

## MPE painting system

The name "MPE system" identifies a prepainted steel with peculiar aesthetic and surface finishing properties, in addition to the quality of the base material, and is expressly dedicated to the household appliance sector and other high-end industries. Several types of resins may be employed, among which standard polyesters, glossy, structured-orange peel, polyurethane and others, based on customer requirements and end use. MPE prepainted material is mainly used for indoor applications.

### Physical characteristics

Cold rolled steel, depending on the final quality required by customer, can be either directly painted or hot dip galvanized as per Euro-norm with a minimum zinc coverage of 100 g/m<sup>2</sup>.

The painting cycle foresees a non-chrome treatment with nitro-cobalt salts and a passivation with zirconium salts of the steel: this set of treatments will support the application of 5 µm of primer and 20 µm of polyester paint to form a total dry layer of nominal 25 µm of organic protection\*.

For the lower side the application of 5/7 µm of foamable backcoat is foreseen or, under specific request by the customer, of the same painting cycle used on the upper side.

The colour matching/reproduction is very high despite the environmental standards of Marcegaglia impose the use of non-toxic paints only, that is formulated without any use of toxic pigments as for instance chromate, molybdate and lead salts pigments.

### Chemical and quality characteristics

<b>Salt spray resistance</b> (EN 13523-8)	The test is performed with reference and according to Euronorm and does not allow for blisters on the cross more than 2 mm per edge (total 4 mm) and, on the surface, more than the degree 8 from the ASTM D714 scale after 500 hours exposure
<b>T-bend test</b> (EN 13523-7)	The test determines the adhesion of the paint to the steel which must not exceed 1,0 t, and it is performed by tearing with adhesive ribbon the bending itself and the elasticity of the paint that must not crack over 2,0 t
<b>Specular gloss</b> (EN 13523-2)	It is measured with a gloss-meter having the incidence radius of 60° and may vary according to the product
<b>Pencil hardness</b> (EN 13523-4)	It is measured by engraving the paint at 45° with Koh-I-Noor pencils and must not be any lower than grade F
<b>Resistance to solvents</b> (EN 13523-11)	After 100 double rubbing (50 for metal colours) with cotton pad, soaked in MEK (metil-etilchetone) and pressure of about 1 kg, the paint must not show any discrepancy nor defect

(\*) Depending on the type of resins employed, the cover value may differ from standard