

Section 1: Identification of the substance/mixture and of the company/undertaking**Product identifier**

Trade name or designation of the mixture Cardolite NX-5445

Registration number N/A

Synonyms None.

Date of first issue 15-August-2011

Version number 02

Revision date -03-02-2012

Supersedes date -

Relevant identified uses of the substance or mixture and uses advised against

Identified uses Epoxy Curing Agent.

Uses advised against Not available.

Details of the supplier of the safety data sheet

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Section 2: Hazards identification**Classification of the substance or mixture****Classification according to Directive 67/548/EEC or 1999/45/EC as amended**

Classification R10, Xn;R20, Xi;R36/38, R43

Hazard summary

Physical hazards Flammable.

Health hazards Harmful by inhalation. Irritating to eyes and skin. May cause sensitisation by skin contact. Occupational exposure to the substance or mixture may cause adverse health effects.

Environmental hazards Not classified for hazards to the environment.

Specific hazards Irritating to eyes and skin. Prolonged or repeated contact may dry skin and cause irritation. May cause damage to the liver and kidneys. Organic solvents may be absorbed into the body by inhalation and ingestion and cause permanent damage to the nervous system, including the brain.

Main symptoms Skin irritation. Severe eye irritation. Upper respiratory tract irritation. Sensitisation.

Label elements**Label according to Directive 67/548/EEC or 1999/45/EC as amended**

Contains: m-Phenylenebis(methylamine)



Harmful

R-phrases

R10 Flammable.
R20 Harmful by inhalation.
R36/38 Irritating to eyes and skin.
R43 May cause sensitisation by skin contact.

S-phrases S16 Keep away from sources of ignition - No smoking.
 S23 Do not breathe gas/fumes/vapour/spray.
 S24/25 Avoid contact with skin and eyes.
 S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 S36/37 Wear suitable protective clothing and gloves.

Supplemental label information Not applicable.

Other hazards Not assigned.

Section 3: Composition/information on ingredients

Mixture

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
Alkyl Phenol Polyamine	76.5	Trade Secret	-	-	
Classification:	-				
2-Propanol	10	67-63-0 200-661-7	-	603-117-00-0	#
Classification:	F;R11, Xi;R36, R67				
Xylene	10	1330-20-7 215-535-7	01-2119488216-32-0039	601-022-00-9	#
Classification:	R10, Xn;R20/21, Xi;R38				
m-Phenylenebis(methylamine)	3.5	1477-55-0 216-032-5	-	-	
Classification:	T;R23, C;R34, Xn;R21-22, R43, R52/53				

#: This substance has workplace exposure limit(s).

Composition comments The full text for all R-phrases is displayed in Section 16. All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

Section 4: First aid measures

General information Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital.

Description of first aid measures

Inhalation Move injured person into fresh air and keep person calm under observation. Get medical attention if any discomfort occurs.

Skin contact Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if irritation persists after washing. In case of allergic reaction or other skin disorders: Seek medical attention and bring along these instructions.

Eye contact Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention if irritation develops or persists. Remove contact lenses, if present and easy to do.

Ingestion Rinse mouth thoroughly. Only induce vomiting at the instruction of medical personnel. Get medical attention if irritation develops and persists.

Most important symptoms and effects, both acute and delayed Sensitisation. Skin irritation. Moderate eye irritation. Upper respiratory tract irritation.

Indication of any immediate medical attention and special treatment needed Symptoms may be delayed. Treat symptomatically.

Section 5: Firefighting measures

General fire hazards Not available.

Extinguishing media

Suitable extinguishing media Foam. Carbon dioxide (CO2). Dry powder. Water fog.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Special hazards arising from the substance or mixture During fire, gases hazardous to health may be formed.

Advice for firefighters

Special protective equipment for firefighters	Not available.
Special firefighting procedures	Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Selection of respiratory protection for fire fighting: follow the general fire precautions indicated in the workplace.

Section 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	Ensure adequate ventilation. Avoid inhalation of vapours/spray and contact with skin and eyes. Wear suitable protective clothing. See Section 8 for personal protective equipment.
For emergency responders	Not available.

Environmental precautions Avoid discharge into drains, water courses or onto the ground.

Methods and material for containment and cleaning up Stop the flow of material, if this is without risk. Collect spillage. Dike the spilled material, where this is possible. Eliminate sources of ignition. Collect with absorbent, non-combustible material into suitable containers. Cover with inert, absorbent material and remove to disposal container. Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with inert, absorbent material and remove to disposal container. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible.

Reference to other sections Not available.

Section 7: Handling and storage

Precautions for safe handling Use non-sparking tools and explosion-proof equipment. Handle and open container with care. Provide adequate ventilation. Avoid inhalation of vapors/mist and contact with skin and eyes. Wear appropriate personal protective equipment. Keep away from heat, spark, open flames and other sources of ignition. The product is flammable, and heating may generate vapours which may form explosive vapour/air mixtures. Ground container and transfer equipment to eliminate static electric sparks. Change contaminated clothing. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities Follow rules for flammable liquids. Keep container tightly closed and in a well-ventilated place. Store away from incompatible materials.

Specific end use(s) Not available.

Section 8: Exposure controls/personal protection

Control parameters

Occupational exposure limits

UK. EH40 Workplace Exposure Limits (WELs)

Components	Type	Value
2-Propanol (67-63-0)	STEL	1250 mg/m3
		500 ppm
	TWA	400 ppm
Xylene (1330-20-7)		999 mg/m3
	STEL	100 ppm
		441 mg/m3
	TWA	220 mg/m3
		50 ppm

Biological limit values

UK. EH40 Biological Monitoring Guidance Values (BMGVs)

Components	Value	Determinant	Specimen	Sampling time
Xylene (1330-20-7)	650 mmol/mol	Methyl hippuric acid	Creatinine in urine	Sampling time: End of shift.

Recommended monitoring procedures Not available.

DNEL Not available.

PNEC Not available.

Exposure controls

Appropriate engineering controls Provide adequate ventilation. Observe Occupational Exposure Limits and minimise the risk of inhalation of vapours. An eye wash bottle must be available at the work site. Use explosion-proof ventilation equipment.

Individual protection measures, such as personal protective equipment

General information	Use personal protective equipment as required. Personal protective equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.
Eye/face protection	Wear approved safety glasses or goggles.
Skin protection	
- Hand protection	Wear protective gloves. Laminate (PE/EVOH) gloves are recommended. Be aware that the liquid may penetrate the gloves. Frequent change is advisable.
- Other	Wear appropriate chemical resistant clothing to prevent any possibility of skin contact.
Respiratory protection	In case of inadequate ventilation: Use respiratory equipment with gas filter, type A2.
Thermal hazards	Not available.
Hygiene measures	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.
Environmental exposure controls	Environmental manager must be informed of all major releases.

Section 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Reddish brown viscous liquid; slight amine odor.
Physical state	Liquid.
Form	Viscous liquid.
Colour	Reddish-brown
Odour	Amine-like.
Odour threshold	Not available.
pH	10.5
Melting point/freezing point	Not available.
Boiling point, initial boiling point, and boiling range	> 65.6 °C (> 150 °F)
Flash point	23.9 °C (75 °F) Pinsky-Martens Closed Cup
Auto-ignition temperature	Not applicable.
Flammability (solid, gas)	Not available.
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Oxidising properties	Not applicable.
Explosive properties	Not applicable.
Explosive limit	Not applicable.
Vapour pressure	Not applicable.
Vapour density	Not applicable.
Evaporation rate	Not applicable.
Relative density	0.98 approx.
Solubility (water)	Insoluble.
Partition coefficient (n-octanol/water)	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Percent volatile	20 % (105°C/2h)
Other information	No relevant additional information available.

Section 10: Stability and reactivity

Reactivity	Not available.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Will not occur.

Conditions to avoid	Contact with incompatible materials. Heat, sparks, flames, elevated temperatures.
Incompatible materials	Strong oxidising agents. Strong acids. Reactive organometallic compounds.
Hazardous decomposition products	Carbon oxides. Nitrogen Oxides.

Section 11: Toxicological information

General information Not available.

Information on likely routes of exposure

Ingestion	Ingestion may cause irritation and malaise.
Inhalation	Harmful if inhaled.
Skin contact	Causes severe skin burns and eye damage.
Eye contact	Causes serious eye damage.

Symptoms Not available.

Information on toxicological effects

Acute toxicity Harmful by inhalation. Ingestion may cause irritation and malaise.

Components

Test results

Xylene (1330-20-7)	Acute Oral LD50 Rat: 3523 - 8600 mg/kg
m-Phenylenebis(methylamine) (1477-55-0)	Acute Dermal LD50 Rabbit: 2 g/kg Acute Oral LD50 Rat: 930 mg/kg
2-Propanol (67-63-0)	Acute Dermal LD50 Rabbit: 12800 mg/kg Acute Oral LD50 Rat: 4.7 g/kg

Skin corrosion/irritation Not available.

Serious eye damage/eye irritation Not available.

Respiratory sensitization The product contains a small amount of sensitising substance which may provoke an allergic reaction among sensitive individuals.

Skin sensitization May cause an allergic skin reaction.

Germ cell mutagenicity No data available.

Carcinogenicity Not classified.

IARC Monographs. Overall Evaluation of Carcinogenicity

Xylene (CAS 1330-20-7) 3 Not classifiable as to carcinogenicity to humans.

Reproductive toxicity No data available.

Specific target organ toxicity - single exposure Causes damage to organs: Central nervous system. May cause damage to organs . Respiratory system

Specific target organ toxicity - repeated exposure Liver. May cause damage to organs through prolonged or repeated exposure: Kidneys.

Aspiration hazard None known.

Mixture versus substance information Not available.

Other information No other specific acute or chronic health impact noted.

Section 12: Ecological information

Toxicity

Components

Test results

Xylene (1330-20-7)	LC50 Rainbow trout,donaldson trout (Oncorhynchus mykiss): 2.661 - 4.093 mg/l 96 hours
2-Propanol (67-63-0)	LC50 Bluegill (Lepomis macrochirus): > 1400 mg/l 96 hours

Persistence and degradability No data available.

Bioaccumulative potential No data available.

Mobility Not available.

Environmental fate - Partition coefficient Not available.

Mobility in soil Not available.

Results of PBT and vPvB assessment Not available.

Other adverse effects The product contains volatile substances, which may spread in the atmosphere.

Section 13: Disposal considerations

Waste treatment methods

Residual waste Dispose of in accordance with local regulations. Waste is suitable for incineration.

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied.

EU waste code 08 04 09*

Disposal methods/information This material and/or its container must be disposed of as hazardous waste. Avoid discharge into water courses or onto the ground. Disposal recommendations are based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

Section 14: Transport information

ADR

UN number UN1866

UN proper shipping name Resin solution

Transport hazard class(es) 3

Subsidiary class(es) -

Packing group III

Environmental hazards No

Labels required 3

Special precautions for user Not available.

RID

UN number UN1866

UN proper shipping name RESIN SOLUTION, flammable

Transport hazard class(es) 3

Subsidiary class(es) -

Packing group III

Environmental hazards No

Labels required 3

Special precautions for user Not available.

ADN

UN number UN1866

UN proper shipping name Resin solution

Transport hazard class(es) 3

Subsidiary class(es) -

Packing group III

Environmental hazards No

Labels required 3

Special precautions for user Not available.

IATA

UN number UN1866

UN proper shipping name Resin solution

Transport hazard class(es) 3

Subsidiary class(es) -

Packing group III

Environmental hazards No

Labels required 3

ERG Code 3L

Special precautions for user Not available.

IMDG

UN number UN1866

UN proper shipping name RESIN SOLUTION, MARINE POLLUTANT

Transport hazard class(es) 3

Subsidiary class(es) -

Packing group III

Marine pollutant No

Labels required 3

EmS No. F-E, S-E*

Special precautions for user Not available.

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code No information available.

Section 15: Regulatory information

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

EU Regulations

Regulation (EC) No. 2037/2000 on substances that deplete the ozone layer, Annex I

Not listed.

Regulation (EC) No. 2037/2000 on substances that deplete the ozone layer, Annex II

Not listed.

Regulation (EC) No. 850/2004 on persistent organic pollutants, Annex I

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 1

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 2

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 3

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex V

Not listed.

Directive 96/61/EC concerning integrated pollution prevention and control (IPPC): Article 15, European Pollution Emission Registry (EPER)

Xylene (CAS 1330-20-7)

Regulation (EC) No. 1907/2006, REACH Article 59(1). Candidate List

Not listed.

Other regulations

This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006. Young people under 18 years old are not allowed to work with this product according to EU Directive 94/33/EC on the protection of young people at work.

National regulations

Contains: Ethylenediamine. May produce an allergic reaction.

Chemical safety assessment

Not available.

Section 16: Other information

List of abbreviations

Not available.

References

Not available.

Information on evaluation method leading to the classification of mixture

The mixture is classified based on test data for physical hazards. The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available. For details, refer to Sections 9, 11 and 12.

Wording of the R-phrases in sections 2 and 3

R10 Flammable.
R11 Highly flammable.
R20 Harmful by inhalation.
R20/21 Harmful by inhalation and in contact with skin.
R21 Harmful in contact with skin.
R22 Harmful if swallowed.
R23 Toxic by inhalation.
R34 Causes burns.
R36 Irritating to eyes.
R36/38 Irritating to eyes and skin.
R38 Irritating to skin.
R43 May cause sensitisation by skin contact.
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R67 Vapours may cause drowsiness and dizziness.

Training information

Not available.

Disclaimer

To the best of our knowledge, the information contained herein is accurate. However no warranty, guarantee or representation is made as to its accuracy, reliability or completeness. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability to assure proper use, disposal, and safety of these materials.

Issue date

15-August-2011

Revision date

15-August-2011

Print date