

# Cardolite® NC-541

## Epoxy Curing Agent

### Technical Datasheet

#### DESCRIPTION

Cardolite® NC-541 is a unique type of epoxy resin hardener known as a phenalkamine. This curing agent is used in heavy duty anti-corrosion coatings for marine and industrial applications. The distinctive structure of phenalkamines imparts a unique combination of desirable properties to the curing agents and the coatings, adhesives, and castings derived from them. Phenalkamines exhibit rapid cure, even at low temperatures with a workable pot-life and the ability to resist moisture while curing, making them ideal for all season cure, surface tolerant coatings. Phenalkamines are accepted for use in coatings for potable water contact in several countries.

#### TYPICAL PROPERTIES

	TYPICAL VALUE	SPECIFICATION
Viscosity @ 25°C (cPs)	35000	25000-50000
Amine Value (mg KOH/g)	-	300-335
Active Hydrogen equivalent (AHEW)	130	-
Flash point (closed cup)	>63°C/145°F	-
Density @ 25°C lbs/gal (kg/l)	8.23 (0.99)	8.15 (0.98) – 8.35(1.0)
Appearance	Reddish brown viscous liquid	
Color (Gardner)	-	17 max
Recommended PHR (liquid epoxy resin, EEW=190)	65-75	-
Volatile Loss (%)	-	5.0 max

#### APPLICATIONS

Cardolite® NC-541 is suitable for medium to high solids surface tolerant marine, industrial maintenance, and pipe coatings. It can be used for coating applications under cold and damp conditions, even over damp and poorly prepared surfaces. The coatings show no blush, even under cold and damp conditions. Cardolite® NC-541 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 (<40°F) temperatures
- Non critical mix ratio
- Good adhesion to poorly prepared surfaces
- Moisture tolerant during cure
- Outstanding chemical resistance
- Compatible with most resins and solvents
- Ship DOT non corrosive
- Superior corrosion resistance
- In compliance with FDA Title 21 CFR 175.300
- Good dilution efficiency
- Based from natural renewable raw material feedstock

## CURE PROPERTIES

FORMULATION	A	B
Liquid Epoxy Resin (EEW 190) (pbw)	100	100
Cardolite <sup>®</sup> NC-541 (pbw)	65	75
Mix viscosity @ 21°C (cPs)	24500	20600
Gel time, 100 g @ 25°C (min)	81	72
Thin film set times, 8 mils (200micron)		
@ 75°F (24°C) (hrs)	14	9
@ 42°F (5°C) (hrs)	22	17
@ 32°F (0°C) (hrs)	40	31
Cure rate / Film appearance @ 42°F (5°C) & 100% RH		Not affected / clear

## APPROVALS AND REGULATORY STATUS

TSCA, EINECS, NICNAS AICS, MITI, PICCS  
FDA Title 21 CFR 175.300

## SAFETY PRECAUTIONS

Please refer to the material safety data sheet (MSDS).

## STORAGE & STABILITY

Cardolite<sup>®</sup> Epoxy curing agents will absorb moisture and carbon dioxide when left in open containers. This may result in increased viscosity and some crystallization of the products. Therefore, all containers of these products should be kept tightly closed when not in use and stored inside in a cool, dry place. Properly protected from moisture and air, this product has a shelf life of 12 months.

## CONTACT INFORMATION



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