

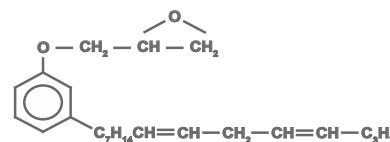
Cardolite[®] NC-513

Epoxy Reactive Diluent

Technical Datasheet

DESCRIPTION

Cardolite NC-513 is a low viscosity, monofunctional epoxy reactive diluent designed for coatings, adhesives, and other epoxy applications. The long hydrophobic aliphatic side chain of cardanol gives this product a very low viscosity and provides excellent water resistance, flexibility, and thermal shock resistance. High viscosity solvent or solvent free formulations can achieve enhanced workability and higher solids without sacrificing other performance properties using this product.



CHEMICAL STRUCTURE

PROPERTIES

PROPERTY	SPECIFICATION	TEST METHOD
Color (Gardner)	5 - 11	ASTM D1544
Viscosity @ 25°C (cPs)	40 - 70	ASTM D2196
Epoxy Equivalent Weight (EEW) ¹	425 - 575	ASTM D1652-97
Hydrolyzable chlorine (%)	≤ 2	ASTM D1726-11
Volatile Loss (% weight)	≤ 0.5	ASTM D2369-98
Density @ 25°C (kg/L) (lbs/gal)	0.96 - 0.98 8.09 - 8.25	ASTM D1475

PROPERTY	TYPICAL VALUE	TEST METHOD
Appearance	Reddish brown liquid	Visual
Flash point	> 270°C / 518°F	ASTM D93
Recommended Use Level (% of total resin weight)	≤ 20	-
Shelf Life (Months)	24	-

Typical properties are not to be construed as specifications

¹ Based on total product weight

APPLICATIONS

While usable in many epoxy applications, Cardolite NC-513 was designed for solvent based and solvent free epoxy systems used in heavy duty marine, protective, industrial, and floor coatings. It can lower the viscosity and bring extra flexibility to coating formulations without sacrificing water resistance and anti-corrosion properties. This product is also useful as an epoxy chain terminator for extending the pot life of systems. As formulations reach higher and higher levels of solids, this product serves as an excellent tool for controlling these critical formulation parameters. Cardolite NC-513 can also be used in potable water applications* and has shown very low migration levels compared to other diluents.

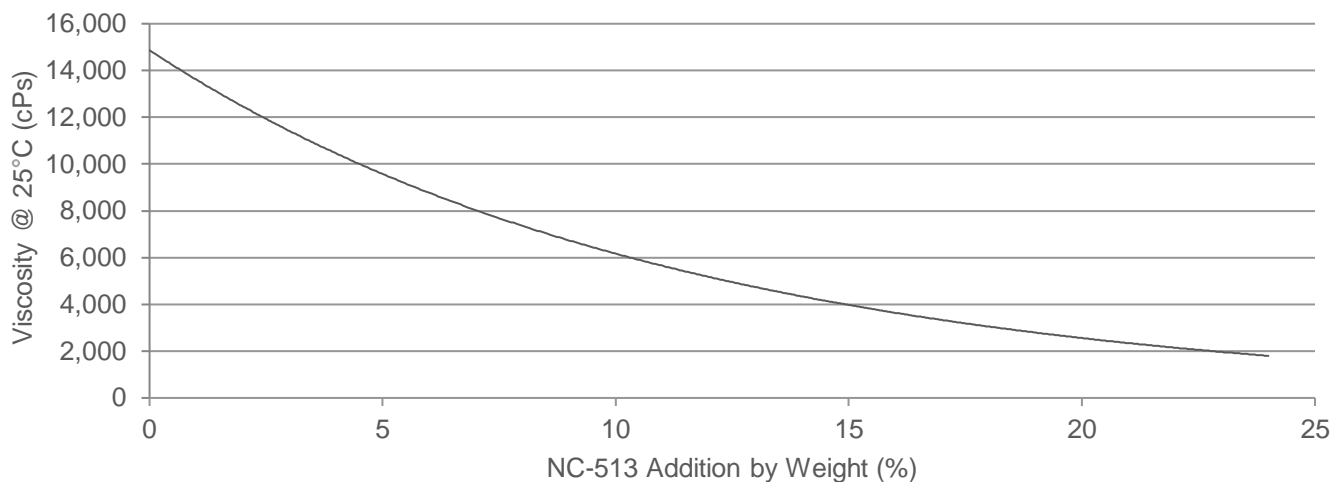
* Dependent on country regulations

ADVANTAGES

- Adds flexibility and lowers viscosity while maintaining performance
- Excellent chemical and water resistance
- Increased thermal shock resistance
- Good dilution effect
- Non-toxic
- Compatible with most epoxy resins
- Aids in overcoming epoxy resin and curing agent incompatibilities
- Low volatility and high flash point
- Based from natural, renewable, non-food raw material feedstock

DILUTION PROPERTIES

NC-513 DILUTION CURVE WITH LIQUID EPOXY RESIN (EEW=190)



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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