches of standard types;
- Consistent and reproducible quality;
- Sophisticated finishing, no burrs or sharp edges;
- Hole included in standard panels for convenient handling;
- Available in various types and dimensions;
- Conveniently packed;
- Fast delivery.

.

TQC bv. Nijverheidscentrum 14 2761 JP Zevenhuizen The Netherlands Tel. +31 (0)180-631344 Fax +31 (0)180-632917 E-mail info@tqc.eu http www.tqc.eu

## THE MATERIALS

The panels are available in divergent standard materials but it is also possible to produce according customers specifications.

**The following materials are standard:**

- *Cold rolled steel*
- *Mild cold rolled steel*
- *Cold rolled harmonica steel*
- *Aluminum, alloy 5005 H24*
- *Aluminum, alloy 3105 H14*
- *Aluminum, alloy 1050 H18*

### Cold rolled steel

- Cold rolled steel with a low carbon content according the EN10130 standard
- Accurately degreased in a fully automated process
- Standard finish: Matt
- Rockwell hardness: HRB ≤ 53
- Roughness: Ra 0.6 µm to ≤ 1.9µm
- Suitable for mechanical, thermal and universal testing

### Mild cold rolled steel

- Mild cold rolled steel with a low carbon content according the EN10130 standard
- Accurately degreased in a fully automated process
- Standard finish: Matt
- Rockwell hardness: B ≤57, IST ≤79
- Roughness: Ra 0.08 µm to 0.3 µm
- Suitable for mechanical, thermal and universal testing

### Cold rolled harmonica steel

- Cold rolled harmonica steel with a low carbon content
- Accurately degreased in a fully automated process
- Bendable but returns always to its original plane shape
- Almost as thin as paper but due to its strength the entire surface can be coated
- Finish: Semi-matt
- Hardness: 800-1000 Rm N/mm$^2$

**The following surface treatments are possible for steel panels (not all are standard):**

- Polished
- Galvanized
- Phosphated
- Zinc plated or passivated to customers specification

### Aluminum, alloy 5005 H24

- Standard: Qualicoat, UNI 9005/1 and EN AW-5005
- Accurately degreased in a fully automated process
- Standard finish: Matt
- Tensile strength U.T.S. (MPa): 145-185
- Yield strength Y.S. (MPa): 110
- Elongation capacity: 4%

### Aluminum, alloy 3105 H14

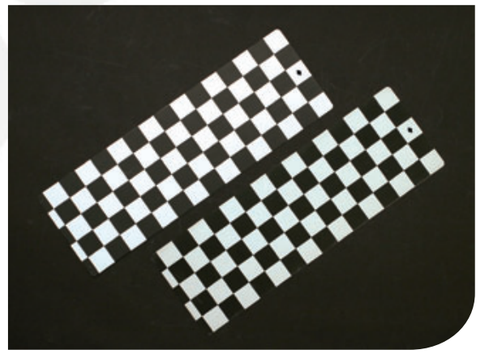
- Standard: Qualicoat, UNI 9005/1 and EN AW-5005
- Accurately degreased in a fully automated process
- Standard finish: Matt
- Tensile strength U.T.S. (MPa): 145-185
- Yield strength Y.S. (MPa): 110
- Elongation capacity: 4%

### Aluminum, alloy 1050 H18

- Standard: Qualicoat, UNI 9005/1 and EN AW-5005
- Accurately degreased in a fully automated process
- Finish: Mirror polished one side, protected by a removable pvc foil
- Tensile strength U.T.S. (MPa): 145-185
- Yield strength Y.S. (MPa): 110
- Elongation capacity: 4%

**The following surface treatments are possible for aluminum panels (not all are standard):**

- Degreased or un-degreased
- Chromated , grey aluminum
- Black / White chequered for testing hiding power of powder coatings
- Polished, mirror-gloss (with protective foil)



## DIMENSIONS

TQC Panels are available in large variety of dimensions and thicknesses.
The pricelist mentions all standard dimensions but special dimensions to customers specifications are possible as well.

Each panel is equipped with a hole for hanging and handling.