

REAFREE® 5401

POWDER COATINGS / TGIC & PRIMID

TECHNICAL DATA SHEET

Product Application details

Saturated carboxylated polyester for combination with Triglycidyl Isocyanurate or β -Hydroxy-alkylamide type hardeners.

Suitable for the formulation of outdoor SUPERDURABLE and protective thermosetting powders for electrostatic application.

For mat paints by dry-blend with REAFREE 5002.

Low TGIC or PRIMID ⁽¹⁾ demand.

TMA free type.

Performance Benefits

- Good flow.
- Good mechanical properties.
- Excellent outdoor durability.

Polymer Type

- Saturated Carboxylated Polyester Resin

Sales Specifications

Colour (50%), (ASTM D-1544)	2 max
Acid value, mg KOH/g (ASTM D-1639)	20 - 25
Viscosity 165°C, Pa.s (ICI – DIN 53229)	20 - 40

Other Characteristics¹

Appearance	Pale granules
Glass Transition T, °C (DSC - T _g)	approx 64

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

Curing Conditions

TGIC: 15 minutes at 200°C (object temperature)

PRIMID⁽¹⁾: 20 minutes at 180°C (object temperature)

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

Recommended Mixing Ratio

REAFREE 5401 / TGIC :	96/4
REAFREE 5401 / PRIMID XL-552 ⁽¹⁾ :	97/3

Starting Formulation

	A	B
REAFREE 5401	---	614
REAFREE 5002	576	---
Titanium Dioxide ⁽¹⁾	320	320
Triglycidyl Isocyanurate ⁽²⁾	64	26
REAFREE F3300-A15	37	37
Benzoin	3	3

- (1) Kronos 2160
(2) Araldite PT-810 (Huntsman) / Tepic (Nissan Chemical)

DRY-blend paints A/B: 50/50

Formulation Guidelines

Application / Extrusion Conditions

Extruder:	BUSS PCS-30
Torque:	40%
Speed:	200 rpm
Extrusion temperature:	80°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 35%
Cupping test, (DIN 53156)	Over 8 mm
Direct Impact, (ASTM D-2794)	Over 50 Kg.cm
Reverse Impact, (ASTM D-2794)	Over 20 Kg.cm
Conical mandrel, (ASTM D-522)	100%
Adhesion, (DIN 53151)	Gt0

REAFREE®
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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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