

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

- **Product identifier**
- **Trade name: Epoxy curing agent**
- **Article number:** Cardolite NX-2003
- **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 preparation** Coating
- **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
- **Emergency telephone number:** During business hours: +32 9 265.88.26 (Belgium)

2 Hazards identification

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



GHS08 health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 Muta. 2 H341 Suspected of causing genetic defects.



GHS05 corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.



GHS07

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

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

Not applicable.



Xn; Harmful

R68: Possible risk of irreversible effects.



Xn; Sensitising

R42/43: May cause sensitisation by inhalation and skin contact.



Xi; Irritant

R36/38: Irritating to eyes and skin.

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EU

Trade name: Epoxy curing agent

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- **Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

- **Classification system:**

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

- **Label elements**

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

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

- **Hazard pictograms**



GHS05 GHS08

- **Signal word** Danger

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

2,2'-iminodiethylamine
 ethylenediamine
 phenol

- **Hazard statements**

H314 Causes severe skin burns and eye damage.
 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 H317 May cause an allergic skin reaction.
 H341 Suspected of causing genetic defects.

- **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.
 P260 Do not breathe dust/fume/gas/mist/vapours/spray.
 P303+P361+P353 IF ON SKIN (or hair): Remove/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 or doctor/physician.
 P405 Store locked up.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **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 substances listed below with nonhazardous additions.

- **Dangerous components:**

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		(Contd. of page 2)
CAS: 111-40-0 EINECS: 203-865-4 Index number: 612-058-00-X	2,2'-iminodiethylamine  C R34;  Xn R21/22;  Xi R43  Skin Corr. 1B, H314;  Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Sens. 1, H317	5,0 - 9,0%
CAS: 107-15-3 EINECS: 203-468-6 Index number: 612-006-00-6	ethylenediamine  C R34;  Xn R21/22;  Xn R42/43 R10  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%
CAS: 108-95-2 EINECS: 203-632-7 Index number: 604-001-00-2	phenol  T R23/24/25;  C R34;  Xn R48/20/21/22-68 Muta. Cat. 3  Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331;  Muta. 2, H341; STOT RE 2, H373;  Skin Corr. 1B, H314	< 1,0%

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

4 First aid measures

- **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. If symptoms persist, consult a doctor.
- **After swallowing:** If symptoms persist consult 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 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
- **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:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **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).
Dispose contaminated material as waste according to item 13.

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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.

7 Handling and storage

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

Information about fire - and explosion protection: No special measures required.

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.

Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

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

Control parameters
Ingredients with limit values that require monitoring at the workplace:
108-95-2 phenol

IOELV	7,8 mg/m ³ , 2 ppm
	Skin

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

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.

Do not inhale dust / smoke / mist.

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

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- **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
Colour:	Red-brown
Odour:	Amine-like
Odour threshold:	Not determined.

- **pH-value:** Not determined.

- **Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	> 66 °C

- **Flash point:** 104 °C

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

- **Ignition temperature:**

Decomposition temperature:	Not determined.
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- **Self-igniting:** Product is not selfigniting.

- **Danger of explosion:** Product does not present an explosion hazard.

- **Explosion limits:**

Lower:	Not determined.
Upper:	Not determined.

- **Vapour pressure:** Not determined.

Density at 25 °C:	0,99935 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.

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- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
 - Dynamic at 25 °C:** 700 cps
 - Kinematic:** Not determined.
- **Other information** No further relevant information available.

10 Stability and reactivity

- **Reactivity**
- **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 relevant for classification:**
Irritating to eyes and skin.

111-40-0 2,2'-iminodiethylamine

Oral	LD50	1080 mg/kg (rat)
Dermal	LD50	1090 mg/kg (rabbit)

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)

108-95-2 phenol

Oral	LD50	317 mg/kg (rat)
Dermal	LD50	850 mg/kg (rabbit)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:**
Sensitization possible through inhalation.
Sensitization possible through skin contact.
- **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Harmful
Irritant

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Trade name: Epoxy curing agent

- **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
Muta. 2

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12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour 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 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
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.

13 Disposal considerations

- **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.

14 Transport information

· UN-Number	
· ADR, ADN, IMDG, IATA	Void
· UN proper shipping name	Not regulated as dangerous goods.
· ADR, ADN, IMDG, IATA	Void
· Transport hazard class(es)	
· ADR, IMDG, IATA	
· Class	Void
· Label	-
· ADN/R Class:	Void
· Packing group	
· ADR, IMDG, IATA	Void
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Not applicable.

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- | | |
|--|-----------------|
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| · UN "Model Regulation": | UN-, - |

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Chemical Substance Control Law**

- **Existing Chemical Substances**

None of the ingredients is listed.

- **Specified Chemical Substances**

None of the ingredients is listed.

- **Priority Assessment Chemical Substances**

None of the ingredients is listed.

- **Chemical Substances Relating to a Public Notice Pursuant to The Provisions of Paragraph 4 of Article 4 of the Former Act**

None of the ingredients is listed.

- **Biodegradation and Bioconcentration of Existing Chemical Substances**

None of the ingredients is listed.

- **Toxicity Tests Results**

None of the ingredients is listed.

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

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

- **Hazard pictograms**



GHS05 GHS08

- **Signal word** Danger

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

2,2'-iminodiethylamine
 ethylenediamine
 phenol

- **Hazard statements**

H314 Causes severe skin burns and eye damage.
 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 H317 May cause an allergic skin reaction.
 H341 Suspected of causing genetic defects.

- **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.
 P260 Do not breathe dust/fume/gas/mist/vapours/spray.
 P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

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Trade name: Epoxy curing agent

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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 or doctor/physician.

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.

- **Relevant phrases**

H226 Flammable liquid and vapour.

H301 Toxic if swallowed.

H302 Harmful if swallowed.

H311 Toxic in contact with skin.

H312 Harmful in contact with skin.

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H331 Toxic if inhaled.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H341 Suspected of causing genetic defects.

H373 May cause damage to organs through prolonged or repeated exposure.

R10 Flammable.

R21/22 Harmful in contact with skin and if swallowed.

R23/24/25 Toxic by inhalation, in contact with skin and if swallowed.

R34 Causes burns.

R42/43 May cause sensitisation by inhalation and skin contact.

R43 May cause sensitisation by skin contact.

R48/20/21/22 Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.

R68 Possible risk of irreversible effects.

- **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 Harmonized System of Classification and Labelling of Chemicals

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent