# Vestlake Epoxy

## **Technical Data Sheet**

## EPIKURE™ Curing Agent 3251

#### **Product Description**

EPIKURE™ Curing Agent 3251 is a phenol-free, modified Mannich base epoxy curing agent. It provides fast setting, low-temperature curing (40-50 °F), chemically resistant, high solids sprayable coatings with good corrosion resistance similar to conventional polyamides/When properly formulated, good adhesive, synthetic flooring and potting properties are observed.

#### Application Areas/Suggested Uses

- High solids and solvent free coatings
- Potting, casting and encapsulation
- Structural adhesives
- Chemical resistant tank linings
  Accelerator or co-curing agent for polyamides
- Synthetic flooring

#### **Benefits**

- Low temperature cure
- Light color
- Low viscosity
- Excellent moisture resistance
  High gloss, carbonate free surfaces
- High gloss, carbonate free sur
  Contains no free phenol
- Contains no free pheno

#### **Sales Specifications**

Property	Value	Unit	Test Method
Amine Value	350 - 390	g/eq	ASTM D2896
Color	5 max.	Gardner	ASTMD1544
Viscosity at 25°C	400 - 700	сР	ASTMD2196

## **Typical Properties**

Property	Value	Unit	Test Method
Appearance	Clear and free of foreign particles		
Equivalent Weight Approx.	76		
Flash Point	282	°F	ASTMD3278
Mx Ratio with EPON™ Resin 828	40	pbw	
Pounds/Gallon @ 25°C	8.3	lbs/gal	ASTMD1475

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### **Performance Properties**

Table 1 / Typical clear coating formulation and performance data

	<u>Method</u>	<u>Units</u>	A
EPON™ Resin 828		pbw	100
EPIKURE Curing Agent 3251		pbw	40

#### Handling Properties @ 25°C

Solids	%	100
Viscosity	Gardner	Z
Pot Life, 250 gram mass	minutes	14

Cure Schedule	days/°C	7/25

Cured State Properties <sup>2</sup>		
Impact, forward/reverse	in.•lbs	40/40
Dry Film Thickness	mils	2.5
Pencil Hardness		Н
Gloss, 85°	%	95
MEK Double Rubs		50
Chemical Spot Test, 7 days		
Deionized Water		No effect
5% Aceric Acid		No effect
10% NaOH		No effect
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	<u>Method</u>	<u>Units</u>	A
10% HCI			No effect
10% H <sub>2</sub> SO <sub>4</sub>			No effect
10% HNO <sub>3</sub>			No effect
MEK			Blister
50%/50% IPA/Xylene			Swelling
QUV 1500 Hours			
Gloss			55
Yellowing			Heavy
Chalk			Slight
Salt Fog, 1500 Hours			
Сгеер			Slight
Blistering			None
Stain			None
Adhesion			Pass

#### Table 2 / Typical casting formulation and performance data

	<u>Method</u>	<u>Units</u>	A
EPON Resin 828		pbw	100
EPIKURE Curing Agent 3251		pbw	40

Handling Properties @ 25°C

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	<u>Method</u>	<u>Units</u>	A
Solids		%	100
Viscosity		Gardner	Z
Pot Life, 250 gram mass		minutes	14
Peak Exotherm		°C	221
Time to Peak Exotherm		minutes	24

Cure Schedule	days/°C	7/25

Cured State Properties <sup>2</sup>			
Heat Deflection Temperature	ASTM D648	°C	78
Tensile Strength	ASTM D638	psi	9,000
Tensile Elongation at break		%	2.1
Tensile Modulus		ksi	
Flexural Strength	ASTM D790	psi	16,300
Flexural Modulus		ksi	500
Compressive Strength	ASTM D695	psi	16,200
Hardness		Shore D	84

Chemical Resistance <sup>1</sup>	ASTM D543		
Deionized Water absortion		%	0.8
5% Acetic Acid		%	1.0
10% HCI		%	0.7
10% H <sub>2</sub> SO <sub>4</sub>		%	0.8
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	<u>Method</u>	<u>Units</u>	A
50% Xylene/50% Isopropanol		%	Destroyed
10% HNO <sub>3</sub>		%	0.9
10% NaOH		%	0.6
Electrical Properties			
Dielectric constant	ASTM D150		

120 Hz			2.74
1 KHz			2.68
Dissipation factor	ASTM D150		
120 Hz			0.002
1 KHz			0.004
Volume resistivity		ohm•cm	5 x 10 <sup>15</sup>

<sup>1</sup> Percent weight gained after 40 hours immersion

#### **General Information**

#### Safety, Storage & Handling

Please refer to the MSDS for the most current Safety and Handling information.

Please refer to the Hexion web site for Shelf Life and recommended Storage information.

Product will absorb moisture and carbon dioxide which may affect viscosity or create foaminghen reacted with epoxy resins.

Exposure to these materials should be minimized and avoided, if feasible, through the observance of proper precautions, use of appropriate engineering controls and proper personal protective clothing and equipment, and adherence to proper handling procedures. None of these materials should be used, stored, or transported until the handling precautions and recommendations as stated in the Material Safety Data Sheet (MSDS) for these and all other products being used are understood by all persons who will work with them. Questions and requests for information on Hexion Inc. ("Hexion") products should be directed to your Hexion sales representative, or the nearest Hexion sales office. Information and MSDSs on non-Hexion products should be obtained from the respective manufacturer.

#### Packaging

Available in bulk and drum quantities.

#### **Contact Information**

For product prices, availability, or order placement, please contact customer service:

www.hexion.com/Contacts/

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For literature and technical assistance, visit our website at<u>www.hexion.com</u>

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