



EPIC – Expanded Bake Window- Series

Cationic Epoxy Electrocoat

ELECTROCOATING

Product Data Sheet

Highlights

ENVIRO-PRIME® EPIC Expanded bake window Series is the latest enhancement of PPG's cationic epoxy electrocoat.

Compared to earlier generation cationic epoxies, ENVIRO-PRIME® EPIC Expanded bake window Series benefits include:

- Excellent corrosion resistance
 - Enhanced corrosion protection on edges*
 - On various substrates
- Environmental advantages
 - Non tin catalyzed Series
 - Reduced water consumption
 - Enables light weighting
- Performance advantages
 - Compatible with Zinc-Phosphate Pretreatment and Thin film pretreatment like PPG's ZIRCOBOND®
 - Compatible with all types of decorative coatings
 - Excellent film appearance
 - High throwpower
 - Improved Workability performances
- Economical advantages
 - Avoid oven Capex
 - Expanded lower end cure window

COMMERCIAL USES

PPG Enviro-Prime® EPIC electrocoats are typically used in the Automotive OEM. With its expanded bake window ENVIRO-PRIME® EPIC Expanded bake window Series contributes to sustainability efforts through a reduced CO₂ – footprint and savings in the energy use.

	EPIC 200R	EPIC 200RX	EPIC 300
Corrosion resistance	High-edge Performance*		
Bake window	From 10-15 min 150°C up to 90 min 190°C Metal Temperature	From 10-15 min 150°C up to 90 min 190°C Metal Temperature	From 10-15 min 140°C up to 90 min 190°C Metal Temperature

TECHNICAL PROPERTIES

Property	Test Method	Value
Color		Grey
Film Thickness	---	12 - 22 µm
Appearance	---	Ra 2,5 < 0,3 LW Nitto < 30
Adhesion	DIN EN ISO 2409	Gt 0 – Gt 1
Erichsen cupping test	DIN EN ISO 1520	> 4 mm
Throwpower	DIN EN ISO 22553-2	> 60 - 65 %

*CRS, EZ, HDG, Alu lab panels; zinc phosphated Gardobond 26S W OC;
17 ± 2 µm film thickness.
cured 15 min @ 175 °C (object temperature)*

Test	Method	Delamination ISO 4628-8
Humidity test	DIN EN ISO 6270-2	> 250 Hours – no changes
Water Immersion	DIN EN ISO 2812-2	> 500 Hours – no changes
Edge coverage (RX version)	DIN EN ISO 4628-1	Rating 0 – 1
Salt Spray	DIN EN ISO 9227	500h – d < 0,5 mm 1000h – d < 1,0 mm
VW – 30 cycles	PV1210	CRS – d < 1.5 mm, EZ/HDG – d < 3 mm
VDA – 10 cycles	DIN EN ISO 11997-1 cycle B	CRS – d < 2 mm, EZ/HDG – d < 4 mm
VDA new – 6 cycles	233-102	CRS – d < 4 mm, EZ/HDG – d < 1,5 mm
Scab corrosion Nissan	G-00007 – CCT IV 67 cycles	CRS – d < 15 mm, GI – d < 2 mm
CASS Test	DIN EN ISO 9227	240h – d < 1mm
Filiform	DIN EN ISO 3665	1000h – dmax < 3mm

*CRS, EZ, HDG, Alu lab panels; zinc phosphated Gardobond 26S W OC;
17 ± 2 µm film thickness.
cured 15 min @ 150 °C (object temperature)
d = (total creepage – scribe) / 2*



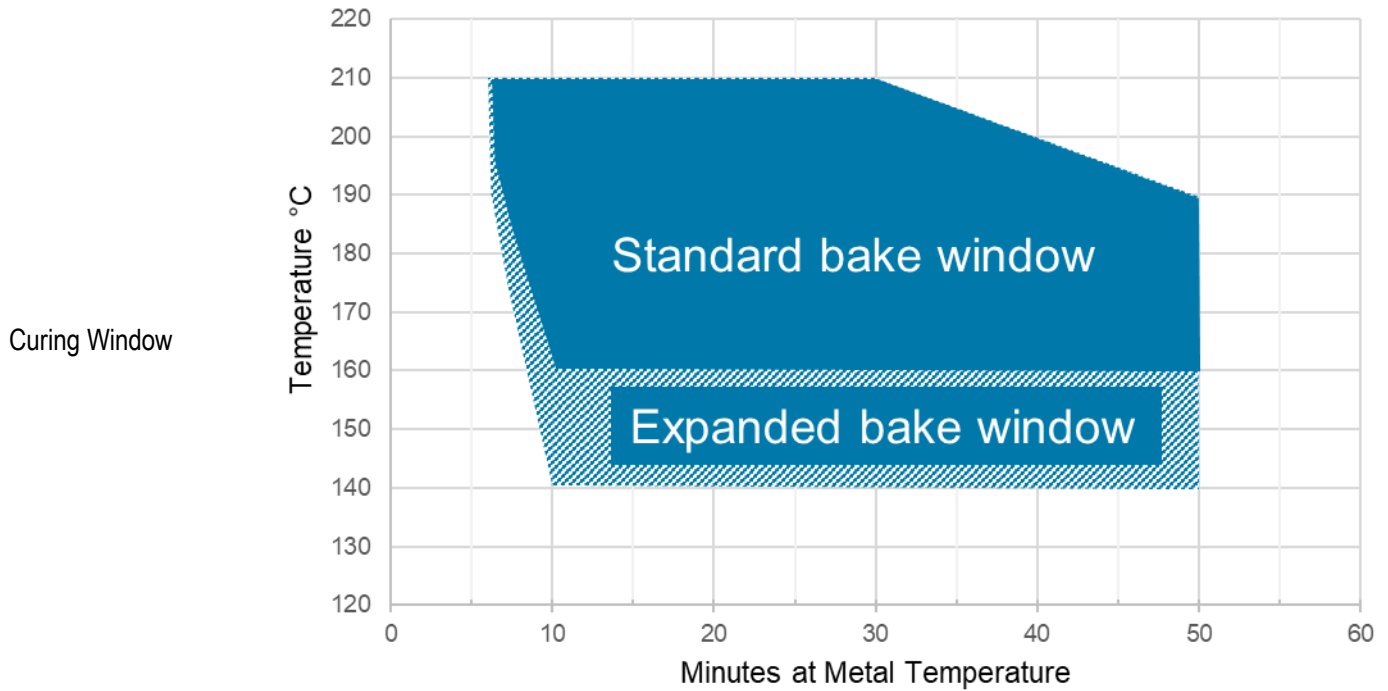
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APPLICATION DATA



From: 10 – 15 Minutes at 140°C up to 90 min 190°C Metal Temperature

Dry film density	1,33 – 1,35 g/cm ³ (depending on bath settings, P/B and solids)
Oven loss	8,0 – 12,0 % (depending on cure temperature)
VOC (ISO 11890-1) Method 1	0,50 – 1,05 % (depending on bath settings, P/B and solids)
Deposition voltage	100 – 360 V
Bath temperature	30 – 36 °C