

Printing date 05/08/2018

Version 2

Reviewed on 05/08/2018

1 Identification

- **Product identifier**
- **Product Description: Epoxy Curing Agent**
- **Product code:** Cardolite NX-5198
- **Application of the substance / the mixture** Coating
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Cardolite Corporation
11 Deer Park Drive, Suite 124
Monmouth Junction, NJ 08852
USA
Tel: (973) 344-5015
Regulatory@cardolite.com
- **Information department:** Product safety department
- **Emergency telephone number:** 24 Hour Emergency: 800-424-9300 CHEMTREC

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS05 Corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.
Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H332 Harmful if inhaled.
Skin Sens. 1 H317 May cause an allergic skin reaction.
Flam. Liq. 4 H227 Combustible liquid.

- **Label elements**
- **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS05 GHS07

- **Signal word** Danger
- **Hazard-determining components of labeling:**
Cashew (*Anacardium occidentale*) Nutshell Extract, decarboxylated, Distilled
2,2'-Iminodiethylamine
2-butoxyethanol
- **Hazard statements**
H227 Combustible liquid.
H332 Harmful if inhaled.
H314 Causes severe skin burns and eye damage.

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H317 May cause an allergic skin reaction.

- **Precautionary statements**

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a poison center/doctor.

P321 Specific treatment (see on this label).

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Classification system:**

- **NFPA ratings (scale 0 - 4)**



Health = 3

Fire = 2

Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**



HEALTH 3 Health = 3

FIRE 2 Fire = 2

REACTIVITY 0 Reactivity = 0

- **Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.







- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**

- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous Components:**

8007-24-7	Cashew (Anacardium occidentale) Nutshell Extract, decarboxylated, Distilled  Eye Dam. 1, H318;  Acute Tox. 4, H312; Skin Irrit. 2, H315; Skin Sens. 1A, H317	35.0 - 45.0%
111-40-0	2,2'-Iminodiethylamine  Acute Tox. 2, H330;  Skin Corr. 1B, H314;  Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Sens. 1, H317; STOT SE 3, H335	6.0 - 10.0%
111-76-2	2-butoxyethanol  Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Flam. Liq. 4, H227	3.0 - 6.0%

4 First-aid measures

- **Description of first aid measures**

- **General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

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- **After inhalation:**
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** Drink copious amounts of water and provide fresh air. Immediately call a doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
Promptly isolate the scene by removing all person from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralizing agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

• PAC-1:		
111-76-2	2-butoxyethanol	60 ppm
• PAC-2:		
111-76-2	2-butoxyethanol	120 ppm
• PAC-3:		
111-76-2	2-butoxyethanol	700 ppm

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.

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- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
- **Conditions for safe storage, including any incompatibilities**
Keep container tightly closed and in a well ventilated place.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.
At this time, the other constituents have no known exposure limits.

111-76-2 2-butoxyethanol

PEL	Long-term value: 240 mg/m ³ , 50 ppm Skin
REL	Long-term value: 24 mg/m ³ , 5 ppm Skin
TLV	Long-term value: 97 mg/m ³ , 20 ppm BEI

- **Ingredients with biological limit values:**

111-76-2 2-butoxyethanol

BEI	200 mg/g creatinine Medium: urine Time: end of shift Parameter: Butoxyacetic acid with hydrolysis
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- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
Use local exhaust ventilation. Suitable respiratory equipment should be used in cases of insufficient ventilation.
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.
- **Breathing equipment:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

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 · **Protection of hands:**


Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

 · **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

 · **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

 · **Eye protection:**


Tightly sealed goggles

 · **Body protection:** Protective work clothing

9 Physical and chemical properties

 · **Information on basic physical and chemical properties**

 · **General Information**

 · **Appearance:**

Form:	Liquid
Color:	Red-brown
Odor:	Amine-like
Odor threshold:	Not determined.

 · **pH-value at 25 °C (77 °F):** 10.5

 · **Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	> 93 °C (>199.4 °F)

 · **Flash point:** 42 °C (107.6 °F)

 · **Flammability (solid, gaseous):** Not applicable.

 · **Decomposition temperature:** Not determined.

 · **Auto igniting:** Product is not selfigniting.

 · **Danger of explosion:** Not determined.

 · **Explosion limits:**

Lower:	Not determined.
Upper:	Not determined.

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· Vapor pressure:	Not determined.
· Density at 25 °C (77 °F):	0.954 g/cm ³ (7.96113 lbs/gal)
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with Water:	Not miscible or difficult to mix.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic at 25 °C (77 °F):	~170 cps
Kinematic:	Not determined.
· Solvent content:	
Solids content:	~95.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability** Product is stable.
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:**
Irritating to eyes and skin.

8007-24-7 Cashew (Anacardium occidentale) Nutshell Extract, decarboxylated, Distilled		
Oral	LD50	>2,000 mg/kg (rat)
Dermal	LD50	2,000 mg/kg (rat)
111-40-0 2,2'-Iminodiethylamine		
Oral	LD50	1,080 mg/kg (rat)
Dermal	LD50	1,090 mg/kg (rabbit)
Inhalative	LC50/4 h	0.3 mg/l (rat)
111-76-2 2-butoxyethanol		
Oral	LD50	1,480 mg/kg (rat)
Dermal	LD50	400 mg/kg (rab)

- **Primary irritant effect:**
- **on the skin:** Caustic effect on skin and mucous membranes.

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- **on the eye:**
Strong caustic effect.
Strong irritant with the danger of severe eye injury.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful
Corrosive
Irritant
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

· **Carcinogenic categories**

· IARC (International Agency for Research on Cancer)	
111-76-2 2-butoxyethanol	3
· NTP (National Toxicology Program)	
None of the ingredients is listed.	
· OSHA-Ca (Occupational Safety & Health Administration)	
None of the ingredients is listed.	

12 Ecological information

· **Toxicity**

· Aquatic toxicity:	
8007-24-7 Cashew (Anacardium occidentale) Nutshell Extract, decarboxylated, Distilled	
EC50	1,300 mg/l (Algae)
LL50	1,000 mg/l (Fish)

- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Must not reach bodies of water or drainage ditch undiluted or unneutralized.
Danger to drinking water if even small quantities leak into the ground.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

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13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- | | |
|-------------------------------------|---|
| · UN-Number | |
| · DOT, ADR, IMDG, IATA | UN2735 |
| · UN proper shipping name | |
| · DOT | Amines, liquid, corrosive, n.o.s. (Diethylenetriamine) |
| · ADR | 2735 Amines, liquid, corrosive, n.o.s. (Diethylenetriamine) |
| · IMDG, IATA | AMINES, LIQUID, CORROSIVE, N.O.S. (DIETHYLENETRIAMINE) |
| · Transport hazard class(es) | |
| · DOT | |
| |  |
| · Class | 8 Corrosive substances |
| · Label | 8 |
| · ADR | |
| |  |
| · Class | 8 Corrosive substances |
| · Label | Miscellaneous dangerous substances and articles
8 |
| · IMDG, IATA | |
| |  |
| · Class | 8 Corrosive substances |
| · Label | 8 |
| · Packing group | |
| · DOT, ADR, IMDG, IATA | III |
| · Environmental hazards: | |
| · Marine pollutant: | No |

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<ul style="list-style-type: none"> • Special precautions for user • Danger code (Kemler): • EMS Number: • Segregation groups 	Warning: Corrosive substances 80 F-A,S-B Alkalis
<ul style="list-style-type: none"> • Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code 	Not applicable.
<ul style="list-style-type: none"> • Transport/Additional information: • DOT • Quantity limitations 	On passenger aircraft/rail: 5 L On cargo aircraft only: 60 L
<ul style="list-style-type: none"> • ADR • Excepted quantities (EQ) 	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
<ul style="list-style-type: none"> • IMDG • Limited quantities (LQ) • Excepted quantities (EQ) 	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
<ul style="list-style-type: none"> • UN "Model Regulation": 	UN 2735 AMINES, LIQUID, CORROSIVE, N.O.S. (DIETHYLENETRIAMINE), 8, III

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**

- **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

- **Section 313 (Specific toxic chemical listings):**

111-76-2 | 2-butoxyethanol

- **TSCA (Toxic Substances Control Act):**

8007-24-7 | Cashew (Anacardium occidentale) Nutshell Extract, decarboxylated, Distilled

68413-29-6 | Alkylated Phenolic Polyamine

111-76-2 | 2-butoxyethanol

- **TSCA new (21st Century Act) (Substances not listed)**

111-40-0 | 2,2'-Iminodiethylamine

- **Proposition 65**

- **Chemicals known to cause cancer:**

None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

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Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

Carcinogenic categories
EPA (Environmental Protection Agency)

111-76-2 2-butoxyethanol

NL

TLV (Threshold Limit Value established by ACGIH)

111-76-2 2-butoxyethanol

A3

NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

Hazard pictograms


GHS05 GHS07

Signal word Danger

Hazard-determining components of labeling:
Cashew (*Anacardium occidentale*) Nutshell Extract, decarboxylated, Distilled
 2,2'-Iminodiethylamine
 2-butoxyethanol
Hazard statements
H227 Combustible liquid.
 H332 Harmful if inhaled.
 H314 Causes severe skin burns and eye damage.
 H317 May cause an allergic skin reaction.
Precautionary statements
P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P310 Immediately call a poison center/doctor.
 P321 Specific treatment (see on this label).
 P405 Store locked up.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Department issuing SDS: Product safety department

Contact: Mr Eleazar dela Cruz

Date of preparation / last revision 05/08/2018 / 1

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

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IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TVL: Treshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
BEL: Biological Exposure Limit
Flam. Liq. 4: Flammable liquids – Category 4
Acute Tox. 4: Acute toxicity – Category 4
Acute Tox. 2: Acute toxicity – Category 2
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
Skin Sens. 1: Skin sensitisation – Category 1
Skin Sens. 1A: Skin sensitisation – Category 1A
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

US