

Cardolite® LITE 3005

Epoxy Curing Agent

Technical Datasheet

DESCRIPTION

Cardolite LITE 3005 is a light color, low viscosity phenalkamide curing agent suitable for medium and high solids epoxy coating applications. Phenalkamide curing agent technology is chemically designed to give coatings a combination of the benefits of both polyamide and phenalkamine systems. This curing agent offers advanced performance such as fast and low temperature cure, good dry color stability, and extended overcoat window in addition to excellent water resistance, adhesion, flexibility, and appearance at high humidity.

PROPERTIES

PROPERTY	SPECIFICATION	TEST METHOD
Color (Gardner)	≤12	ASTM D1544
Viscosity @ 25°C (cPs)	1,000 - 3,000	ASTM D2196
Amine Value (mg KOH/g)	140 - 170	ASTM D2074
Solids (% weight)	68 - 72	ASTM D2369-98

PROPERTY	TYPICAL VALUE	TEST METHOD
Appearance	Yellow brown liquid	Visual
Theoretical Active Hydrogen Equivalent (AHEW) ¹	256	Calculated
Density @ 25°C (kg/L) (lbs/gal)	0.96 8.01	ASTM D1475
Flash point	33°C / 91°F	ASTM D93
Recommended Use Level (phr, EEW 190/500)	134/51	-
Shelf Life (Months)	12	-

Typical properties are not to be construed as specifications

¹Based on total product weight

APPLICATIONS

Cardolite LITE 3005 is suitable for fast curing medium and high solids general purpose marine, industrial, floor, and protective coatings. This product is a cost effective alternative to standard polyamides that can be easily incorporated into existing or new formulations to deliver improved performance. It can be used for coating applications under cold and humid conditions, and provides excellent corrosion protection. Good flexibility and adhesion on various metal/primed substrates make this curing agent especially suitable for marine, transportation, and general industrial equipment coatings. Its ability to cure quickly over a wide temperature range combined with an excellent pot life at room temperature brings coatings based on this curing agent broad application latitude and good workability. Applications requiring the speed and corrosion protection of a phenalkamine that need better dry color stability and extended recoat interval can benefit from this curing agent.

ADVANTAGES

- Excellent combination of rapid cure and long pot life at both ambient and low (<5°C/40°F) temperatures
- Continues to chemically crosslink at very low temperatures
- Light dry and wet color for broad color range and use in tinting systems
- Low viscosity for excellent workability
- Good adhesion to poorly prepared surfaces and difficult substrates
- Excellent overcoatability
- Cost effective alternative to standard polyamides
- Excellent flexibility and impact resistance
- Good chemical resistance
- Compatible with most epoxy resins, solvents and their blends
- Excellent corrosion resistance and early water resistance
- Moisture tolerant and blush-free at extreme conditions
- Non-critical mix ratio
- Non-toxic and non-corrosive
- Based from natural, renewable, non-food chain raw material feedstock

CURE PROPERTIES

	FORMULATION A*	FORMULATION B*	FORMULATION C*	TEST METHOD
Liquid Epoxy Resin (pbw, EEW 190)	100			
Solid Epoxy Resin (pbw, EEW 666.7)		100		
Semi-Solid Epoxy Resin (pbw, EEW 283)			100	
Cardolite LITE 3005 (pbw)	134	38.4	90.5	
Mix viscosity @ 25°C (cPs)	2,450	-	-	
Gel time, 50 g @ 25°C (min)	156 - 230	-	-	NTM-15
Thin film dry times, 8 mils (200 micron)				
@ 25°C (77°F) (hrs hard/through)	8/13	12/24	8.5/16	ASTM D5895
@ 5°C (41°F) (hrs hard/through)	18/27	21/24	16/30	ASTM D5895
Film appearance @ 10°C, 92% RH	Clear	Clear	Clear	Visual

*15 min induction time recommended

REGULATORY STATUS

Please refer to the material safety data sheet (MSDS). Specific information regarding chemical inventory listing can be obtained from your local sales representative.

SAFETY PRECAUTIONS

Please refer to the material safety data sheet (MSDS). Copies of the MSDS can be requested on the Cardolite website or via your local sales representative.

STABILITY AND STORAGE

Cardolite products may absorb moisture and carbon dioxide when left in open containers, which could result in increased viscosity, discoloration, reduction of reactivity, and/or crystallization of the products. These products should be kept tightly sealed in their original containers when not in use, and stored in a cool, dry place.

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