

GENERAL FEATURES

This thermosetting powder contains polyester resins cured with fit curing agents specially selected for their excellent resistance to UV radiation and outdoor weathering.

The powder forms a decorative film with enhanced outdoor resistance.

The PE/UM MIC were created for coating aluminium components used in architecture and for coating galvanised steel and are approved by Qualicoat (P-1102) for Class 1,5 Cat. 1, and Standard GSB (152 n).

The metallic effect pigment is fixed on the powder by means of a bonding process, thanks to which is possible to achieve the best results in terms of application and reproducibility for the metallic effect powders. The problems of separation in the powdercloud during the application process, typical of dry blend products, are so eliminate, with positive effects on the colour constancy.

APPLICATION

Due to its special content the product is particularly suggested for exterior coating.

ADVISED CYCLES

The surface to be coated must be cleaned from oils, grease or flash rust. If particular resistance to corrosion or humidity is required, it is suggested the following pretreatment of the surface:

for aluminium	chromate conversion according to DIN 50939
for steel	sand blasting or/and iron or zinc phosphatising
for galvanised steel	chromatising

HANDLING AND STORAGE

Store at temperatures lower than 30°C; higher temperatures may damage the powder by causing undesired alterations or blobs.

Storage life in original package: 12 months.

TECHNICAL DATA

Code	Int. Method	Range	Ref. Method
P/CL092	Calc.specific gravity(kg/l):	1.164 - 1.212	
P/CL120	Non volatile content(w/w)(%) 3h at 105 °C	100.0 - 100.0	UNI EN ISO 3251
P/CL125	Non volatile content(v/v)(%)	100.0 - 100.0	
P/CL143	1µm Theor.spread.rate (m2/kg):	825 - 859	
P/CL210	Water content (%):	0.0 - 0.0	
P/YC060	Particle size dist. <32µ(%):	48 - 54	
P/YC120	Particle size dist. <63µ(%):	87 - 93	
P/CS010	Dry film thickness(microns):	60 - 80	UNI ISO 2178

Code	Int. Method	Range	Ref. Method
P/CC050	Gloss 60° :	3.0 - 8.0	UNI EN ISO 2813:2001

WAYS OF APPLICATION

Apply with guns with negative terminal (60/80KV) or triboelectric guns automatically or manually.

It is advised to apply the product in layers with the thickness of 70-90 microns and to stove at 190°C for 20 minutes (temperature of the support).

For stoving of the PE/UM MIC products it is possible to use the following curing windows:

10-15 minutes	200°C (temperature of the support)
20-30 minutes	190°C (temperature of the support)

For stoving use the given indications.

TECHNOLOGICAL FEATURES AND RESISTANCE TESTS

The support used	aluminium sheet
Thickness	70 microns
Stoving	20 minutes at 190°C

Chemical resistance test by immersing for 48 hours at indoor temperature into:

Hydrochloric acid 10 %	film is intact
nitric acid 30 %	matt, but washing off
saturated hydrogen sulphide	intact
hydrogen peroxide 40 volumes	intact
ammonium hydroxide 10 %	intact
ammonium hydroxide 33 %	intact
sodium hydroxide 5 %	intact
tartaric acid 5 %	intact
sodium hydroxide 5 %	intact
citric acid 5 %	intact
lactic acid 5 %	intact
ethanol	intact
N-butanol	intact
petroleum ether	slightly softened

The chemical resistance test was carried out on chromatised aluminium.

Code	Int. Method	Range	Ref. Method
P/CM010	Buchholz indentation test :	more than 90	UNI EN ISO 2815
P/CM040	Ericksen cupping test (mm):	more than 5	UNI EN ISO 1520
P/CM050	Direct impact test (cm.Kg):	more than 25	ASTM D 2794; ISO 6272-2:2002

Code	Int. Method	Range	Ref. Method
P/CM051	Opposite impact test(cm.kg):	more than 25	ASTM D 2794; ISO 6272-2:2002
P/CM080	Cylindrical mandrel size 4 :	does not break	UNI EN ISO 1519
P/CM100	Crosscut adhesion (2mm)(GT):	00	UNI EN ISO 2409
P/CM230	Resistance to humidity (Humidity test)	1000 hours later - no blistering, indentation along the cross of maximum 1 mm	UNI EN ISO 6270-2:2005

NOTES

The mechanical test of the PE/UM MIC are carried out according to the Qualicoat specifications, some cracks are admitted but the coating film has to stick to the substrate under the action of a specific adhesive tape. For optimal appearance and performance, exceeding 125 microns (5 mils) is not recommended.

NOTE TO USER

The information contained in this document while based on evidence and reliable methods can not be considered exhaustive. This information is current to the date of issuance of this data sheet, therefore it is under the user's responsibility to verify that the data provided on this sheet are current to the date of the product. The user, under its own responsibility, shall respect all the existing provisions on hygiene and safety and shall verify every time the features and the specific and appropriate way to use the product, as the respect of the provisions is not under the producer's direct control. The manufacturer does not guarantee nor assume any liability or responsibility for whatsoever harm that might result from a misuse of the product or for damages that have arisen after the product's distribution.