

**PRODUCT: CathoGuard® 580**

**ORIGINAL CODE: CG 580**

**COLOR: Black**

- ❑ Excellent with new pre-treatment generation
- ❑ Excellent surface property
- ❑ High edge Protection
- ❑ Global Product
- ❑ HAPs free
- ❑ Optimized mapping sensitivity
- ❑ Low VOC Content
- ❑ Lower sensitivity to watermark

**BATH PARAMETERS:**

	<b>volum</b>	<b>weight</b>
Compensation ratio :		
Emulsion	5,3(4,9-5,7)	4,2 (4,0-4,4)
Paste	1,0	1,0
Solid Contend	<b>30min 180°C</b> 18,5 ± 1,5 %	<b>3 h -105 °C</b> 20,0 ± 2,0%
Ash content rel. to solid	16,0 ± 2,0%	14,5 ± 2,0%
pH (20 °C)	5,6 ± 0.2	
Conductivity (20 °C)	1300 ± 500µS/cm	

**CARACTERISTC OF MIX:**

	<b>30min 180°C</b>	<b>3 h -105 °C</b>
Solid Contend of Mix	42,0%	44,2%

**ELECTROCOATING:**

Bath Temperature	28 – 36 °C
Coating time	mín 120 s
Voltage	120 – 400 V
Electrochemical equivalent	30 - 45 C/g
Substrate	Steel, galvanized, aluminium, cast iron,
Phosphate	Iron, zinc, tricationic, thin-film,

**FILM PROPERTIES:**

Thickness	15 - 22 µm
Film Density	1,30 ± 0,03 g/cm <sup>3</sup>

**BAKING:**

Time/Temperature (object)	15 min. 175 ± 10 °C
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## SAFETY & HEALTH INFORMATION :

Flash Point > 100 °C

## SAFETY & HEALTH INFORMATION :

Flash Point	> 70°C	> 85°C
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## PRODUCT DATA:

	<b>Emulsion</b> EM CG580	<b>Paste</b> PP CG580
Appearance	Milky liquid	Black Paste
Solid content (30min. 180°C)	37,5 ± 1,5 %	61,0 ± 2,0 %
Pigment content (of solids)	-	71,5 ± 2,5 %
Ash Content (of solids)	-	54,0 ± 2,5 %
Appearance	Milky liquid	Black Paste
Solid content (3h-105°C / 1h-130°C )	40,0 ± 1,0 %	62,0 ± 2,0 %
Pigment content (of solids)	-	70,5 ± 2,5 %
Ash Content (of solids)	-	53,0 ± 2,5 %
pH	5,90 – 6,30	-
Density (20 °C)	1,07 ± 0,03 g/cm <sup>3</sup>	1,40 ± 0,05 g/cm <sup>3</sup>
Brookfield Viscosity (25 °C)	< 120 cps	1300 ± 300 cps
Type of packaging	Truck tank Steel Container Polyethylene Container Polyethylene drums	Steel Container Polyethylene Container Polyethylene drums Coated drums

## DATA LIFE:

At temperatures between 4°C e 35° C	12 month	6 months
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## LAB BATH:

DIW	559,9 g
Emulsion	358,6 g
Paste	81,5 g
	<b>1000,0 g</b>

Add emulsion, under stirring, over the water. After the incorporation, slowly add the paste.  
Keep under constant stirring.  
Material ready for application, after 16 hours of aging at room temperature.

Technical parameters of painting:

Electrode distance =  $18 \pm 2$  cm

Anode:catode ratio = 1:4

Corrections should be made after consultation with BASF Technical Assistance.

## OTHER RECOMMENDATIONS FOR TANK OPERATION:

Conductivity:

DI Water

<10  $\mu$ S/cm

Anolyte

500 – 2000  $\mu$ S/cm

# Technical Information

## CathoGuard<sup>®</sup> Electrocoat paints

Version 2.1 / Status 02.01.2023

<b>Product name</b>	<b>CATHOGUARD<sup>®</sup> 800RE</b>
<b>Product code</b>	<b>FT 25-7821</b>
<b>Colour</b>	<b>grey</b>

### Properties

- enhanced reactivity
- consumption optimized "Raise Efficiency"
- tin free
- excellent with new pre-treatment generation
- designed for integrated processes
- excellent surface properties and good edge protection
- adapted for multi-metal substrate mix
- optimized mapping sensitivity
- high ultrafiltrate performance
- low film density
- non HAP Coating (acc. USEPA)
- low VOC content
- optimized run-out behaviour
- no UF drain necessary
- reduced process costs – anolyte water reduction
- global product

### Bath Parameters

Average ratio of fill and feed		Volume	Weight
Emulsion	FT 23-0821	10,3 (8,4 – 13,0)	6,9 (5,7 – 8,8)
Paste	FT 24-7820	1,0	1,0
		<b>30 min / 180 °C</b>	<b>3 h / 105 °C</b>
Non-volatile content	DIN EN ISO 3251	10,0 – 21,0 %	12,5 – 23,5 %
Ash content of non-volatile content	DIN EN ISO 14680-2	14,5 ± 2,5 %	13,0 ± 2,5 %
P/B	DIN EN ISO 14680-2	0,20 ± 0,04	0,18 ± 0,04
pH-Value (20 °C)	DIN EN ISO 19396-1	5,4 ± 0,3	
Conductivity (20 °C)	DIN EN ISO 15091	1,7 ± 0,5 mS/cm	

### Resulting Film Properties

Film thickness	DIN EN ISO 2178	13,0 – 25,0 µm
Film density	DIN 53219	1,30 ± 0,03 g/cm <sup>3</sup>

### Stoving Conditions

Object temperature "Optimum range"	15-20 min 175 ± 20 °C
extended Range	see baking window

#### **Disclaimer:**

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<b>Emulsion</b>	<b>Paste</b>
<b>FT 23-0821</b>	<b>FT 24-7820</b>

### Health and Safety Characteristics

Safety relevant information's: see MSDS (Material Safety Data Sheet)

### Characteristics

Colour		Colourless	Grey
Non-volatile content (30 min/180 °C)	DIN EN ISO 3251	38,0 ± 1,5 %	65,5 ± 1,5 %
Pigment content (of Solids)	DIN EN ISO 14680-1	-	77,5 ± 1,5 %
Ash content (of Solids)	DIN EN ISO 14680-2	-	68,0 ± 1,5 %
Non-volatile content (3 h / 105 °C)	DIN EN ISO 3251	41,0 ± 1,5 %	67,0 ± 1,5 %
Pigment content (of Solids)	DIN EN ISO 14680-1	-	76,0 ± 1,5 %
Ash content (of Solids)	DIN EN ISO 14680-2	-	66,5 ± 1,5 %
pH-Value (20 °C)	DIN EN ISO 19396-1	6,0 ± 0,2	-
Density (20 °C)	DIN EN ISO 2811-1	1,06 ± 0,03 g/cm <sup>3</sup>	1,55 ± 0,03 g/cm <sup>3</sup>
Viscosity (25 °C)	DIN 53019-1	≤ 200 mPas	1400 ± 400 mPas
Fineness Hegman	DIN EN ISO 1524	-	≤ 13 µm

### Delivered in

Drums with interior protective coating, stainless steel container, tank wagon

### Shelf life

At temperature between > 4 °C and < 35 °C	12 months	Minimum 4 months; 6 months, when stirred before use
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<b>Colour</b>	<b>grey</b>

### Laboratory Bath Preparation

Deionised water ( $\leq 10 \mu\text{S/cm}$ )	517,0 g
FT 23-0821	422,0 g
FT 24-7820	61,0 g
	1000,0 g

Into the water add all other components while stirring

The material is deposit able after 1 hour of aging.

The bath has to be stirred continuously

Without dialysis system (anolyte system) the compensation is limited

Possibly the application parameters must be adjusted during use.

The pH value can drop to less than 5.4 and the specific bath conductivity can be set between 900-2100  $\mu\text{S/cm}$ .

Corrections should be carried out after follow-up discussions with the paint supplier

### Lab Application

Bath temperature	26 – 36 °C
Coating time	minimum 120 s
Voltage	200 – 400 V
Pre-resistance	150 Ohm
Electrochemical equivalent	DIN EN ISO 22553-8 30 – 45 C/g

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