

CNSL-BASED ADHESIVES GUIDE FORMULATIONS



1K HEAT CURE EPOXY ADHESIVES WITH CNSL MODIFIERS

- Excellent adhesion and better wetting properties
- Low viscosity, easy of mixing
- Durability from outstanding water resistance

BIO-BASED EPOXY MODIFIERS

1K HEAT CURE EPOXY SYSTEMS

ASSEMBLY, TRANSPORTATION,
ELECTRICAL/ELECTRONICS

Ingredients/ Parts by weight	Formula 1	Formula 2	Formula 3	Formula 4	Formula 5
Epon 828 ²	80	80	80	80	80
NC-513 ¹	20				
NC-514 ¹		20		20	
NC-514S ¹			20		20
DDA5 ³ (DICY)	7	7	7	7	7
U52 ³ (substituted urea accelerator)	3	3	3	3	3
Silica powder (Silverbond 602 ⁴)				40	40
Fumed silica (Aerosil 380 ⁵)				5	5
Cure 150°C/2hr	Typical Properties				
Lap shear on steel (sand blasted), MPa	30.4	30.1	29.7	34.9	32.6
Lap shear on Al (sand blasted), MPa	-	24	23.1	21.6	20.6
Glass transition temperature, °C	85	120	106	-	-
Benefits	Lower viscosity	Improved water resistance	Low viscosity, improved water resistance	-	-

¹ Cardolite ² Hexion ³ CVC Thermoset speciality ⁴ Sibelco ⁵ Evonik

PROCESSING

All liquid components are blended together with a high shear mixer. Then any solid components are added separately and blended into the liquid after each addition. The product is generally degassed after mixing and before packaging. **Please refer to each supplier's material safety data sheet (MSDS) for the most current safety and handling information.**

DISCLAIMER

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 or warranted either express or implied including but not limited as to merchantability or fitness for a particular purpose. The formulations contained herein are not optimized for any particular use and are therefore, only to be considered as references. It is the responsibility of the user to fully test their formulations for the intended use. Use of the product is at the user's risk.



Cardolite Corporation
140 Wharton Rd
Bristol, PA 19007
United States of America
T: +1-800-322-7365
www.cardolite.com