

Cardolite® NC-541X90

Epoxy Curing Agent

Technical Datasheet

DESCRIPTION

Cardolite NC-541X90 is a 90% solids version of Cardolite's NC-541 phenalkamine curing agent cut in xylene designed for epoxy coating applications. It has excellent rapid cure properties, even at low temperatures, and provides good adhesion on wet or otherwise unprepared surfaces. Heavy duty industrial, protective, and marine service coatings can benefit from this product's outstanding water resistance and corrosion protection.

PROPERTIES

PROPERTY	SPECIFICATION	TEST METHOD
Color (Gardner)	≤ 17	ASTM D1544
Viscosity @ 25°C (cPs)	3,000 - 6,000	ASTM D2196
Amine Value (mg KOH/g)	265 - 310	ASTM D2074
Solids (% weight)	88 - 91	ASTM D2369-98

PROPERTY	TYPICAL VALUE	TEST METHOD
Appearance	Reddish brown liquid	Visual
Theoretical Active Hydrogen Equivalent (AHEW) ¹	144	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)	70 - 85	-
Shelf Life (Months)	12	-

Typical properties are not to be construed as specifications

¹Based on total product weight

APPLICATIONS

Cardolite NC-541X90 is suitable for medium to high solids surface tolerant marine, industrial, and protective coatings. It can be used for coating applications under cold and humid conditions, even over damp and poorly prepared surfaces. This product's fast cure and good hardness make it ideal for applications requiring fast return to service. Its ability to cure over a wide temperature range and non-critical mix ratio can bring coatings broad application latitude. Cardolite NC-541X90 can also be used in potable water applications* and applications requiring FDA 175.300 compliance.

* Dependent on country regulations

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)
- Good adhesion to poorly prepared surfaces
- Moisture tolerant during cure
- Excellent early water resistance
- Good chemical resistance
- 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 NC-541X90 (pbw)	75	
Mix viscosity @ 25°C (cPs)	2,600	
Gel time, 50 g @ 25°C (min)	72	NTM-15
Thin film dry times, 8 mils (200 micron)		
@ 25°C (77°F) (hrs hard/through)	5/7	ASTM D5895
@ 5°C (41°F) (hrs hard/through)	13/15	ASTM D5895
@ 0°C (32°F) (hrs hard/through)	21/30	ASTM D5895
Film appearance @ 10°C, 92% RH	Slight haze	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



<http://www.cardolite.com>

Cardolite Corporation
140 Wharton Road
Bristol, PA 19007
United States of America

Cardolite Specialty
Chemicals Europe NV
Wijmenstraat 21K / 2
B-9030 Mariakerke (Gent)
Belgium

Cardolite Specialty Chemicals
India LLP
Plot No. IP-1 & IP-2, Mangalore
Special Economic Zone
Bajpe, Mangalore 574 142
India

Cardolite Chemical
Zhuhai Ltd.
1248 Ninth Shihua Road
Gaolan Port Economic Zone
Zhuhai, Guangdong 519050
P.R. China

T: +1-800-322-7365

T: +32 (0) 92658826

T: + 91 (0) 824 2888 300

T: +86-756-726-9066

DISCLAIMER & COPYRIGHT

All statements, technical information and recommendations contained herein are based on tests Cardolite believes to be reliable, but the accuracy or completeness thereof is not guaranteed. Actual test method procedures may differ from listed standards; major differences are noted. Limitation of liability and remedy: Purchase or use of these products constitutes an agreement with seller and manufacturer that, if the product proves to be defective or unsuitable, seller's and manufacturer's liability and the exclusive remedy, regardless of tort or contract theory or of incidental or consequential damages shall be to receive, at seller's or manufacturer's option, an equivalent quantity of replacement product or a refund of the purchase price. This datasheet is copyrighted to Cardolite Corporation and may be reproduced but not altered in any way.