



## Curing Agents

### epoxa us™ 20-01

#### Description

epoxa us™ Curing Agent 20-01 is a very low viscosity, unmodified aliphatic amine, light colored epoxy hardener. Systems formulated with epoxa us Curing Agent 20-01 tend to form complexes with atmospheric carbon dioxide in humid conditions, they are usually formulated to inhibit or minimize amine blush.

#### Applications

- \* Epoxy curing agents
- \* Oil and fuel additives
- \* Wet strength applications
- \* Corrosion systems
- \* Adhesive systems
- \* Inks (polyamides)

#### Key Features and Benefits

- Great impact resistance, low viscosity
- Medium reactivity
- Wide variety of chemical reactions and enduse applications
- Good chemical resistance
- Positive cure under damp cool conditions

#### Sales Specification

Property	Units	Value	Test Method/Standard
Amine value	mg/g	1400 - 1452	ASTM D2896
Viscosity at 25°C	cP	25	Standard Method
Color	Gardner	2 max	Standard Method

#### Typical Properties

Property	Units	Value	Test Method/Standard
Equivalent weight, approx.		24.5	
Density @ 20 °C	lbs/gal	8.16	

## 20-01

Flash point	°C	>275	ASTM D56
Appearance		Very light yellow	
Mix ratio with			
EEW 188-192 epoxy	phr	13	

### Performance Properties

#### Properties of epoxa us 20-01 curing agent

<b>Components</b>	<b>Method</b>	<b>Units</b>	<b>Value</b>
epoxa us 20-01		pbw	13.6
epoxa us 1600-01 epoxy		pbw	80
HELOXY™ Modifier 61		pbw	20

### Handling Properties

#### 25°C

Viscosity, Mixed		cP	162
Peak Exotherm		°C	125
Pot life, 250 g, 25 °C		min	50

### Cured Properties

Heat Deflection Temperature	ASTM D648	°C	54
Tensile Strength	ASTM D638	psi	7,503
Tensile Elongation		%	7.3

### Starting Formulation Fiber Glass

<b>Components</b>	<b>Units</b>	<b>Value</b>
1600-01 resin	pbw	86
HELOXY Modifier 8	pbw	14
epoxa us curing agent 20-01	pbw	13.8

### Physical Properties

Percent of solids epoxa 20-01		100
-------------------------------	--	-----

## 20-01

Pot life at 25 °C	minutes	40
Dry times		
Dust-free	hours	3
Tack-free	hours	4.1
Through-cure	hours	14

### Film Properties

25 c 50% R.H.		
1 day		Clear, tack-free
10 c 90% R.H.		
1 day		Slight tack, clear
7 days		Tack-free, slight blush
4.4 c 80% R.H.		
1 day		Slight tack, slight blush
7 days		Slight tack, slight blush

### Resistance to Chemichals

Resistant	20 hour immersion, less than 50% loss in hardness, no blistering, no whitening.	
	25% ammonium hydroxide	5% HNO <sub>3</sub>
	gasoline	10% HCl
	xylene	distilled water
	20% HCl	mineral spirits
Limited Resistance	20 hour immersion, greater than 50% loss in hardness, no blistering, slight whitening.	
	10% HNO <sub>3</sub>	50% NaOH
	10% H <sub>2</sub> SO <sub>4</sub>	wine
	10% acetic	10% lactic
Not Resistant	20 hour immersion, greater than 50% loss in hardness, blistering, whitening, adhesion loss.	
	Ethanol	5% H <sub>3</sub> PO <sub>4</sub>
	fuming H <sub>2</sub> SO <sub>4</sub>	methylene chloride
	methyl ethyl ketone	50% acetic acid
		50% lactic acid

### Storage, Handling and Safety

Please read and understand the latest MSDS before using epoxa us 20-01

Please refer to epoxa us website for more information on shelf life.

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 epoxa us incorporated products should be directed to your epoxa us sales representative. Information and MSDSs on non epoxa us products should be obtained from the respective manufacturer.

### Packaging

Available in gallon and drum quantities.

### Contact Information

For product prices, availability, or order placement, MSDS and technical help please contact us.

[www.epoxaus.com](http://www.epoxaus.com)

® and ™ Licensed trademarks of epoxa us incorporated

#### Disclaimer

The information provided herein was believed by epoxa us incorporated to be accurate at the time of preparation or prepared from sources believed to be reliable, but it is the responsibility of the user to investigate and understand other pertinent sources of information, to comply with all laws and procedures applicable to the safe handling and use of the product and to determine the suitability of the product for its intended use. All products supplied by epoxa us are subject to epoxa us terms and conditions of sale. **EPOXA US MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE OR CONCERNING THE ACCURACY OF ANY INFORMATION PROVIDED BY EPOXA US** except that the product shall conform to epoxa us specifications. Nothing contained herein constitutes an offer for the sale of any product.

6A9214JGHU