NAUTIC EPOXY STANDARD – HARDENER

SECTION 1: IDENTIFICATION OF SUBSTANCE/MIXTURE AND OF THE COMPANY

1.1. Product identifier

NAUTIC EPOXY STANDARD – HARDENER

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

Hardener for epoxy adhesives. Intended for professional use.

1.3. Details of the Supplier of the Safety Data Sheet

NOVOL Sp. z o.o.
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PL 62-052 Komorniki

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Person responsible for preparation of the SDS dokumentacja@novol.pl

1.4. Emergency telephone number +48 61 810-99-09 (7.00 AM to 3.00 PM)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture
The mixture was classified as dangerous pursuant to current regulations - see Section 15.

Classification 1272/2008/EC:
Acute toxicity, cat. 4 Harmful if swallowed .
Corrosive, cat. 1B Causes severe skin burns and eye damage .
Skin sensitization cat 1A May cause an allergic skin reaction .
Hazardous to aquatic environment, cat. . Toxic to aquatic life with long lasting effects . Suspected of damaging fertility. Suspected of damaging the unborn child.

2.2. Label elements

Contain: 4-nonylphenol, branched

Pictograms

Signal word:	Danger.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H361fd	May damage fertility. May damage the unborn child.
H411	Toxic to aquatic life with long lasting effects.
P260	Do not breathe vapours/spray.
P273	Avoid release to the environment
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
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 doctor
P312	Call a doctor if you feel unwell.

2.3. Other hazards
No data

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances
N/A
3.2. Mixtures

Product identifier **NAUTIC EPOXY STANDARD – HARDENER**

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substance name	Identification numbers	Classification and labelling	Concentration [% w/w]
3-(aminomethyl)-3,5,5-trimethyl-cyclohexan-1-amine	EC: 220-666-8 CAS: 2855-13-2 Index no. 612-067-00-9 Registration no. 01-2119514687-32-0000	Acute Tox. 4; H312 Acute Tox. 4; H302 Skin Corr. 1B;H314 Skin Sens. 1; H317 Aquatic Chronic 3; H412	15-40
Benzyl alcohol	EC: 100-51-6 CAS: 202-859-9 Index no. 603-057-00-5 Registration no. 01-2119492630-38-XXXX	Classification acc. to 1272/2008/EC: Acute Tox. 4; H332 Acute Tox. 4; H302	25-50
Produkty reakcji mfenylenobis(metyloa miny) i 4,4'-izopropylidenodifenolu, oligomeryczne produkty reakcji z 1-chloro-2,3-epoksypropanem	WE: 500-302-7 CAS: 113930-69-1 Nr Indeksu: -- Nr rejestracji: 01-2119965162-39-0000	Skin Corr. 1B;H314 Skin Sens. 1; H317 Aquatic Chronic 2; H411	=<30
4-nonylphenol, branched	EC: 284-325-5 CAS: 84852-15-3 Index no. 601-053-00-8 Registration no. 01-2119510715-45-0000	Repr. 2; H361f-d Acute Tox. 4; H302 Skin Corr. 1B; H314 Aquatic Acute 1; H400 Aquatic Chronic1; H410	<5
Salicylic acid	EC: 200-712-3 CAS: 69-72-7 Index no: -- Registration no: 01-2119486984-17-XXXX	Acute Tox. 4; H302 Eye Dam. 1; H318	<5

The full meaning of hazard phrases is listed in section 16.

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures
General guidelines:
See SDS section 11.
Respiratory tract:
Remove the injured to fresh air, provide rest; if respiratory action is arrested, apply artificial respiration. **Seek medical attention.**

Skin:
Remove contaminated clothes. Wash the contaminated skin with plenty of lukewarm water for ca. 15 mins. If irritation persists, seek medical advice.

Eyes:
Immediately wash with plenty of water for ca. 15 minutes, avoid strong flow of water – danger of corneal damage; seek medical advice.

Digestive system:
Do not provoke vomiting (danger of choking) Rinse mouth with water. If the injured is conscious, give 1-2 glasses of warm water to drink. Seek medical attention.
First aid responders should use medical gloves.

4.2. Most important symptoms and effects, both acute and delayed
Causes burns. Repeated exposure may dry or crack the skin. May cause sensitization upon skin exposure.

4.3. Indication of any immediate medical attention and special treatment needed for the injured
The work site shall feature special means of specialist and immediate assistance.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media
Dry powder, alcohol-resistant foam, carbon dioxide, water mist.

5.2. Special hazards arising from the substance
Fire may produce carbon monoxide, nitrogen oxides and other toxic gases. Do not allow contaminated fire water to escape into the soil, underground water or surface waters.

5.3. Advice for firefighters
Firefighters shall use closed respiratory protection systems and light protective garment. Cool containers adjacent to the fire by spraying with water from a safe distance.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures
For non-assisting personnel:
Remove all ignition sources. Ensure adequate ventilation of the room. Avoid direct contact with the released substance. Avoid exposure of skin and eyes. Personal protection, see SDS section 8.

For assisting personnel:
The assisting personnel/responders shall wear protective garment made of coated and impregnated fabrics, protective gloves (Viton), sealed protective eyewear and respiratory protection, i.e. gas masks with type A absorbers.

6.2. Environmental precautions
Prevent release into sewerage, surface waters, underground waters and soil.

6.3. Methods and material for containment and cleaning up
Remove the spill (isolate and seal off the flow of liquid). Place damaged containers in an emergency containment container, collect the liquid mechanically into an emergency containment container. Embank the area of large spills. Collect small spills with an universal binder (e.g. mica, diatomaceous earth, sand, etc.).

6.4. Reference to other sections
Personal protection, see SDS section 8.
Waste treatment methods, see SDS section 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling
Keep away from heat and fire. Prevent release into sewerage, surface waters, underground waters and soil. Use only in well-ventilated rooms. Do not smoke cigarettes. Do not inhale vapours. Avoid exposure of skin and eyes. Use protection against electrostatic discharge. Use personal protection, see SDS section 8.

7.2. Conditions for safe storage, including any incompatibilities
Store in hermetically sealed containers in cool and well ventilated rooms (optimum temperature: 15° to 20°C). Avoid storage near strong oxidants, acids and bases.

7.3. Specific end uses
Intended for professional use with the proviso of subsection 7.1 and 7.2.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters
No highest permissible concentration limits for the preparation components.

8.2. Exposure controls
Respiratory protection:
Gas masks with type A absorbers (EN 141).

Hand protection:
Safety gloves acc. to PN-EN 374-3 (Viton, 0.7 mm thick, penetration time > 480 mins; nitrile rubber, 0.4 mm, penetration time > 30 mins).

Eye protection:
Sealed protective eyewear.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.2. Exposure controls
Skin protection:
Suitable protective garment (coated/impregnated fabrics).

Work site:
Local exhaust, general ventilation.

The adopted personal protection shall meet the requirements of the Regulation of Ministry of Economy dated 21 December 2005 concerning the basic requirements for personal protection, Journal of Laws 2005, issue 259 item 2173
Environmental exposure controls:
Prevent release into sewerage, surface waters, underground waters and soil.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state	liquid
Colour	yellowish
Odour	typical of amines, pungent, sharp
Odour threshold	No data
pH	Not applicable
Melting point / freezing point	No data
Boiling point	>200°C
Ignition point	>100°C
Auto-ignition temperature	No data
Decomposition temperature	N/A
Evaporation rate	N/A
Flammability (solid, gas)	Not applicable
Explosion limits	lower: 1.2 % vol; upper:13% vol
Vapour pressure	No data
Vapour density (relative to air)	No data
Density	ca. 1.0 g/cm^3 (20°C)
Solubility (in water)	insoluble
Partition coefficient: n-octanol/water	No data
Viscosity (rotating rheometer)	Ca. 350 mPas
Explosive properties	N/A
Oxidising properties	N/A

9.2. Other information
No data

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity
Not reactive under normal conditions.

10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions
Thermal decomposition produces nitrous oxide and other toxic gases.

10.4. Conditions to avoid
Avoid exposure to strong oxidants, peroxides, strong acids and strong alkalis. Avoid generation and accumulation of electrostatic charges. Protect from exposure to sunlight and heat.

10.5. Incompatible materials
Avoid exposure to large amounts of organic peroxides, strong acids, strong alkalis and other strong oxidants.

10.6. Hazardous decomposition products
Thermal decomposition produces nitrous oxide and other toxic gases.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects
No experimental data on the preparation. The evaluation is based on the data of the hazardous components of this preparation.
(a) Acute toxicity

3-(aminomethyl)-3,5,5-trimethyl-cyclohexan-1-amine	LD_{50} (rat, oral)	1030 mg/kg
Nonylphenol	LD_{50} (rat, oral) LD_{50} (rat, skin)	200-2000 mg/kg 2140 mg/kg
Benzyl alcohol	LD_{50} (rat, oral) LD_{50} (rat, skin) LD_{50}/4h (rat, inhalation)	1230 mg/kg 2000 mg/kg 4178 mg/l

b) skin corrosion/irritation
Causes severe skin burns and eye damage.

c) serious eye damage/irritation
Causes severe skin burns and eye damage.

d) respiratory or skin sensitisation
May cause an allergic skin reaction.

e) germ cell mutagenicity
The mixture has not been classified as mutagenic. No available data confirming the hazard class.

f) carcinogenicity
The mixture has not been classified as cancerogenic. No available data confirming the hazard class.

g) reproductive toxicity
May damage fertility. May damage the unborn child.

h) STOT-single exposure
No available data confirming the hazard class.

i) STOT- repeated exposure
No available data confirming the hazard class.

j) aspiration hazard
No available data confirming the hazard class.

Exposure methods:
Inhalation: Harmful by inhalation.
Skin: Harmful in contact with skin. Irritating to skin. May cause skin sensitization.
Eyes: May cause irritation .Risk of serious damage to eyes.
Harmful if swallowed. If swallowed, the substance may cause irritation of the alimentary tract, nausea, vomiting and diarrhoea.

Poisoning symptoms:
Headache and vertigo, fatigue, decreased muscle power, drowsiness and, in exceptional instances, loss of consciousness.
Fumes might cause drowsiness and vertigo. Vapours may cause drowsiness and dizziness.

SECTION 12: ECOLOGICAL INFORMATION

No experimental data on the preparation. The evaluation is based on the data of the hazardous components of this preparation.
12.1. Toxicity

3-(aminomethyl)-3,5,5-trimethyl-cyclohexan-1-amine	Acute fish toxicity: LC50 110 mg/l/96h Acute toxicity to crustaceans Daphnia manga EC50 23 mg/l/48h
Nonylphenol	Acute fish toxicity: LC50 0.1-1 mg/l/96h Acute toxicity to crustaceans Daphnia manga EC50 0.01-0.1 mg/l/48h
Benzyl alcohol	Acute fish toxicity: LC50 460 mg/l/96h Acute toxicity to crustaceans Daphnia manga EC50 400mg/l/24h
12.2. Persistence and degradability	No data
12.3. Bioaccumulative potential	No data

SECTION 12: ECOLOGICAL INFORMATION

12.4. Mobility in soil
Poor water solubility. Keep away from sewerage, surface waters, underground waters and soil.

12.5. Results of PBT and vPvB assessment
No data

12.6. Other adverse effects
Very toxic to aquatic organisms; may cause long-lasting adverse changes in the aquatic environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste neutralisation methods
The product must be disposed of in compliance with proper local and statutory regulations with regard to waste - see point 15.
The product should be disposed with entities which are authorised to conduct activity in the area of collecting, recycling or utilization of waste.

Product remains:
Do not dispose the product into the sewage system. Do not store with communal waste. Remove the remains of the mixture carefully and harden with the use of the proper A component, included in the set. The hardened product is not harmful waste.
CAUTION: harden the remains in small portions and keep them away from flammable products. High amounts of heat are released during chemical reaction!

Contaminated container:
A container containing unhardened remains of the product is harmful waste. Do not store with communal waste. The contaminated container should be disposed with entities which are authorized to collection, recover or disposal.

SECTION 14: INFORMATION ON TRANSPORT

		ADR/RID	IMO/IMGD	IATA-DGR
14.1.	**UN number**	2735	2735	2735
14.2.	**UN proper shipping name**	LIQUID CORROSIVE AMINES, I.N.O. (3-(aminomethyl)-3,5,5-trimethyl-cyclohexan-1-amine)		
14.3.	**Transport hazard class(es)**	8	8	8
14.4.	**Packing group**	III	III	III
14.5.	**Environmental hazards**	YES	YES	---

14.6. Special precautions for users
Do not ship together with Call 1 materials (except for Class 1.4S) and specific materials of Class 4.1 and 5.2. Avoid direct exposure to Class 5.1 and 5.2 materials during shipping. Do not use open flame, do not smoke.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
N/A

SECTION 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
REACH - Regulation 2006/1907/WE
CLP - Regulation 1272/2008/WE

15.2. Chemical safety assessment
None performed

SECTION 16: OTHER INFORMATION

The full meaning of hazard phrases listed in section 2 to 15:
Acute Tox. 4 Acute toxicity, cat. 4
H302 Harmful if swallowed.
H332 Harmful if inhaled.
H312 Harmful in contact with skin.
Skin Corr. 1B Corrosive, cat. B
H314 Causes severe skin burns and eye damage.
Skin Sens. 1 Skin sensitization
H317 May cause an allergic skin reaction.
Repr. 2 Reproductive toxicity, cat. 2
H361f-d Suspected of damaging fertility or the unborn child.
Aquatic Acute 1 Hazardous to aquatic environment
H400 Very toxic to aquatic life.
Aquatic Chronic 1 Hazardous to aquatic environment, cat. 1
H410 Very toxic to aquatic life with long lasting effects.
Aquatic Chronic 2 Hazardous to aquatic environment, cat. 2
H411 Toxic to aquatic life with long lasting effects.
Aquatic Chronic 3 Hazardous to aquatic environment, cat. 1
H412 Harmful to aquatic life with long lasting effects.

Explanation of the abbreviations and acronyms used in the Safety Data Sheet
CAS no – numerical symbol ascribed to a chemical substance by the American organization, Chemical Abstracts Service (CAS).
EC no. – a number ascribed to a chemical substance in the European List of Notified Chemical Substances (ELINCS) or a number in the European Inventory of Existing Chemical Substances mention in "No-longer polymers" publication (EINECS)
MPC – maximum permissible concentration of health hazardous substances in the work place
MPIC – maximum permissible instantaneous concentration
MPCC - maximum permissible ceiling concentration
PCB - permissible concentration in biological material
UN number - four-digit identification number of a substance, preparation or product pursuant to UN model regulations
ADR – European agreement on international road transport of hazardous materials
IMO – International Marine Organization
RID – Regulations for international rail transport of hazardous materials
IMDG-Code – International marine code for hazardous materials
ICAO /IATA – Technical Instructions for Safe Air Transport of Hazardous Materials
The information is based on our current knowledge. This document shall not constitute warranty for product characteristics.
Classification of the mixture results from the application of the classification rules contained in Directive 1999/45/EC.

Other sources of information
ESIS European Chemical Substances Information System
TOXNET Toxicology Data Network
IUCLID International Uniform Chemical Information Database

Changes: General update

Trainings:
With regard to handling, health and safety while working with hazardous substances and mixtures.
With regard to transport of hazardous goods pursuant to the requirements of ADR regulations.

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