

# Cardolite<sup>®</sup> NX-5459

## Epoxy Curing Agent

### Technical Datasheet

#### DESCRIPTION

Cardolite NX-5459 is a 70% solids, low viscosity, adducted phenalkamine curing agent designed for medium and high solids epoxy coating applications. This curing agent has very fast cure even at very low temperatures, and can provide excellent adhesion on difficult substrates, such as an inorganic zinc primer and degreased galvanized steel. Film quality of coatings using this curing agent is excellent, showing no blush even at low temperatures and high humidity. Like other Cardolite phenalkamines, this curing agent has good adhesion on wet or otherwise unprepared surfaces, and can provide outstanding water resistance and corrosion protection.

#### PROPERTIES

PROPERTY	SPECIFICATION	TEST METHOD
Color (Gardner)	≤ 15	ASTM D1544
Viscosity @ 25°C (cPs)	1,500 - 2,500	ASTM D2196
Amine Value (mg KOH/g)	185 - 210	ASTM D2074
Solids (% weight)	68 - 71	ASTM D2369-98

PROPERTY	TYPICAL VALUE	TEST METHOD
Appearance	Yellow brown liquid	Visual
Theoretical Active Hydrogen Equivalent (AHEW) <sup>1</sup>	164	Calculated
Density @ 25°C (kg/L) (lbs/gal)	0.97 - 0.99 8.07 - 8.24	ASTM D1475
Flash point	32°C / 90°F	ASTM D93
Recommended Use Level (phr, EEW 190)	100	-
Shelf Life (Months)	12	-

Typical properties are not to be construed as specifications

<sup>1</sup>Based on total product weight

#### APPLICATIONS

Cardolite NX-5459 is suitable for fast curing medium and high solids surface tolerant marine, industrial, and protective coatings. This product's fast cure and good hardness make it ideal for applications requiring fast return to service or multiple coats over a short period of time. It can be used for coating applications under cold and humid conditions, even over damp and poorly prepared surfaces. Good flexibility and adhesion on various metal/primed substrates make this curing agent especially suitable for primers of marine, transportation, and general industrial equipment. Its ability to cure quickly over a wide temperature range, including below 0°C, combined with a good pot life at room temperature brings coatings based on this curing agent broad application latitude and good workability. Cardolite NX-5459 can also be used in applications requiring FDA 175.300 compliance.

#### 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)
- Low viscosity for excellent workability
- Good adhesion to poorly prepared surfaces
- Good adhesion to difficult substrates
- Moisture tolerant during cure
- Excellent early water resistance
- Good chemical resistance
- Very good flexibility
- Compatible with most epoxy resins, solvents and their blends
- Superior corrosion resistance mitigating the need for anti-corrosion pigments
- Non-critical mix ratio
- No induction time required
- Non-toxic and non-corrosive
- Based from natural, renewable, non-food chain raw material feedstock

## CURE PROPERTIES

	FORMULATION	TEST METHOD
Liquid Epoxy Resin (pbw, EEW 190)	100	
Cardolite NX-5459 (pbw)	100	
Mix viscosity @ 25°C (cPs)	2,340	
Gel time, 50 g @ 25°C (min)	90-135	NTM-15
Thin film dry times, 8 mils (200 micron)		
@ 25°C (77°F) (hrs hard/through)	4/5.5	ASTM D5895
@ 5°C (41°F) (hrs hard/through)	12/20	ASTM D5895
@ 0°C (32°F) (hrs hard/through)	18/28.5	ASTM D5895
Film appearance @ 10°C, 92% RH	Hazy	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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