

Cardolite[®] NX-4943

Epoxy Curing Agent

Technical Datasheet

DESCRIPTION

Cardolite NX-4943 is a low viscosity, solvent-free phenalkamine curing agent designed for epoxy coating applications requiring good chemical resistance. It has excellent rapid cure properties, even at low temperatures and provides good adhesion on wet or otherwise unprepared surfaces. Chemical tank and pipe linings needing to protect against corrosion and either immersion or environmental exposure to various solvents, fuels, lubricants, oils, acids, and bases can benefit from this product's good barrier properties.

PROPERTIES

PROPERTY	SPECIFICATION	TEST METHOD
Color (Gardner)	≤ 17	ASTM D1544
Viscosity @ 25°C (cPs)	1,400 - 2,300	ASTM D2196
Amine Value (mg KOH/g)	470 - 510	ASTM D2074
Volatile Loss (% weight)	≤ 5	ASTM D2369-98

PROPERTY	TYPICAL VALUE	TEST METHOD
Appearance	Orange red liquid	Visual
Theoretical Active Hydrogen Equivalent (AHEW) ¹	82	Calculated
Density @ 25°C (kg/L) (lbs/gal)	0.99 - 1.01 8.24 - 8.41	ASTM D1475
Flash point	104°C / 220°F	ASTM D93
Recommended Use Level (phr, EEW 190)	35 - 45	-
Shelf Life (Months)	12	-

Typical properties are not to be construed as specifications

¹ Based on total product weight

APPLICATIONS

Cardolite NX-4943 is usable in chemical resistant, high solids or solvent free, surface tolerant marine, industrial, and protective coatings and linings. Tank, pipe, secondary containment, and structural steel immersed or exposed to chemical environments can benefit from coatings based on this product. Typically used with an epoxy novolac, this curing agent's low viscosity offers good workability, and it can be used for coating applications under cold and humid conditions, even over damp and poorly prepared surfaces. Fast cure and good hardness make it ideal for applications requiring fast return to service or multiple coats in a single day. Its ability to cure over a wide temperature range and non-critical mix ratio can bring formulations broad application latitude for protection from applicator errors.

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 (<0°C/32°F)
- Very good chemical resistance
- Good adhesion to poorly prepared surfaces
- Moisture tolerant during cure
- Excellent early water resistance
- Good flexibility
- Compatible with most epoxy resins, solvents and their blends
- Superior corrosion resistance mitigating the need for anti-corrosion pigments
- Low viscosity giving good workability
- Non-critical mix ratio
- No induction time required
- Based from natural, renewable, non-food chain raw material feedstock

CURE PROPERTIES

	FORMULATION	TEST METHOD
Liquid Epoxy Resin (pbw, EEW 190)	100	
Cardolite NX-4943 (pbw)	40	
Mix viscosity @ 25°C (cPs)	5,900	
Gel time, 50 g @ 25°C (min)	41	NTM-15
Thin film dry times, 8 mils (200 micron)		
@ 25°C (77°F) (hrs hard/through)	4 / 5	ASTM D5895
@ 5°C (41°F) (hrs hard/through)	14 / 17	ASTM D5895
@ 0°C (32°F) (hrs hard/through)	23 / 33	ASTM D5895
Film appearance @ 10°C, 92% RH	Blush	Visual

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.

CONTACT INFORMATION



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