Curing Agent | Technical Data Sheet

EPO 50

Modified Cycloaliphatic Polyamine

Product Description

EPO 50 is a self leveling flooring modified cycloaliphatic polyamine curing agent intended for ambient or low temperature cure of liquid epoxy resins. It has excellent surface apperance. EPO 50 is useful in formulating flooring, mortars, coatings and penetrating sealers.

Features

- Very low viscosity
- Good chemical resistance
- Good mechanical properties
- Low color
- Excellent surface apperance
- High gloss

Chemical Composition

Modified Cycloaliphatic Polyamine

Typical Applications

- Encapsulation
- Self leveling flooring
- Mortars and concrete repair materials
- High solids coatings
- Concrete Sealers
- Adhesives

Typical Physical Properties

PROPERTY	RANGE	UNITS
Color (GARDNER)	1 MAX	Gardner
Viscosity @25 °C	80 –180	cP
Total Amine Value	285 - 304	mg KOH/g
Density @25 °C	0.99 – 1.02	Kg/L
AHEW	94	g/eq
Mix Ratio*(1)	50	parts in weight
Gel Time*(2) @25 °C	24 - 28	minutes

*(1) Cured with 190 EEW liquid resin

*(2) Cured @ 25 °C in 150 g system

Typical Performance Properties *(3)

PROPERTY	METHOD	VALUE
Glass Transition Temperature (°F)		123.4
Tensile Strenght (psi)	ASTM D638-14	7,025
Tensile Modulus (Thousand psi)	ASTM D638-14	143
Elongation %	ASTM D638-14	6.1
Compressive Strenght (psi)	ASTM D695-15	14,854
Compressive Modulus (Thousand psi)	ASTM D695-15	428
Hardness (Shore D)	ASTM D 2240	81
Heat Distortion Temperature (°F)	ASTM D648	132.4

***(3) Unless otherwise specified, properties obtained after more than 7 days cure at room temperature**

***(4) Glass transition temperature measured by DSC**

Typical Properties Of Chemical Resistance Without Load

Chemical	YD-128		YD-114		YDPN-631 F		YDF-170	
	3 days	28 days	3 days	28 days	3 days	28 days	3 days	28 days
Deionized water	0.30	0.68	0.43	0.50	0.40	0.64	0.27	0.57
Ethanol	3.66	5.63	5.11	7.89	3.26	5.16	2.90	4.50
Toluene	3.27	8.08	destroyed	destroyed	1.33	4.05	5.24	9.90
Xyelene	0.11	0.34	10.45	17.63	0.11	0.33	0.58	1.49
Butyl cellosolve	8.02	11.42	9.85	14.77	5.80	9.08	7.73	11.61
MEK	destroyed	destroyed	destroyed	destroyed	destroyed	destroyed	destroyed	destroyed
Acetic acid 10%	1.39	2.26	1.15	1.80	1.10	1.79	1.02	1.73
Sulfuric acid 70%	0.62	1.00	0.61	0.97	0.47	0.74	0.45	0.69
Sodium hydroxide 50%	0.14	0.14	0.09	0.09	0.07	0.09	0.06	0.08

Percentage of weight gain after 7 days of curing at 25 °C followed by 28 days of immersion at 25 °C.

Storage Life	At least 12 months from the date of manufacture in the original sealed container at ambient temperature. Store away from excessive heat and humidity in tightly closed containers. Do not freeze.