

Hazard pictogram:**Signal word:** Warning**Hazard statement:**
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H411 Toxic to aquatic life with long lasting effects.**Precautionary statement:**
P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P280 Wear protective gloves/eye protection.
P501 Dispose of contents/container in accordance with national regulation.**2.3. Other hazards**

Persons suffering from allergic reactions to epoxides should avoid contact with the product.

SECTION 3: Composition/information on ingredients**3.2. Mixtures****General chemical description:**

Reaction resin

Base substances of preparation:

Epoxy resin

Declaration of the ingredients according to CLP (EC) No 1272/2008:

Hazardous components CAS-No.	EC Number REACH-Reg No.	content	Classification
Reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	500-033-5 500-033-5 01-2119456619-26	> 90 %	Skin Irrit. 2 H315 Skin Sens. 1 H317 Eye Irrit. 2 H319 Aquatic Chronic 2 H411

For full text of the H - statements and other abbreviations see section 16 "Other information".
Substances without classification may have community workplace exposure limits available.

SECTION 4: First aid measures**4.1. Description of first aid measures****General information:**

In case of adverse health effects seek medical advice.

Inhalation:

Move to fresh air, consult doctor if complaint persists.

Skin contact:

Rinse with running water and soap. Apply replenishing cream. Change all contaminated clothing. If necessary, see a dermatologist.

Eye contact:

Immediately flush eyes with soft jet of water or eye rinse solution for at least 5 minutes. If pains remains (intensive smarting, sensitivity to light, visual disturbance) continue flushing and contact/seek doctor or hospital.

Ingestion:

Rinse mouth and throat. Drink 1-2 glasses of water. Seek medical advice.

4.2. Most important symptoms and effects, both acute and delayed

SKIN: Redness, inflammation.

May cause an allergic skin reaction.

Causes serious eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed

See section: Description of first aid measures

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

carbon dioxide, foam, powder, water spray jet, fine water spray

Extinguishing media which must not be used for safety reasons:

High pressure waterjet

5.2. Special hazards arising from the substance or mixture

In the event of a fire, carbon monoxide (CO) and carbon dioxide (CO₂) can be released.

5.3. Advice for firefighters

Wear protective equipment.

Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.

Wear protective equipment.

Danger of slipping on spilled product.

Avoid contact with skin and eyes.

6.2. Environmental precautions

Do not empty into drains / surface water / ground water.

6.3. Methods and material for containment and cleaning up

Remove with liquid-absorbing material (sand, peat, sawdust).

Dispose of contaminated material as waste according to Section 13.

6.4. Reference to other sections

See advice in section 8

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Ensure that workrooms are adequately ventilated.

Avoid skin and eye contact.

Hygiene measures:

Do not eat, drink or smoke while working.

Wash hands before work breaks and after finishing work.

7.2. Conditions for safe storage, including any incompatibilities

Store in sealed original container.

Store frost-free.

Store protected from heat influence.

Temperatures between + 5 °C and + 30 °C

Do not store together with food or other consumables (coffee, tea, tobacco, etc.).

7.3. Specific end use(s)

2-Component epoxy adhesive

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Occupational Exposure Limits**

Valid for
Denmark

None

Predicted No-Effect Concentration (PNEC):

Name on list	Environmental Compartment	Exposure period	Value				Remarks
			mg/l	ppm	mg/kg	others	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	aqua (freshwater)					0,006 mg/L	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	aqua (marine water)					0,0006 mg/L	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	aqua (intermittent releases)					0,018 mg/L	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	STP					10 mg/L	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	sediment (freshwater)				0,996 mg/kg		
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	sediment (marine water)				0,0996 mg/kg		
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	soil				0,196 mg/kg		
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	oral					11 mg/kg food	

Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	Workers	Dermal	Acute/short term exposure - systemic effects		8,33 mg/kg bw/day	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	Workers	Inhalation	Acute/short term exposure - systemic effects		12,25 mg/m3	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	Workers	Dermal	Long term exposure - systemic effects		8,33 mg/kg bw/day	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	Workers	Inhalation	Long term exposure - systemic effects		12,25 mg/m3	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	general population	Dermal	Acute/short term exposure - systemic effects		3,571 mg/kg bw/day	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	general population	Dermal	Long term exposure - systemic effects		3,571 mg/kg bw/day	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	general population	Inhalation	Acute/short term exposure - systemic effects		0,75 mg/m3	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	general population	Inhalation	Long term exposure - systemic effects		0,75 mg/m3	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	general population	oral	Acute/short term exposure - systemic effects		0,75 mg/kg bw/day	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	general population	oral	Long term exposure - systemic effects		0,75 mg/kg bw/day	

Biological Exposure Indices:

None

8.2. Exposure controls:

Respiratory protection:
Not needed.

Hand protection:

In the case of longer contact protective gloves made from nitrile rubber are recommended according to EN 374.
Perforation time > 480 minutes
material thickness > 0.1 mm

In the case of longer and repeated contact please note that in practice the penetration times may be considerably shorter than those determined according to EN 374. The protective gloves must always be checked for their suitability for use at the specific workplace (e.g. mechanical and thermal stress, product compatibility, antistatic effects, etc.). The gloves must be replaced immediately at the first signs of wear and tear. The information provided by the manufacturers and given in the relevant trade association regulations for industrial safety must always be observed. We recommend that a hand care plan is drawn up in cooperation with a glove manufacturer and the trade association in accordance with the local operating conditions.

Eye protection:
Goggles which can be tightly sealed.

Skin protection:
Suitable protective clothing

Danish Code Number:
00-5 (1993)

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	liquid
	viscous
	colourless,
	transparent
Odor	slightly
Odour threshold	No data available / Not applicable
pH	No data available / Not applicable
Initial boiling point	No data available / Not applicable
Flash point	Not applicable
Decomposition temperature	No data available / Not applicable
Vapour pressure	No data available / Not applicable
Density	1,1 - 1,18 g/cm ³
()	
Bulk density	No data available / Not applicable
Viscosity	20.000 - 30.000 mPa.s
(Brookfield; 23 °C (73.4 °F))	
Viscosity (kinematic)	No data available / Not applicable
Explosive properties	No data available / Not applicable
Solubility (qualitative)	Insoluble
(23 °C (73.4 °F); Solvent: Water)	
Solidification temperature	No data available / Not applicable
Melting point	No data available / Not applicable
Flammability	No data available / Not applicable
Auto-ignition temperature	No data available / Not applicable
Explosive limits	No data available / Not applicable
Partition coefficient: n-octanol/water	No data available / Not applicable
Evaporation rate	No data available / Not applicable
Vapor density	No data available / Not applicable
Oxidising properties	No data available / Not applicable

9.2. Other information

No data available / Not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity

Reacts with amines, alcohols, acids and alkalis.
Reaction with oxidants.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

See section reactivity

10.4. Conditions to avoid

None if used for intended purpose.

10.5. Incompatible materials

See section reactivity

10.6. Hazardous decomposition products

None known.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

General toxicological information:

The mixture is classified based on the available hazard information for the ingredients as defined in the classification criteria for mixtures for each hazard class or differentiation in Annex I to Regulation 1272/2008/EC. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

Persons suffering from allergic reactions to epoxides should avoid contact with the product.
Cross-reactions with other epoxide compounds possible.

Skin irritation:

Causes skin irritation.

Eye irritation:

Causes serious eye irritation.

Sensitizing:

May cause an allergic skin reaction.

Acute oral toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	LD50	> 2.000 mg/kg	oral		rat	

Acute dermal toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	LD50	23.000 mg/kg	dermal		rabbit	

Skin corrosion/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	slightly irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Serious eye damage/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)

Respiratory or skin sensitization:

Hazardous components CAS-No.	Result	Test type	Species	Method
Reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)

Germ cell mutagenicity:

Hazardous components CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
Reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	negative	bacterial reverse mutation assay (e.g Ames test)			OECD Guideline 472 (Genetic Toxicology: Escherichia coli, Reverse Mutation Assay)

SECTION 12: Ecological information**General ecological information:**

The mixture is classified based on the available hazard information for the ingredients as defined in the classification criteria for mixtures for each hazard class or differentiation in Annex I to Regulation 1272/2008/EC. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

Do not empty into drains, soil or bodies of water.

12.1. Toxicity**Ecotoxicity:**

Toxic to aquatic life with long lasting effects.

Hazardous components CAS-No.	Value type	Value	Acute Toxicity Study	Exposure time	Species	Method
Reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	LC50	1,750000 mg/l	Fish	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
	LC50	1,75 mg/l	Fish	96 h	Oncorhynchus mykiss (reported as <i>Salmo gairdneri</i>)	OECD Guideline 203 (Fish, Acute Toxicity Test)
Reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	NOEC	2,4 mg/l	Algae	72 h	Scenedesmus capricornutum	OECD Guideline 201 (Alga, Growth Inhibition Test)
	EC50	9,4 mg/l	Algae	72 h	Scenedesmus capricornutum	OECD Guideline 201 (Alga, Growth Inhibition Test)
Reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	NOEC	0,3 mg/l	chronic Daphnia	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)

12.2. Persistence and degradability

Hazardous components CAS-No.	Result	Route of application	Degradability	Method
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Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6		aerobic	5 %	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
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12.3. Bioaccumulative potential / 12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

Hazardous components CAS-No.	PBT/vPvB
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

12.6. Other adverse effects

No data available.

SECTION 13: Disposal considerations**13.1. Waste treatment methods**

Product disposal:

Dispose of waste and residues in accordance with local authority requirements.

Disposal of uncleaned packages:

Use packages for recycling only when totally empty.

Waste code

08 04 09 waste adhesives and sealants containing organic solvents and other dangerous substances

SECTION 14: Transport information**14.1. UN number**

ADR	3082
RID	3082
ADN	3082
IMDG	3082
IATA	3082

14.2. UN proper shipping name

ADR	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bisphenol-A Epichlorhydrin resin)
RID	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bisphenol-A Epichlorhydrin resin)
ADN	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bisphenol-A Epichlorhydrin resin)
IMDG	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bisphenol-A Epichlorhydrin resin)
IATA	Environmentally hazardous substance, liquid, n.o.s. (Bisphenol-A Epichlorhydrin resin)

14.3. Transport hazard class(es)

ADR	9
RID	9
ADN	9
IMDG	9
IATA	9

14.4. Packaging group

ADR	III
RID	III
ADN	III
IMDG	III
IATA	III

14.5. Environmental hazards

ADR	not applicable
RID	not applicable
ADN	not applicable
IMDG	Marine pollutant
IATA	not applicable

14.6. Special precautions for user

ADR	not applicable Tunnelcode: (E)
RID	not applicable
ADN	not applicable
IMDG	not applicable
IATA	not applicable

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

not applicable

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**
VOC content 0,00 %

(VOCV 814.018 VOC regulation
CH)

15.2. Chemical safety assessment

A chemical safety assessment has not been carried out.

National regulations/information (Denmark):

Danish Code Number: 00-5 (1993)

SECTION 16: Other information

The labelling of the product is indicated in Section 2. The full text of all abbreviations indicated by codes in this safety data sheet are as follows:

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H411 Toxic to aquatic life with long lasting effects.

Further information:

This information is based on our current level of knowledge and relates to the product in the state in which it is delivered. It is intended to describe our products from the point of view of safety requirements and is not intended to guarantee any particular properties.

Label elements (DPD):

Xi - Irritant

N - Dangerous for the environment



Risk phrases:

R36/38 Irritating to eyes and skin.

R43 May cause sensitisation by skin contact.

R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety phrases:

S2 Keep out of the reach of children.

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.

S29 Do not empty into drains.

S37 Wear suitable gloves.

S46 If swallowed, seek medical advice immediately and show this container or label.

Additional labeling:

Contains epoxy constituents. See information supplied by the manufacturer.

Contains:

Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700)

Relevant changes in this safety data sheet are indicated by vertical lines at the left margin in the body of this document. Corresponding text is displayed in a different color on shadowed fields.

Safety Data Sheet according to (EC) No 1907/2006

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Loctite Power Epoxy Universal 5 min

SDS No. : 370672
V004.1

Revision: 27.05.2015
printing date: 19.10.2016
Replaces version from: -

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

1.1. Product identifier

Loctite Power Epoxy Universal, B

Contains:

1,2-Ethanediamine, N-(2-aminoethyl)-, polymer with oxirane
Diethylenetriamine

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

Intended use:

2-Component epoxy adhesive

Danish PR-number:

Not yet assigned

1.3. Details of the supplier of the safety data sheet

Henkel Norden AB
Box 151 22
167 15 Bromma

Sweden

Phone: +46 (0) 10 480 7700

ua-productsafety.norden@henkel.com

1.4. Emergency telephone number

+46 10 480 7500 (kontortid)

+45 82 12 12 12 (giftlinjen)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (CLP):

Skin irritation	Category 2
H315 Causes skin irritation.	
Skin sensitizer	Category 1
H317 May cause an allergic skin reaction.	
Serious eye damage	Category 1
H318 Causes serious eye damage.	

2.2. Label elements

Label elements (CLP):

Hazard pictogram:**Signal word:**

Danger

Hazard statement:

H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.

Precautionary statement:

P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P280 Wear protective gloves/eye protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P501 Dispose of waste and residues in accordance with local authority requirements.

2.3. Other hazards

Persons suffering from allergic reactions to amines should avoid contact with the product.

SECTION 3: Composition/information on ingredients**3.2. Mixtures****General chemical description:**

Hardener

Base substances of preparation:

Polymercaptan

Declaration of the ingredients according to CLP (EC) No 1272/2008:

Hazardous components CAS-No.	EC Number REACH-Reg No.	content	Classification
1,4-Diazabicyclooctane 280-57-9	205-999-9	< 2 %	Acute Tox. 4; Oral H302 Skin Irrit. 2; Dermal H315 Eye Irrit. 2 H319 Flam. Sol. 1 H228
Diethylenetriamine 111-40-0	203-865-4 01-2119473793-27	< 3 %	Acute Tox. 4; Dermal H312 Acute Tox. 4; Oral H302 Skin Sens. 1 H317 Skin Corr. 1B H314
1,2-Ethanediamine, N-(2-aminoethyl)-, polymer with oxirane 28063-82-3		< 8 %	Eye Dam. 1 H318

For full text of the H - statements and other abbreviations see section 16 "Other information".
Substances without classification may have community workplace exposure limits available.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information:

In case of adverse health effects seek medical advice.

Inhalation:

Move to fresh air, consult doctor if complaint persists.

Skin contact:

Rinse with running water and soap. Skin care. Remove contaminated clothes immediately.

Eye contact:

Immediately flush eyes with soft jet of water or eye rinse solution for at least 5 minutes. If pains remains (intensive smarting, sensitivity to light, visual disturbance) continue flushing and contact/seek doctor or hospital.

Ingestion:

Rinse mouth and throat. Drink 1-2 glasses of water. Seek medical advice.

4.2. Most important symptoms and effects, both acute and delayed

EYE: Irritation, conjunctivitis.

SKIN: Rash, Urticaria.

SKIN: Redness, inflammation.

4.3. Indication of any immediate medical attention and special treatment needed

See section: Description of first aid measures

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

carbon dioxide, foam, powder, water spray jet, fine water spray

Extinguishing media which must not be used for safety reasons:

High pressure waterjet

5.2. Special hazards arising from the substance or mixture

In the event of a fire, carbon monoxide (CO), carbon dioxide (CO₂) and nitrogen oxides (NO_x) can be released.

5.3. Advice for firefighters

Wear self-contained breathing apparatus.

Wear protective equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear protective equipment.

Ensure adequate ventilation.

Danger of slipping on spilled product.

Avoid contact with skin and eyes.

6.2. Environmental precautions

Do not empty into drains / surface water / ground water.

6.3. Methods and material for containment and cleaning up

Remove with liquid-absorbing material (sand, peat, sawdust).

Dispose of contaminated material as waste according to Section 13.

6.4. Reference to other sections

See advice in section 8

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid skin and eye contact.

Hygiene measures:

Wash hands before work breaks and after finishing work.

Do not eat, drink or smoke while working.

7.2. Conditions for safe storage, including any incompatibilities

Store in sealed original container.

Store frost-free.

Store protected from heat influence.

Temperatures between + 5 °C and + 30 °C

Do not store together with food or other consumables (coffee, tea, tobacco, etc.).

7.3. Specific end use(s)

2-Component epoxy adhesive

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure Limits

Valid for

Denmark

Ingredient [Regulated substance]	ppm	mg/m ³	Value type	Short term exposure limit category / Remarks	Regulatory list
2,2'-Iminodi(ethylamine) 111-40-0	1		Threshold Limit Values (TLV):		DK OS
2,2'-Iminodi(ethylamine) 111-40-0			Skin designation:	Can be absorbed through the skin.	DK OS
2,2'-Iminodi(ethylamine) 111-40-0	1	4	Threshold Limit Values (TLV):		GV (DK)
2,2'-Iminodi(ethylamine) 111-40-0			Skin designation:	Can be absorbed through the skin.	GV (DK)

Predicted No-Effect Concentration (PNEC):

Name on list	Environmental Compartment	Exposure period	Value				Remarks
			mg/l	ppm	mg/kg	others	
2,2'-Iminodi(ethylamine) 111-40-0	aqua (freshwater)					0,56 mg/L	
2,2'-Iminodi(ethylamine) 111-40-0	aqua (marine water)					0,056 mg/L	
2,2'-Iminodi(ethylamine) 111-40-0	aqua (intermittent releases)					0,32 mg/L	
2,2'-Iminodi(ethylamine) 111-40-0	sediment (freshwater)				1072 mg/kg		
2,2'-Iminodi(ethylamine) 111-40-0	sediment (marine water)				107,2 mg/kg		
2,2'-Iminodi(ethylamine) 111-40-0	STP					6 mg/L	
2,2'-Iminodi(ethylamine) 111-40-0	soil				214 mg/kg		

Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
2,2'-Iminodi(ethylamine) 111-40-0	Workers	Dermal	Long term exposure - systemic effects		11,4 mg/kg	
2,2'-Iminodi(ethylamine) 111-40-0	Workers	Dermal	Long term exposure - local effects		1,1 mg/kg	
2,2'-Iminodi(ethylamine) 111-40-0	Workers	Inhalation	Acute/short term exposure - systemic effects		92,1 mg/m3	
2,2'-Iminodi(ethylamine) 111-40-0	Workers	Inhalation	Acute/short term exposure - local effects		2,6 mg/m3	
2,2'-Iminodi(ethylamine) 111-40-0	Workers	Inhalation	Long term exposure - systemic effects		15,4 mg/m3	
2,2'-Iminodi(ethylamine) 111-40-0	Workers	Inhalation	Long term exposure - local effects		0,87 mg/m3	
2,2'-Iminodi(ethylamine) 111-40-0	general population	oral	Acute/short term exposure - local effects		4,88 mg/kg	
2,2'-Iminodi(ethylamine) 111-40-0	general population	Inhalation	Acute/short term exposure - systemic effects		27,5 mg/m3	
2,2'-Iminodi(ethylamine) 111-40-0	general population	Dermal	Long term exposure - systemic effects		4,88 mg/kg	
2,2'-Iminodi(ethylamine) 111-40-0	general population	Inhalation	Long term exposure - systemic effects		4,6 mg/m3	

Biological Exposure Indices:

None

8.2. Exposure controls:**Respiratory protection:**

Suitable breathing mask when there is inadequate ventilation.

Combination filter: ABKEKP

This recommendation should be matched to local conditions.

Hand protection:

In the case of longer contact protective gloves made from nitrile rubber are recommended according to EN 374.

Perforation time > 480 minutes

material thickness > 0.1 mm

In the case of longer and repeated contact please note that in practice the penetration times may be considerably shorter than those determined according to EN 374. The protective gloves must always be checked for their suitability for use at the specific workplace (e.g. mechanical and thermal stress, product compatibility, antistatic effects, etc.). The gloves must be replaced immediately at the first signs of wear and tear. The information provided by the manufacturers and given in the relevant trade association regulations for industrial safety must always be observed. We recommend that a hand care plan is drawn up in cooperation with a glove manufacturer and the trade association in accordance with the local operating conditions.

Eye protection:

Goggles which can be tightly sealed.

Skin protection:

Suitable protective clothing

Danish Code Number:

5-5 (1993)

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Appearance	liquid viscous colourless, transparent
Odor	characteristic
Odour threshold	No data available / Not applicable
pH	No data available / Not applicable
Initial boiling point	No data available / Not applicable
Flash point	No data available / Not applicable
Decomposition temperature	No data available / Not applicable
Vapour pressure	No data available / Not applicable
Density	1,14 - 1,2 g/cm ³
()	
Bulk density	No data available / Not applicable
Viscosity	12.000 - 25.000 mPa.s
(Brookfield; Instrument: RVDV II+; 23 °C (73.4 °F); speed of rotation: 20 min ⁻¹ ; Spindle No: 6; Swell time: 24 h)	
Viscosity (kinematic)	No data available / Not applicable
Explosive properties	No data available / Not applicable
Solubility (qualitative)	Insoluble
(20 °C (68 °F); Solvent: Water)	
Solidification temperature	No data available / Not applicable
Melting point	No data available / Not applicable
Flammability	No data available / Not applicable
Auto-ignition temperature	No data available / Not applicable
Explosive limits	No data available / Not applicable
Partition coefficient: n-octanol/water	No data available / Not applicable
Evaporation rate	No data available / Not applicable
Vapor density	No data available / Not applicable
Oxidising properties	No data available / Not applicable

9.2. Other information

No data available / Not applicable

SECTION 10: Stability and reactivity**10.1. Reactivity**

None if used for intended purpose.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

See section reactivity

10.4. Conditions to avoid

None if used for intended purpose.

10.5. Incompatible materials

None if used properly.

10.6. Hazardous decomposition products

None known.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

General toxicological information:

The mixture is classified based on the available hazard information for the ingredients as defined in the classification criteria for mixtures for each hazard class or differentiation in Annex I to Regulation 1272/2008/EC. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

Persons suffering from allergic reactions to amines should avoid contact with the product.

Cross-reactions with other amine compounds are possible.

Skin irritation:

Causes skin irritation.

Eye irritation:

Causes serious eye damage.

Sensitizing:

May cause an allergic skin reaction.

Acute oral toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Diethylenetriamine 111-40-0	LD50	1.553 mg/kg	oral		rat	

Acute inhalative toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method

Acute dermal toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
1,4-Diazabicyclooctane 280-57-9	LD50	> 2.000 mg/kg	dermal		rabbit	
Diethylenetriamine 111-40-0	LD50	1.045 mg/kg	dermal		rabbit	

Skin corrosion/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Diethylenetriamine 111-40-0	corrosive	15 min	rabbit	BASF Test

Serious eye damage/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Diethylenetriamine 111-40-0	corrosive	30 s	rabbit	

Respiratory or skin sensitization:

Hazardous components CAS-No.	Result	Test type	Species	Method
1,4-Diazabicyclooctane 280-57-9	not sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
Diethylenetriamine 111-40-0	sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)

SECTION 12: Ecological information

General ecological information:

The mixture is classified based on the available hazard information for the ingredients as defined in the classification criteria for mixtures for each hazard class or differentiation in Annex I to Regulation 1272/2008/EC. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

Do not empty into drains, soil or bodies of water.

12.1. Toxicity

Hazardous components CAS-No.	Value type	Value	Acute Toxicity Study	Exposure time	Species	Method
1,4-Diazabicyclooctane 280-57-9	LC50	> 100 mg/l	Fish	96 h	Carassius sp.	OECD Guideline 203 (Fish, Acute Toxicity Test)
1,4-Diazabicyclooctane 280-57-9	EC50	> 92 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
1,4-Diazabicyclooctane 280-57-9	NOEC	46 mg/l	Algae	72 h	Selenastrum capricornutum (new name: Pseudokirchnerella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
	EC50	110 mg/l	Algae	72 h	Selenastrum capricornutum (new name: Pseudokirchnerella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Diethylenetriamine 111-40-0	LC50	430 mg/l	Fish	96 h	Poecilia reticulata	EU Method C.1 (Acute Toxicity for Fish)
Diethylenetriamine 111-40-0	EC50	64,6 mg/l	Daphnia	48 h	Daphnia magna	EU Method C.2 (Acute Toxicity for Daphnia)
Diethylenetriamine 111-40-0	NOEC	10,2 mg/l	Algae	72 h	Selenastrum capricornutum (new name: Pseudokirchnerella subcapitata)	EU Method C.3 (Algal Inhibition test)
	EC50	187 mg/l	Algae	72 h	Selenastrum capricornutum (new name: Pseudokirchnerella subcapitata)	EU Method C.3 (Algal Inhibition test)

12.2. Persistence and degradability

Hazardous components CAS-No.	Result	Route of application	Degradability	Method
1,4-Diazabicyclooctane 280-57-9		aerobic	7 %	OECD Guideline 301 B (Ready Biodegradability: CO ₂ Evolution Test)
Diethylenetriamine 111-40-0	readily biodegradable	aerobic	87 %	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
1,2-Ethanediamine, N-(2-aminoethyl)-, polymer with oxirane 28063-82-3		aerobic	2 - 5 %	EU Method C.4-E (Determination of the "Ready" Biodegradability Closed Bottle Test)

12.3. Bioaccumulative potential / 12.4. Mobility in soil

Hazardous components CAS-No.	LogKow	Bioconcentration factor (BCF)	Exposure time	Species	Temperature	Method
1,4-Diazabicyclooctane 280-57-9	-0,49					
Diethylenetriamine 111-40-0	-2,13					

12.5. Results of PBT and vPvB assessment

Hazardous components CAS-No.	PBT/vPvB

Diethylenetriamine 111-40-0	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
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12.6. Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product disposal:

Dispose of waste and residues in accordance with local authority requirements.

Disposal of uncleaned packages:

Use packages for recycling only when totally empty.

Waste code

08 04 09 waste adhesives and sealants containing organic solvents and other dangerous substances

SECTION 14: Transport information**14.1. UN number**

ADR	Not dangerous goods
RID	Not dangerous goods
ADN	Not dangerous goods
IMDG	Not dangerous goods
IATA	3334

14.2. UN proper shipping name

ADR	Not dangerous goods
RID	Not dangerous goods
ADN	Not dangerous goods
IMDG	Not dangerous goods
IATA	Aviation regulated liquid, n.o.s. (Mercaptan polymer)

14.3. Transport hazard class(es)

ADR	Not dangerous goods
RID	Not dangerous goods
ADN	Not dangerous goods
IMDG	Not dangerous goods
IATA	9

14.4. Packaging group

ADR	Not dangerous goods
RID	Not dangerous goods
ADN	Not dangerous goods
IMDG	Not dangerous goods
IATA	III

14.5. Environmental hazards

ADR	not applicable
RID	not applicable
ADN	not applicable
IMDG	not applicable
IATA	not applicable

14.6. Special precautions for user

ADR	not applicable
RID	not applicable
ADN	not applicable
IMDG	not applicable
IATA	No dangerous good according to ADR/RID/ADN. Carriage in accordance with 1.1.4.2.1 ADR/RID/ADN.

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

not applicable

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

VOC content 0,00 %
(VOCV 814.018 VOC regulation
CH)

15.2. Chemical safety assessment

A chemical safety assessment has not been carried out.

National regulations/information (Denmark):

Danish Code Number: 5-5 (1993)

SECTION 16: Other information

The labelling of the product is indicated in Section 2. The full text of all abbreviations indicated by codes in this safety data sheet are as follows:

H228 Flammable solid.
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.
H319 Causes serious eye irritation.

Further information:

This information is based on our current level of knowledge and relates to the product in the state in which it is delivered. It is intended to describe our products from the point of view of safety requirements and is not intended to guarantee any particular properties.

Label elements (DPD):

Xi - Irritant

**Risk phrases:**

R36 Irritating to eyes.
R43 May cause sensitisation by skin contact.

Safety phrases:

S2 Keep out of the reach of children.
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.
S37 Wear suitable gloves.
S46 If swallowed, seek medical advice immediately and show this container or label.

Contains:

Diethylenetriamine

Relevant changes in this safety data sheet are indicated by vertical lines at the left margin in the body of this document. Corresponding text is displayed in a different color on shadowed fields.