

## 1 Identification

- **Product identifier**
- **Product Description:** Epoxy curing agent
- **Product code:** Cardolite NX-5445
- **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**



GHS02 Flame

Flam. Liq. 3 H226 Flammable liquid and vapor.



GHS05 Corrosion

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

- **Label elements**

- **GHS label elements**

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

- **Hazard pictograms**



GHS02 GHS05

- **Signal word** Danger

- **Hazard-determining components of labeling:**

m-phenylenebis(methylamine)

- **Hazard statements**

H226 Flammable liquid and vapor.

H315 Causes skin irritation.

H318 Causes serious eye damage.

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**Product Description: Epoxy curing agent**

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**Precautionary statements**

- P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
 P241 Use explosion-proof electrical/ventilating/lighting/equipment.  
 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.  
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**Classification system:**
**NFPA ratings (scale 0 - 4)**


Health = 1  
 Fire = 3  
 Reactivity = 0

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


Health = 1  
 Fire = 3  
 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:**

67-63-0	propan-2-ol	8.0 - 12.0%
	⚠ Flam. Liq. 2, H225; ⚠ Eye Irrit. 2A, H319; STOT SE 3, H336	
1330-20-7	xylene	8.0 - 12.0%
	⚠ Flam. Liq. 3, H226; ⚠ Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315	
1477-55-0	m-phenylenebis(methylamine)	2.0 - 4.0%
	⚠ Skin Corr. 1B, H314; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332	

**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.

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## Product Description: Epoxy curing agent

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- **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:** CO<sub>2</sub>, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **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:**  
Wear self-contained respiratory protective device.  
Wear fully protective suit.

## 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).  
Ensure adequate ventilation.  
Do not flush with water or aqueous cleansing agents
- **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 protection against explosions and fires:**  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.
- **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.

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**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:**

**67-63-0 propan-2-ol**

PEL	980 mg/m <sup>3</sup> , 400 ppm
REL	Short-term value: 1225 mg/m <sup>3</sup> , 500 ppm Long-term value: 980 mg/m <sup>3</sup> , 400 ppm
TLV	Short-term value: 984 mg/m <sup>3</sup> , 400 ppm Long-term value: 492 mg/m <sup>3</sup> , 200 ppm BEI

**1330-20-7 xylene**

PEL	435 mg/m <sup>3</sup> , 100 ppm
REL	Short-term value: 655 mg/m <sup>3</sup> , 150 ppm Long-term value: 435 mg/m <sup>3</sup> , 100 ppm
TLV	Short-term value: 651 mg/m <sup>3</sup> , 150 ppm Long-term value: 434 mg/m <sup>3</sup> , 100 ppm BEI

**1477-55-0 m-phenylenebis(methylamine)**

REL	Short-term value: C 0.1 mg/m <sup>3</sup> Skin
TLV	Short-term value: C 0.1 mg/m <sup>3</sup> Skin

- **Additional information:** The lists that were valid during the creation 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.

- **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.

- **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**

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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:	> 80 °C (> 176 °F)

- Flash point: 24 °C (75 °F)

- Flammability (solid, gaseous): Not applicable.

- **Ignition temperature:**

Decomposition temperature: Not determined.

- Auto igniting: Product is not selfigniting.

- Danger of explosion: Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

- **Explosion limits:**

Lower:	Not determined.
Upper:	Not determined.

- Vapor pressure: Not determined.

- Density at 25 °C (77 °F): 0.97778 g/cm<sup>3</sup> (8.16 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.

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- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
  - Dynamic at 25 °C (77 °F):** 1800 cps
  - Kinematic:** Not determined.
- **Solvent content:**
- **Solids content:** ~ 78.0 %
- **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.

**1330-20-7 xylene**

Oral	LD50	4300 mg/kg (rat)
Dermal	LD50	2000 mg/kg (rabbit)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:  
Irritant

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

67-63-0	propan-2-ol	3
1330-20-7	xylene	3

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

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**· OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.


**12 Ecological information**

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **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.  
 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 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**



- |   |                     |
|---|---------------------|
| · <b>UN-Number</b>  | UN1866              |
| · <b>DOT, ADR, IMDG, IATA</b>   |                     |
| · <b>UN proper shipping name</b>  | RESIN SOLUTION      |
| · <b>DOT, IMDG, IATA</b>  | 1866 RESIN SOLUTION |
| · <b>ADR</b>  |                     |
| · <b>Transport hazard class(es)</b>   |                     |
| · <b>DOT</b>  |                     |
|  |                     |
| · <b>Class</b>  | 3 Flammable liquids |

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· Label	3
· ADR	
	
· Class	3 Flammable liquids
· Label	Miscellaneous dangerous substances and articles
· Label	3
· IMDG, IATA	
	
· Class	3 Flammable liquids
· Label	3
· Packing group	
· DOT, ADR, IMDG, IATA	III
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Warning: Flammable liquids
· Danger code (Kemler):	33
· EMS Number:	F-E,S-E
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· UN "Model Regulation":	UN1866, RESIN SOLUTION, 3, III

**15 Regulatory information**

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**  
This product contains a substance subject to a Significant New Use Rule at U.S. 40 CFR 721.10058

- **Sara**

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

None of the ingredients is listed.

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

67-63-0 propan-2-ol

1330-20-7 xylene

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

All ingredients are listed.

- **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.

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

None of the ingredients is listed.

**Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

**Carcinogenic categories**
**EPA (Environmental Protection Agency)**

1330-20-7 xylene

I

**TLV (Threshold Limit Value established by ACGIH)**

67-63-0 propan-2-ol

A4

1330-20-7 xylene

A4

**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**


GHS02 GHS05

**Signal word** Danger

**Hazard-determining components of labeling:**

m-phenylenebis(methylamine)

**Hazard statements**

H226 Flammable liquid and vapor.

H315 Causes skin irritation.

H318 Causes serious eye damage.

**Precautionary statements**

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P241 Use explosion-proof electrical/ventilating/lighting/equipment.

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.

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** 08/22/2016 / 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)  
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  
Flam. Liq. 2: Flammable liquids – Category 2  
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  
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A  
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

US