

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 23.05.2017





Version number 3

Revision: 23.05.2017

### 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-5556M
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
 No further relevant information available.
- **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.
- 
 GHS08 health hazard  
 Resp. Sens. 1    H334    May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- 
 GHS05 corrosion  
 Eye Dam. 1    H318    Causes serious eye damage.
- 
 GHS07  
 Skin Irrit. 2    H315    Causes skin irritation.  
 Skin Sens. 1    H317    May cause an allergic skin reaction.  
 STOT SE 3    H335-H336    May cause respiratory irritation. May cause drowsiness or dizziness.
- **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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### · Hazard pictograms



GHS02 GHS05 GHS07 GHS08

### · Signal word Danger

### · Hazard-determining components of labelling:

 Butanol  
 Ethylenediamine

### · Hazard statements

H226 Flammable liquid and vapour.  
 H315 Causes skin irritation.  
 H318 Causes serious eye damage.  
 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
 H317 May cause an allergic skin reaction.  
 H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.

### · 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: 71-36-3 EINECS: 200-751-6 Index number: 603-004-00-6 Reg.nr.: 01-2119484630-38-0022	Butanol ⚠ Flam. Liq. 3, H226; ⚠ Eye Dam. 1, H318; ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; STOT SE 3, H335-H336	17.0 - 21.0%
CAS: 107-15-3 EINECS: 203-468-6 Index number: 612-006-00-6 Reg.nr.: 01-2119480383-37-0012	Ethylenediamine ⚠ Flam. Liq. 3, H226; ⚠ Resp. Sens. 1, H334; ⚠ Skin Corr. 1B, H314; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Sens. 1, H317	< 1.0%

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

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### SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **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:** If symptoms persist consult doctor.
- **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:** CO<sub>2</sub>, 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:** No special measures required.

### 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 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).  
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.  
See Section 13 for disposal information.

### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.
- **Information about fire - and explosion protection:**  
Keep ignition sources away - Do not smoke.

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Protect against electrostatic charges.

- **7.2 Conditions for safe storage, including any incompatibilities**
- **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:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists valid during the making were used as basis.
- **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.  
Avoid contact with the skin.  
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.

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**· 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:**

<b>Form:</b>	Liquid
<b>Colour:</b>	Red-brown
<b>· Odour:</b>	Amine-like
<b>· Odour threshold:</b>	Not determined.

**· pH-value at 25 °C:** 10.5

**· Change in condition**

<b>Melting point/freezing point:</b>	Undetermined.
<b>Initial boiling point and boiling range:</b>	> 65 °C

**· Flash point:** 32 °C

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

**· Ignition temperature:**
**Decomposition temperature:** Not determined.

**· Auto-ignition temperature:** Product is not selfigniting.

**· Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

**· Explosion limits:**

<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.

**· Vapour pressure:** Not determined.

<b>· Density at 25 °C:</b>	0.97778 g/cm <sup>3</sup>
<b>· Relative density</b>	Not determined.
<b>· Vapour density</b>	Not determined.
<b>· Evaporation rate</b>	Not determined.

**· Solubility in / Miscibility with water:**

Not miscible or difficult to mix.

**· Partition coefficient: n-octanol/water:** Not determined.

**· Viscosity:**

<b>Dynamic at 25 °C:</b>	3100 cps
<b>Kinematic:</b>	Not determined.

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**• Solvent content:**

<b>Solids content:</b>	78.0 %
<b>• 9.2 Other information</b>	No further relevant information available.

### SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **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** Based on available data, the classification criteria are not met.
- **LD/LC50 values relevant for classification:**  
Irritating to eyes and skin.

**71-36-3 Butanol**

Oral	LD50	790 mg/kg (rat)
Dermal	LD50	3400 mg/kg (rabbit)
Inhalative	LC50/4 h	8000 mg/l (rat)

**107-15-3 Ethylenediamine**

Oral	LD50	500 mg/kg (rat)
Dermal	LD50	730 mg/kg (rabbit)
Inhalative	LC50/4 h	0.3 mg/l (mouse)

- **Primary irritant effect:**
- **Skin corrosion/irritation**  
Causes skin irritation.
- **Serious eye damage/irritation**  
Causes serious eye damage.
- **Respiratory or skin sensitisation**  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
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**  
May cause respiratory irritation. May cause drowsiness or dizziness.
- **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.

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### SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **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 1 (German Regulation) (Self-assessment): slightly hazardous for water  
 Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **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.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

### SECTION 14: Transport information

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>• <b>14.1 UN-Number</b></li> <li>• <b>ADR, ADN</b></li> <li>• <b>IMDG, IATA</b></li> </ul>   | Non-hazardous for transport<br>UN1866                           |
| <ul style="list-style-type: none"> <li>• <b>14.2 UN proper shipping name</b></li> <li>• <b>ADR, ADN</b></li> <li>• <b>IMDG, IATA</b></li> </ul>   | Non-hazardous for transport<br>RESIN SOLUTION                   |
| <ul style="list-style-type: none"> <li>• <b>14.3 Transport hazard class(es)</b></li> <li>• <b>ADR</b></li> <li>• <b>Class</b></li> <li>• <b>Label</b></li> <li>• <b>ADN/R Class:</b></li> </ul> | Non-hazardous for transport<br>-<br>Non-hazardous for transport |
|   |   |
| <ul style="list-style-type: none"> <li>• <b>IMDG, IATA</b></li> </ul>   |   |
|    |   |
| <ul style="list-style-type: none"> <li>• <b>Class</b></li> <li>• <b>Label</b></li> </ul>  | 3 Flammable liquids.<br>3                                       |

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<ul style="list-style-type: none"> <li>• <b>14.4 Packing group</b></li> <li>• <b>ADR</b></li> <li>• <b>IMDG, IATA</b></li> </ul>	Non-hazardous for transport III
<ul style="list-style-type: none"> <li>• <b>14.5 Environmental hazards:</b></li> <li>• <b>Marine pollutant:</b></li> </ul>	No
<ul style="list-style-type: none"> <li>• <b>14.6 Special precautions for user</b></li> <li>• <b>Danger code (Kemler):</b></li> <li>• <b>EMS Number:</b></li> </ul>	Not applicable. - F-E, S-E
<ul style="list-style-type: none"> <li>• <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b></li> </ul>	Not applicable.
<ul style="list-style-type: none"> <li>• <b>Transport/Additional information:</b></li> </ul>	
<ul style="list-style-type: none"> <li>• <b>IMDG</b></li> <li>• <b>Limited quantities (LQ)</b></li> <li>• <b>Excepted quantities (EQ)</b></li> </ul>	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"> <li>• <b>UN "Model Regulation":</b></li> </ul>	Non-hazardous for transport

## 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**



- **Signal word** Danger
- **Hazard-determining components of labelling:**  
 Butanol  
 Ethylenediamine
- **Hazard statements**  
 H226 Flammable liquid and vapour.  
 H315 Causes skin irritation.  
 H318 Causes serious eye damage.  
 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
 H317 May cause an allergic skin reaction.  
 H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.
- **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.

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- 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.

- **Directive 2012/18/EU**
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5.000 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50.000 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### 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**
  - H226 Flammable liquid and vapour.
  - 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.
  - H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
  - H335 May cause respiratory irritation.
  - H336 May cause drowsiness or dizziness.
- **Department issuing SDS:** 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)
  - 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 – Category 3
  - Acute Tox. 4: Acute toxicity – Category 4
  - 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
  - Resp. Sens. 1: Respiratory sensitisation – Category 1
  - Skin Sens. 1: Skin sensitisation – Category 1
  - STOT SE 3: Specific target organ toxicity (single exposure) – Category 3