

SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
- **Trade name:** Epoxy curing agent
- **Article number:** Cardolite NX-5198
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
- **Sector of Use** SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
- **Product category** PC9a Coatings and paints, thinners, paint removers
- **Application of the substance / the mixture** Coating
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
 CARDOLITE SPECIALTY CHEMICALS EUROPE N.V.
 Wijmenstraat 21 K , Bus 2
 9030 Mariakerke – Gent
 Tel. : +32 9 265.88.26 (Belgium)
 Fax. : +32 9 265.88.24 (Belgium)
 regulatory@cardolite.com
 eumsds@cardolite.com
- **Further information obtainable from:** Product safety department
- **1.4 Emergency telephone number:** During business hours: +32 9 265.88.26 (Belgium)

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



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 H302 Harmful if swallowed.

Acute Tox. 4 H332 Harmful if inhaled.

Skin Sens. 1 H317 May cause an allergic skin reaction.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
 The product is classified and labelled according to the CLP regulation.

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Trade name: Epoxy curing agent

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- **Hazard pictograms**



GHS02 GHS05 GHS07

- **Signal word** Danger

- **Hazard-determining components of labelling:**

Cashew (*Anacardium occidentale*) Nutshell Extract, Decarboxylated, Distilled
 2,2'-iminodiethylamine
 2-butoxyethanol

- **Hazard statements**

H226 Flammable liquid and vapour.
 H302+H332 Harmful if swallowed or if inhaled.
 H314 Causes severe skin burns and eye damage.
 H317 May cause an allergic skin reaction.

- **Precautionary statements**

P101 If medical advice is needed, have product container or label at hand.
 P102 Keep out of reach of children.
 P103 Read label before use.
 P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 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.
 P405 Store locked up.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **2.3 Other hazards**

- **Results of PBT and vPvB assessment**

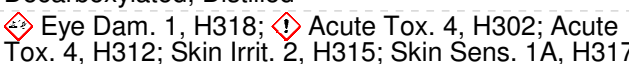
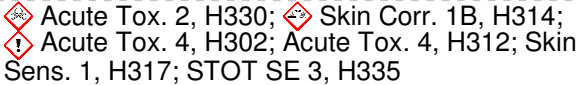
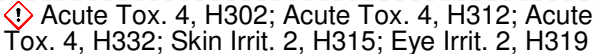
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- **3.2 Chemical characterisation: Mixtures**

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

- **Dangerous components:**

CAS: 8007-24-7 EC number: 700-991-6 Reg.nr.: 01-2119502450-57-0000	Cashew (<i>Anacardium occidentale</i>) Nutshell Extract, Decarboxylated, Distilled 	35,0 - 45,0%
CAS: 111-40-0 EINECS: 203-865-4 Index number: 612-058-00-X	2,2'-iminodiethylamine 	6,0 - 10,0%
CAS: 111-76-2 EINECS: 203-905-0 Index number: 603-014-00-0	2-butoxyethanol 	3,0 - 6,0%

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- **Additional information:** For the wording of the listed risk phrases refer to section 16.

SECTION 4: First aid measures

· 4.1 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.

Remove breathing equipment only after contaminated clothing have been completely removed.

In case of irregular breathing or respiratory arrest provide artificial respiration.

· **After inhalation:**

Supply fresh air or oxygen; call for 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:**

Call for a doctor immediately.

Drink plenty of water and provide fresh air. Call for a doctor immediately.

· 4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

· 4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Firefighting measures

· 5.1 Extinguishing media

· **Suitable extinguishing agents:** CO₂, sand, extinguishing powder. Do not use water.

· **For safety reasons unsuitable extinguishing agents:** Water with full jet

· **5.2 Special hazards arising from the substance or mixture** No further relevant information available.

· 5.3 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.

SECTION 6: Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

· 6.2 Environmental precautions:

Do not allow product to reach sewage system or any water course.

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/ surface or ground water.

· 6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Use neutralising agent.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

Do not flush with water or aqueous cleansing agents

· 6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

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See Section 13 for disposal information.

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SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
 Ensure good ventilation/exhaustion at the workplace.
 Open and handle receptacle with care.
 Prevent formation of aerosols.
- **Information about fire - and explosion protection:**
 Keep ignition sources away - Do not smoke.
 Protect against electrostatic charges.
 Keep respiratory protective device available.
- **7.2 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 container tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

8.1 Control parameters

- **Ingredients with limit values that require monitoring at the workplace:**

111-76-2 2-butoxyethanol

IOELV	Short-term value: 246 mg/m ³ , 50 ppm Long-term value: 98 mg/m ³ , 20 ppm Skin
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- **DNELs**

8007-24-7 Cashew (*Anacardium occidentale*) Nutshell Extract, Decarboxylated, Distilled

Oral	DNEL	0,25 mg/kg/day (General Population)
Dermal	DNEL	0,25 mg/kg/day (General Population)
		0,5 mg/kg/day (Workers)
Inhalative	DNEL	0,2 mg/m ³ (General Population)
		0,88 mg/m ³ (Workers)

- **PNECs**

8007-24-7 Cashew (*Anacardium occidentale*) Nutshell Extract, Decarboxylated, Distilled

PNEC	3 µg/l (Aqua (freshwater))
	30 µg/l (Aqua (intermittent release))
	10 mg/kg (Oral)
	0,97 mg/kg (Sediment (freshwater))
	0,088 mg/kg (Sediment (marine water))
	6,71 mg/kg (Soil)

- **Additional information:** The lists valid during the making were used as basis.

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- **8.2 Exposure controls**
- **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.
 Store protective clothing separately.
 Avoid contact with the eyes and skin.
- **Respiratory protection:**
 In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- **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

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**

Form:	Liquid
Colour:	Red-brown
Odour:	Amine-like
Odour threshold:	Not determined.
- **pH-value at 25 °C:** 10,5
- **Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	> 93 °C

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· Flash point:	42 °C
· Flammability (solid, gaseous):	Not applicable.
· Ignition temperature:	
Decomposition temperature:	Not determined.
· Self-igniting:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapour pressure:	Not determined.
· Density at 25 °C:	0,954 g/cm ³
· Relative density	Not determined.
· Vapour 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:	~170 cps
Kinematic:	Not determined.
· Solvent content:	
Solids content:	~95,0 %
· 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

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

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity**
Harmful if swallowed or if inhaled.
- **LD/LC50 values relevant for classification:**
Irritating to eyes and skin.

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

Oral	LD50	500 mg/kg (rat)
Dermal	LD50	>2000 mg/kg (daphnia)

111-40-0 2,2'-iminodiethylamine

Oral	LD50	1080 mg/kg (rat)
Dermal	LD50	1090 mg/kg (rabbit)
Inhalative	LC50/4 h	0,3 mg/l (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation**
Causes severe skin burns and eye damage.
- **Serious eye damage/irritation**
Causes serious eye damage.
- **Respiratory or skin sensitisation**
May cause an allergic skin reaction.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

 • **12.1 Toxicity**

 • **Aquatic toxicity:**
8007-24-7 Cashew (Anacardium occidentale) Nutshell Extract, Decarboxylated, Distilled

EC50	1300 mg/l (Algae)
LL50	1000 mg/l (Fish)

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

SECTION 13: Disposal considerations

 • **13.1 Waste treatment methods**

 • **Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.





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- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

· 14.1 UN-Number · ADR, IMDG, IATA	UN2733
· 14.2 UN proper shipping name · ADR · IMDG, IATA	2733 AMINES, FLAMMABLE, CORROSIVE, N.O.S. (DIETHYLENETRIAMINE) AMINES, FLAMMABLE, CORROSIVE, N.O.S. (DIETHYLENETRIAMINE)
· 14.3 Transport hazard class(es) · ADR	
 	
· Class · Label	3 Flammable liquids. Miscellaneous dangerous substances and articles. 3+8
· IMDG, IATA	
 	
· Class · Label	3 Flammable liquids. 3+8
· 14.4 Packing group · ADR, IMDG, IATA	III
· 14.5 Environmental hazards: · Marine pollutant:	No
· 14.6 Special precautions for user · Danger code (Kemler): · EMS Number: · Segregation groups	Warning: Flammable liquids. 38 F-E,S-C Alkalis
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR · 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
· Transport category	3

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Trade name: Epoxy curing agent

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· Tunnel restriction code	D/E
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN2733, AMINES, FLAMMABLE, CORROSIVE, N.O.S. (DIETHYLENETRIAMINE), 3 (8), III

SECTION 15: Regulatory information

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

- **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

- **Hazard pictograms**



GHS02 GHS05 GHS07

- **Signal word** Danger

- **Hazard-determining components of labelling:**

Cashew (Anacardium occidentale) Nutshell Extract, Decarboxylated, Distilled
 2,2'-iminodiethylamine
 2-butoxyethanol

- **Hazard statements**

H226 Flammable liquid and vapour.
 H302+H332 Harmful if swallowed or if inhaled.
 H314 Causes severe skin burns and eye damage.
 H317 May cause an allergic skin reaction.

- **Precautionary statements**

P101 If medical advice is needed, have product container or label at hand.
 P102 Keep out of reach of children.
 P103 Read label before use.
 P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 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.
 P405 Store locked up.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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Trade name: Epoxy curing agent

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SECTION 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.

- **Relevant phrases**

H302 Harmful if swallowed.
 H312 Harmful in contact with skin.
 H314 Causes severe skin burns and eye damage.
 H315 Causes skin irritation.
 H317 May cause an allergic skin reaction.
 H318 Causes serious eye damage.
 H319 Causes serious eye irritation.
 H330 Fatal if inhaled.
 H332 Harmful if inhaled.
 H335 May cause respiratory irritation.

- **Department issuing MSDS:** Product safety department

- **Contact:** Mr Eleazar dela Cruz

- **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)
 IMDG: International Maritime Code for Dangerous Goods
 IATA: International Air Transport Association
 GHS: Globally Harmonised System of Classification and Labelling of Chemicals
 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)
 DNEL: Derived No-Effect Level (REACH)
 PNEC: Predicted No-Effect Concentration (REACH)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 PBT: Persistent, Bioaccumulative and Toxic
 vPvB: very Persistent and very Bioaccumulative
 Flam. Liq. 3: Flammable liquids, Hazard Category 3
 Acute Tox. 4: Acute toxicity, Hazard Category 4
 Acute Tox. 2: Acute toxicity, Hazard Category 2
 Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B
 Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
 Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1
 Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
 Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
 Skin Sens. 1A: Sensitisation - Skin, Hazard Category 1A
 STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3