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Technical data sheet

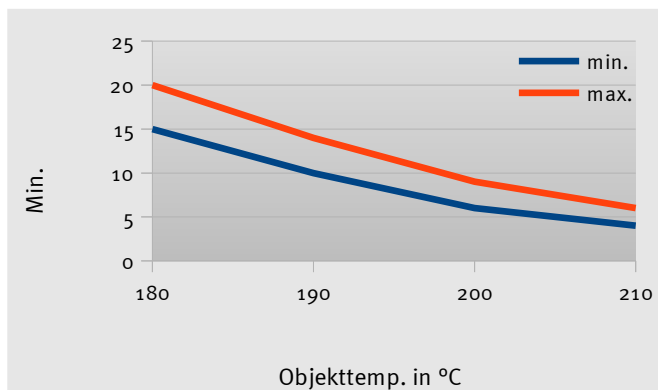
POLYFLEX® EP-20-Korroflexprimer-GU, smooth out gassing Corona Matt 10

Dull matt primer powder based on epoxy resins. The powder exhibits very good out gassing, dispersion and covering properties, along with very good intercoat adhesion for overcoating with a powder coating. Most of the intended applications of the powder coating are for hot-dip and spray-galvanized steel as well as for blasted steel.

Applications	Railings, hydrants, all kinds of die-cast parts, fixtures, machine housings, and many more.	
Colour tones	RAL 7035, 7043, 1M1269 PP oxide red, 2M4933 white (approx. RAL 9010), 3M1805 PP olive green, 3M1806 PP black – special tones available on request (minimum volume)	
Surface	Smooth	
Gloss	Matt, 5-15 gloss units (60°)	
Powder properties	Particle size distribution (HELOS H1708)	smaller than 29 µm: 40 – 47 % smaller than 122 µm: 98 – 100%
	Density	1.3 – 1.7 g/cm³ depending on colour tone; can be specified for each colour tone if required.
Material consumption	g/m² =	density (g/cm³) x coating thickness (µm)
Coating thickness	Recommendation: Maximum:	70 – 90 µm according to colour tone 150 µm
Application	The powder can be applied with all common types of electrostatic system. For better results with regard to out gassing, the powder primer should be cured, rather than simply gelled, before the top coat is applied. In order to avoid surface defects, we recommend not mixing this type of powder coating with other powder coatings.	
Packaging	20/25 kg cardboard 500 kg Octobox 450/500 kg Big Bag Other packaging types are available on request.	

Baking diagram

Curing time recommendation: 10 minutes by 190 °C object temperature



Curing conditions:

210°C	4 min. hold time
200°C	6 min. hold time
190°C	10 min. hold time
180°C	15 min. hold time

Substrates

Steel/iron, hot galvanised substrates, aluminium. The substrate must be free from oil, grease and oxidation products. We recommend the following pretreatments:

Aluminium and aluminium alloys

A suitable chemical pretreatment.

Steel/iron

Blasting with a suitable blasting agent (cleanliness level at least SA 2.5 in accordance with DIN 55928 part 4, "bare metal") or a suitable chemical pretreatment.

Hot galvanised substrates

A suitable chemical pretreatment or sweep blasting.

Physical properties

Tested on:

Steel sheet 0.8mm ST1405
double-pickled V1094

Film thickness:
70 – 90 µm

Cross cut test

(DIN ISO 2409)

GT 0

Mandrel bending test

(DIN ISO 1519)

≤ 8 mm*

Impact resistance testing

ASTM D 2794

front ≥ 5.0 Nm* (~44 inch pounds)

reverse ≥ 2.5 Nm* (~22 inch pounds)

Erichsen cupping

(DIN ISO 1520)

≥ 3 mm*

Buchholz hardness test

≥ 90* (cracks; no peeling with (DIN ISO 2815)
adhesive tape visible to the naked eye)

Resistance

Tested on:

Steel sheet S 235 JR, blasting Sa
2 1/2, degree of roughness (G).

Condensation water test

DIN ISO 6270

480 h – no bubble building

Infiltration on the scratch track under 1 mm

Salt spray test

DIN ISO 9227

720 h – no bubble building

Infiltration on the scratch track under 1 mm

Scoring of sheets as per DIN EN ISO 12944-6 Annex A.

Scoring tool: van Laar-type scratch tool, Model 426

Material approvals

Qualisteelcoat PE-0083 with the following structure: steel SA 2.5

(30-40µm roughness depth),

C4-H zinc phosphating, top coat PES-135 (Qualicoat P-1131)

PE-0085 with the following structure: steel SA 2.5

(30-40µm roughness depth),

zinc phosphating, top coat PUR-151

C5 M / I long in accordance with DIN EN ISO 12944-6 – IFO-Report available

Post-treatment of coated parts

To print, to paste, to label, to laminate of film and any other post-treatment, some preliminary testing is recommended. For packaging only use appropriate plasticizers-free materials. Perspiration water should be avoided.

Repairs

For repairs (conveyors hanger touch ups) the repair kit, Art. 12155 is available.

Storage

Storage conditions

To be stored in original canister, in cool and dry conditions at max. 25 °C and not exposed to direct sunlight.

Duration of storage

Up to 18 months as of production date under the conditions stated.

Safety recommendations

Lower explosion limit please refer to the safety data sheet

Further information are to find in the safety data sheet and the CEPE booklet „Safe powder coating“ and „Results of the experimental toxicology study on thermosetting powder coatings“.

Comments:

The information on this technical data sheet about the properties and application of the product in question are made on hand of our knowledge, development and practical experience. Because of the multiple possible applications, it is impossible for us to present them all in detail. Our technical consultants are at your disposal for any question you might have. Further more, our general sales and delivery conditions apply. The technical data sheet is revised periodically. If necessary, our sales department will confirm the validity of this document.



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