

# REAFREE® 5701

POWDER COATINGS / TGIC & PRIMID

TECHNICAL DATA SHEET

March 2014

## Product Application details

Saturated carboxylated polyester for combination with Triglycidylisocyanurate or  $\beta$ -Hydroxyalkylamide type hardeners.

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

TMA free type.

## Performance Benefits

- Outstanding flow.
- High gloss.
- Excellent outdoor durability. SUPERDURABLE FINISHES.
- Excellent salt spray resistance.

## Polymer Type

- Saturated Carboxylated Polyester Resin

## Sales Specifications

Colour (50%), (ASTM D-1544)	2 max
Acid value, mg KOH/g (ASTM D-1639)	32 - 38
Viscosity 165°C, Pa.s (ICI – DIN 53229)	9 - 20

## Other Characteristics<sup>1</sup>

Appearance	Pale granules
Glass Transition T, °C (DSC - Tg)	approx 63

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

## Curing Conditions

TGIC: 10 minutes at 200°C (object temperature)

PRIMID<sup>(1)</sup>: 15 minutes at 160°C (object temperature)

<sup>(1)</sup>PRIMID is a trade mark of EMS-Chemie AG

## Recommended Mixing Ratio

REAFREE 5701 / TGIC :	93/7
REAFREE 5701 / PRIMID XL-552 <sup>(1)</sup> :	95/5
REAFREE 5701 / PRIMID QM-1260 <sup>(1)</sup> :	94,5/5,5

## Starting Formulation

	TGIC	PRIMID
<b>REAFREE 5701</b>	595	564
Titanium Dioxide <sup>(1)</sup>	320	320
Triglycidylisocyanurate <sup>(2)</sup>	45	
$\beta$ -Hydroxyalkylamide <sup>(3)</sup>		29
REAFREE F3300-A15	37	
REAFREE F3300-B10		75
Benzoin	3	2
Worlée AD-904 <sup>(4)</sup>		10

- (1) Kronos 2160  
(2) Araldite PT-810 (Huntsman) / Tepic (Nissan Chemical)  
(3) Primid XL-552 (EMS Chemie)  
(4) Worlée

## Formulation Guidelines

## Application / Extrusion Conditions

Extruder:	BUSS PCS-30
Torque:	40%
Speed:	200 rpm
Extrusion temperature:	80°C / 105°C (TGIC / PRIMID)
Spraying Gun:	GEMA PG 1-B
Application voltage:	60-80 Kv
Test substrate:	Degreased steel 1 mm

## Coating Properties

Film thickness	60-80 microns
Gloss 60°, (ASTM D-523-60E)	Over 90%
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
Adhesion, (DIN 53151)	Gt0

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**Product Safety**

Please refer to the corresponding Safety Data Sheet.

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**Delivery form**

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

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**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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