



D.E.H.™ 650
Epoxy Curing Agent

Description D.E.H.™ 650 curing agent is an aromatic amine suitable for curing liquid epoxy resins at elevated temperatures.

- Advantages**
- Good pot life
 - Low viscosity
 - High heat resistance

- Typical Applications**
- This product is suitable for use in applications such as:
- Filament Wound Pipes
 - Fittings
 - Tanks

Typical Properties

Property ⁽¹⁾	Method	Value
Appearance	Visual	Dark redish brown
Density @ 25°C (g/ml)	ASTM D4052	1.04
Viscosity @ 25°C (mPa•s)	ASTM D445	365
Amine value [meq/g]	ISO 9702	10.9
Amine Hydrogen Equivalent Weight	Calculated	46
Shelf Life (Months)		12

(1) Typical properties, not to be construed as specifications.

Typical Handling Properties

Property	Method	Value
		D.E.R. 383™
		D.E.H. 650
Gel Time (min/100 g mass @80°C) ²		51
Mix ratio, phr (weight)		25

⁽²⁾ Tested by Paul N. Gardner Standard Model Gel Timer

DOW RESTRICTED - For internal use only

* Responsible Care is a service mark of the American Chemistry Council in the United States
D.E.H. 650 Epoxy Curing Agent

Form No. 296-01981-0112-SM

Typical Performance Properties

Property	Method	Value
		D.E.R. 383™
		D.E.H. 650
Mix ratio, phr (weight)		25
Glass Transition Temperature (°C) ⁴		196
Flexural Strength (psi) ⁽³⁾		885
Flexural Modulus (thousand psi) ⁽³⁾		422
% Strain at break ⁽³⁾		6.1
Tensile Modulus (thousand psi) ⁽³⁾		430
Elongation % ⁽³⁾		3.2

⁽³⁾ Clear panel cured for 2 hours at 88°C, 2 hours at 150°C and 2 hours at 200°C.

⁽⁴⁾ Glass transition temperature measured by DMTA

Safety and Handling

The Dow Chemical Company provides its customers with a product specific Material Safety Data Sheet (MSDS) or Safety Data Sheet (SDS) to cover potential health effects, safe handling, storage, use and disposal information. Dow strongly encourages its customers to review the MSDS or SDS on its products and other materials prior to their use.

This curing agent should retain its chemical properties for a period of at least 6 months.

For further handling information, consult the Dow brochure entitled, *DOW Epoxy Curing Agents Product Stewardship Manual, Safe Handling and Storage*, Form No. 296-01331 and the Dow technical bulletin, *Product Coding, Shelf-life and Storage Stability*, Form No. 296-01657.

Product Stewardship

The Dow Chemical Company has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis of our Product Stewardship philosophy by which we assess the health and environmental information on our products and then take the appropriate steps to protect employee and public health and the environment. The Dow Chemical Company has enduring commitments to Responsible Care® in the management of chemicals worldwide. Our Product Stewardship program rests with every individual involved with Dow products from the initial concept and research to the manufacture, sale, distribution, and disposal of each product.

Packaging, Storage and Shelf Life

The D.E.H™ 650 Hardener is supplied in 200 kg tight-head drums. This hardener should retain its chemical properties for at least 12 months when stored in its original closed packaging, in a cool, dry environment, away from direct sunlight and at a temperature not over 25°C.





D.E.H.™ 23 Epoxy Curing Agent

Description D.E.H.™ 23 Epoxy Curing Agent is a modified aliphatic polyamine based, solvent-free curing agent for epoxy resins. The product contains no benzyl alcohol.

Benefits Due to its very low temperature / low exotherm reaction and long potlife, this curing agent is suitable for high processing temperatures and large-volume embedding compounds. Tack-free surfaces with good UV-stability and toughness are achieved.

- Applications**
- Adhesives
 - Building & Civil Engineering
 - Composites
 - Paint & Coatings

Dow Epoxy	Nominal Value	Unit	Test Method
AHEW	63	g/eq	
Viscosity, absolute (25°C)	5.00 to 25.0	mPa·s	ISO 3219
Colour			
Max. Gardner	1		ASTM D1544
Max. Pt-Co., Solution	35		ASTM D1209
Density (25°C)	0.940	g/cm³	ASTM D4052
Amine Value	454 to 488	mg KOH/g	ISO 9702
Pot Life (23°C, 100 g)	300	min	GELNORM Geltimer-TC ¹

Notes

These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.

¹ Reference Resin: D.E.R.™ 331

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For further handling information, consult the Dow brochure entitled, DOW Epoxy Curing Agents Product Stewardship Manual, Safe Handling and Storage, Form No. 296-01331 and the Dow technical bulletin, Product Coding, Shelf-life and Storage Stability, Form No. 296-01657.



D.E.H.™ 2132 Epoxy Curing Agent

Description D.E.H.™ 2132 Epoxy Curing Agent is a modified, cycloaliphatic polyamine based epoxy curing agent. The product has low viscosity and is solvent-free.

Benefits D.E.H.™ 2132 is recommended for mineral casting applications and is also suitable for heavy-filled mortars. It is especially suitable for products where low reactivity is required because it has a low exotherm release during reaction. Epoxy systems cured with D.E.H. 2132 have a high Heat Distortion Temperature (HDT).

- Applications**
- Building & Civil Engineering: Chemical Anchoring
 - Building & Civil Engineering: Crack Injection
 - Building & Civil Engineering: Mortars & Grouts
 - Building & Civil Engineering: Primers & Impregnation
 - Building & Civil Engineering: Roller Coating Flooring
 - Building & Civil Engineering: Self-leveling Flooring
 - Castings / Potting/ Encapsulation / Tooling

Dow Epoxy	Nominal Value	Unit	Test Method
AHEW		45 g/eq	
Viscosity, absolute (25°C)	5.00 to 25.0	mPa·s	ISO 3219
Colour (Max. Gardner)		4	ASTM D1544
Amine Value	550 to 600	mg KOH/g	ISO 9702

Notes

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