

REAFREE® 8180-T

POWDER COATINGS / PRIMID

TECHNICAL DATA SHEET

Product Application details

Saturated carboxylated polyester for combination with β -Hydroxyalkylamide type hardeners. Suitable for the formulation of outdoor durable and protective thermosetting powders for electrostatic and tribochargeable applications. For matt powder coatings by dry blending. Gas oven stabilised.

Performance Benefits

- Good flow.
- Different glosses by dry blend process with REAFREE 8300-T, alone or mixed with 8780-T.
- Good mechanical properties.
- Excellent outdoor durability.
- Good yellowing resistance.
- Tribochargeable.

Polymer Type

- Saturated Carboxylated Polyester Resin

Sales Specifications

Colour (50%), (ASTM D-1544)	2 max
Acid value, mg KOH/g (ASTM D-1639)	70 - 78
Viscosity 165°C, Pa.s (ICI – DIN 53229)	7 - 15

Other Characteristics¹

Appearance	Pale granules
Glass Transition T, °C (DSC - Tg)	approx 52

¹ The data provided for these properties are typical values, intended only as guides, and should not be construed as sales specifications

Curing Conditions

15 minutes at 180°C (object temperature)

Recommended Mixing Ratio

REAFREE 8180-T / PRIMID XL-552⁽¹⁾: 90/10

REAFREE 8180-T / PRIMID QM-1260⁽¹⁾: 88/12

⁽¹⁾PRIMID is a trade mark of EMS-Chemie AG

Starting Formulation

	A	B
REAFREE 8180-T	265	---
REAFREE 8780-T	265	---
REAFREE 8300-T	---	569
Titanium Dioxide ⁽¹⁾	400	400
β -Hydroxyalkylamide ⁽²⁾	60	21
Flow modifier ⁽³⁾	8	8
Benzoin	2	2

- (1) Kronos 2160
(2) Primid XL-552 (EMS Chemie)
(3) Byk 360 P (Byk Chemie)

DRY-blend paints A/B: 50/50

Formulation Guidelines

Application / Extrusion Conditions

Extruder:	BUSS PCS-30
Torque:	40%
Speed:	200 rpm
Extrusion temperature:	105°C
Spraying Gun:	GEMA PG 1-B
Application voltage:	60-80 Kv
Test substrate:	Degreased steel 1 mm
Curing conditions:	15min. at 200°C

Coating Properties

Film thickness	60-80 microns
Gloss 60°, (ASTM D-523-60E)	Ca. 30%
Cupping test, (DIN 53156)	Over 8 mm
Direct Impact, (ASTM D-2794)	Over 80 Kg.cm
Reverse Impact, (ASTM D-2794)	Over 80 Kg.cm
Conical mandrel, (ASTM D-522)	100%
Adhesion, (DIN 53151)	Gt0

Product Safety

Please refer to the corresponding Safety Data Sheet.

Delivery form

Granules. White opaque polyethylene bags of 25 Kg. One Ton pallet shrink – wrapped.

Storage & Handling

The resin in its original unopened bags is stable for more than three years, stored in a dry place at temperature below 30°C. Avoid direct sunlight.

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