

# 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
- Contains no free phenol

### Sales Specifications

Property	Value	Unit	Test Method
Amine Value	350 - 390	g/eq	ASTMD2896
Color	5 max.	Gardner	ASTMD1544
Viscosity at 25°C	400 - 700	cP	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

### Performance Properties

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Table 1 / Typical clear coating formulation and performance data

	Method	Units	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			H
Gloss, 85°		%	95
MEK Double Rubs			50
Chemical Spot Test, 7 days			
Deionized Water			No effect
5% Acetic Acid			No effect
10% NaOH			No effect
10% HCl			No effect

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	Method	Units	A
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			
Creep			Slight
Blistering			None
Stain			None
Adhesion			Pass

Table 2 / Typical casting formulation and performance data

	Method	Units	A
EPON Resin 828		pbw	100
EPIKURE Curing Agent 3251		pbw	40

Handling Properties @ 25°C

Solids		%	100
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	Method	Units	A
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 absorption		%	0.8
5% Acetic Acid		%	1.0
10% HCl		%	0.7
10% H <sub>2</sub> SO <sub>4</sub>		%	0.8
50% Xylene/50% Isopropanol		%	Destroyed

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	Method	Units	A
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 foaming when 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/](http://www.hexion.com/Contacts/)

For literature and technical assistance, visit our website at [www.hexion.com](http://www.hexion.com)

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