

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

### 1.1 Product identifier

Trade name: Infusioncoat® 1A

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

General use: Epoxy resin-coating agent.  
Reserved for industrial and professional use.

### 1.3 Details of the supplier of the safety data sheet

Company name: AIRTECH EUROPE SARL

Street/POB-No.: Z.I. Haneboesch

Postal Code, city: 4562 Differdange  
Luxemburg

WWW: www.airtech.lu

E-mail: sales@airtech.lu

Telephone: +352-582282-1

Telefax: +352-584935

Dept. responsible for information:

Telephone: +352-582282-1, E-mail: sales@airtech.lu

### 1.4 Emergency telephone number

GIZ-Nord, Germany Telephone: +49 (0)551-19240

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

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

Xi; R36/38 Irritating to eyes and skin.

Sens.; R43 May cause sensitisation by skin contact.

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

### 2.2 Label elements

#### Labelling (67/548/EEC or 1999/45/EC)



Xi



N

irritant

dangerous for the environment

R phrase(s):

R 36/38

Irritating to eyes and skin.

R 43

May cause sensitisation by skin contact.

R 51/53

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

S phrase(s):

S 24/25

Avoid contact with skin and eyes.

S 26

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 28

After contact with skin, wash immediately with soap and plenty of water.

S 37/39

Wear suitable gloves and eye/face protection.

S 61

Avoid release to the environment. Refer to special instructions/Safety data sheets.

**Special labelling**

Text for labelling:

Contains epoxy containing compounds: Bisphenol A epoxy resin and 1,4-bis(2,3-Epoxypropoxy)butane.

**2.3 Other hazards**

Thermal decomposition can lead to the escape of irritating gases and vapours. May cause respiratory irritation. May be harmful if swallowed. Special danger of slipping by leaking/spilling product.

**SECTION 3: Composition / information on ingredients**

3.1 Substances: not applicable

**3.2 Mixtures**

Hazardous ingredients:

Ingredient	Designation	Content	Classification
EC No. - CAS 25085-99-8	Bisphenol A epoxy resin	< 60 %	DSD/DPD: Xi, N; R 36/38, 43, 51/53 CLP: Skin Irrit. 2; H315. Eye Irrit. 2; H319. Skin Sens. 1; H317. Aquatic Chronic 2; H411.
EC No. 500-033-5 CAS 25068-38-6	Reaction product with Bisphenol A- epichlorhydrin epoxy resin (molecular weight = 700)	< 30 %	DSD/DPD: Sens.; R43. N; R51-53. Xi; R36/38. CLP: Skin Irrit. 2; H315. Eye Irrit. 2; H319. Skin Sens. 1; H317. Aquatic Chronic 2; H411.
EC No. 219-371-7 CAS 2425-79-8	1,4-bis(2,3- Epoxypropoxy) butane	< 10 %	DSD/DPD: Sens.; R43. R52-53. Xi; R36/38. Xn; R20/21. CLP: Acute Tox. 4; H312. Acute Tox. 4; H332. Skin Irrit. 2; H315. Eye Irrit. 2; H319. Skin Sens. 1; H317. Aquatic Chronic 3; H412.

**SECTION 4: First aid measures****4.1 Description of first aid measures**

In case of inhalation:	Move victim to fresh air, put at rest and loosen restrictive clothing. In case of breathing stop use artificial aspiration immediately. In case of breathing difficulties administer oxygen. Seek medical attention.
In case of skin contact:	After contact with skin, wash immediately with soap and plenty of water. Take off contaminated clothing and wash it before reuse. In case of skin irritation, consult a physician.
After eye contact:	Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently seek the immediate attention of an ophthalmologist.
After swallowing:	Immediately get medical attention. Do not induce vomiting without medical assistance. If person is clearly conscious, have them drink two glasses of water to dilute ingested material. Never give an unconscious person anything through the mouth.

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

In case of inhalation:

Thermal decomposition can lead to the escape of irritating gases and vapours. May cause respiratory irritation.

In case of ingestion: May be harmful if swallowed.

After contact with skin: Irritation, redness, pain, Sensitisation.

After eye contact: Irritation, redness, pain.

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

Treat symptomatically.

### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

Suitable extinguishing media:

Water fog, foam, extinguishing powder, carbon dioxide.

Extinguishing media which must not be used for safety reasons:

High power water jet.

#### 5.2 Special hazards arising from the substance or mixture

This material is combustible, but will not ignite readily. Emits toxic fumes under fire conditions.

In case of fire may be liberated: Aldehyde, acids, phenols, carbon monoxide and carbon dioxide.

Formation of numerous unknown compounds is possible.

#### 5.3 Advice for firefighters

Special protective equipment for firefighters:

Wear a self-contained breathing apparatus and chemical protective clothing.

Additional information:

Hazchem-Code: 2Z

Seal off endangered area. Heating causes rise in pressure with risk of bursting. Cool endangered containers with water spray and, if possible, remove from danger zone. Fight fire from a safe distance. Stay upwind/keep distance from source. Use water spray jet to knock down vapours. Do not allow fire water to penetrate into surface or ground water.

### SECTION 6: Accidental release measures

#### 6.1 Personal precautions, protective equipment and emergency procedures

Avoid formation of aerosols/vapours. Avoid inhalation and contact with skin and eyes.

Respiratory protection in case of aerosol or vapour formation. Wear protective equipment. Keep away from unprotected people. Ensure adequate ventilation, especially in confined areas.

#### 6.2 Environmental precautions

Do not allow to penetrate into soil, waterbodies or drains. If necessary notify appropriate authorities.

#### 6.3 Methods and material for containment and cleaning up

Dam spills. Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents) and place in closed containers for disposal. Wash spill area with hot water. Dispose of waste according to applicable legislation.

Additional information:

Special danger of slipping by leaking/spilling product.

#### 6.4 Reference to other sections

Refer additionally to section 8 and 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Advices on safe handling: Provide adequate ventilation, and local exhaust as needed. Avoid contact with skin, eyes, and clothing. Do not breathe vapour/aerosol. Use suitable personal protective equipment to protect skin and eyes. Take care when re-opening already used containers. Handle and open container with care. When using do not eat, drink or smoke. Wash hands before breaks and after work.

Precautions against fire and explosion:

Take standard precautions to prevent fire.

### 7.2 Conditions for safe storage, including any incompatibilities

Requirements for storerooms and containers:

Keep container tightly closed in a cool, well-ventilated place. Keep away from sources of ignition. Store in a dry place. Do not drop, drag or bang the container.

Shelf life: 12 months at 22 °C.

Hints on joint storage:

Avoid contact with strong acids, oxidizing agents and alkalis. Keep away from food and drinks.

Storage class:

11 = Combustible solids

### 7.3 Specific end use(s)

No information available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
14807-96-6	Talcum	Great Britain: WEL-TWA	1 mg/m <sup>3</sup> (respirable fraction)
		Ireland: 8 hours	0.8 mg/m <sup>3</sup> (respirable fraction)
		Ireland: 8 hours	10 mg/m <sup>3</sup> (inhalable fraction)
471-34-1	Calcium carbonate	Great Britain: WEL-TWA	10 mg/m <sup>3</sup> (inhalable fraction)
		Great Britain: WEL-TWA	4 mg/m <sup>3</sup> (respirable fraction)
1333-86-4	Carbon	Great Britain: WEL-STEL	7 mg/m <sup>3</sup>
		Great Britain: WEL-TWA	3.5 mg/m <sup>3</sup>
		Ireland: 15 minutes	7 mg/m <sup>3</sup>
		Ireland: 8 hours	3.5 mg/m <sup>3</sup>

### 8.2 Exposure controls

Provide adequate ventilation, and local exhaust as needed.

### Personal protection equipment

#### Occupational exposure controls

Respiratory protection:

If vapours form, use respiratory protection.

Recommended: Use filter type A (= against vapours of organic substances) according to EN 14387.

The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used.

Hand protection:

Protective gloves according to EN 374.

Glove material: Nitrile rubber or neoprene.

layer thickness (recommended): >0.5 mm.

Breakthrough time: not tested.

Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

Eye protection: Tightly sealed goggles according to EN 166.  
Body protection: Wear suitable protective clothing.  
General protection and hygiene measures:  
Avoid contact with skin, eyes, and clothing. Take off contaminated clothing and wash it before reuse. Do not breathe vapour/aerosol. Have eye wash bottle or eye rinse ready at work place. When using do not eat, drink or smoke. Wash hands before breaks and after work.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Appearance: Form: pasty  
Colour: black

Odour: characteristic  
Odour threshold: no data available

pH value: neutral

Melting point/freezing point: no data available  
Initial boiling point and boiling range: no data available  
Flash point/flash point range: no data available  
Evaporation rate: no data available

Flammability: This material is combustible, but will not ignite readily.  
Explosive properties: no data available  
Explosion limits: no data available

Vapour pressure: negligible  
Vapour density: no data available  
Density: 1.19 g/cm<sup>3</sup>

Water solubility: negligible

Partition coefficient: n-octanol/water: no data available

Auto-ignition temperature: no data available  
Thermal decomposition: no data available

Viscosity, dynamic: at 20 °C: 8500 - 10500 mPa\*s

Explosive properties: no data available  
Oxidizing characteristics: no data available

### 9.2 Other information

Additional information: no data available

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Refer to 10.3

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

Exothermic reactions with oxidizing agents, strong bases, strong acids.

### 10.4 Conditions to avoid

Keep away from heat.

## 10.5 Incompatible materials

Strong acids, bases, oxidizing agents.

## 10.6 Hazardous decomposition products

Emits toxic fumes under fire conditions.

In case of fire may be liberated: aldehyde, acids, phenols, carbon monoxide and carbon dioxide.

Formation of numerous unknown compounds is possible.

Thermal decomposition: no data available

# SECTION 11: Toxicological information

## 11.1 Information on toxicological effects

Toxicological effects: Acute toxicity (oral): Lack of data.  
Acute toxicity (dermal): Lack of data.  
Acute toxicity (inhalative): Lack of data.  
Skin corrosion/irritation: Skin Irrit. 2; H315 = Causes skin irritation.  
The product has not been tested. The statement is derived from the properties of the single components.  
Eye damage/irritation: Eye Irrit. 2; H319 = Causes serious eye irritation.  
The product has not been tested. The statement is derived from the properties of the single components.  
Sensitisation to the respiratory tract: Lack of data.  
Skin sensitisation: Skin Sens. 1; H317 = May cause an allergic skin reaction.  
The product has not been tested. The statement is derived from the properties of the single components.  
Germ cell mutagenicity/Genotoxicity: Lack of data.  
Carcinogenicity: Lack of data.  
Reproductive toxicity: Lack of data.  
Effects on or via lactation: Lack of data.  
Specific target organ toxicity (single exposure): Lack of data.  
Specific target organ toxicity (repeated exposure): Lack of data.  
Aspiration hazard: Lack of data.

Other information: Existing disorders like eye, skin and respiratory organ diseases may be aggravated by exposure to bisphenol A epoxy resin.

## Symptoms

In case of inhalation:  
Thermal decomposition can lead to the escape of irritating gases and vapours. May cause respiratory irritation.  
In case of ingestion: May be harmful if swallowed.  
After contact with skin: Irritation, redness, pain, Sensitisation.  
After eye contact: Irritation, redness, pain.

# SECTION 12: Ecological information

## 12.1 Toxicity

Aquatic toxicity: Toxic to aquatic life with long lasting effects.  
The product has not been tested. The statement is derived from the properties of the single components.

## 12.2. Persistence and degradability

Further details: no data available

## 12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water:  
no data available

## 12.4 Mobility in soil

no data available

## 12.5 Results of PBT and vPvB assessment

no data available

## 12.6 Other adverse effects

General information: Do not allow to penetrate into soil, waterbodies or drains.

# SECTION 13: Disposal considerations

## 13.1 Waste treatment methods

### Product

Waste key number: 08 04 09\* = Waste adhesives and sealants containing organic solvents or other dangerous substances.

MFSU = manufacture, formulation, supply and use

\* = Evidence for disposal must be provided.

Recommendation: Incinerate according to applicable local, state and federal regulations.

### Contaminated packaging

Recommendation: Dispose of waste according to applicable legislation. Handle contaminated packages in the same way as the substance itself. Non-contaminated packages may be recycled. Do not remove label until container is thoroughly cleaned.

### Additional information

Do not allow to penetrate into soil, waterbodies or drains.

# SECTION 14: Transport information

## 14.1 UN number

ADR/RID, IMDG, IATA: 3077

## 14.2 UN proper shipping name

ADR/RID, IMDG, IATA: UN 3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
(Bisphenol epoxy resins)

## 14.3 Transport hazard class(es)

ADR/RID: Class 9, Code: M7

IMDG: Class 9, Subrisk -

IATA: Class 9

## 14.4 Packing group

ADR/RID, IMDG, IATA: III

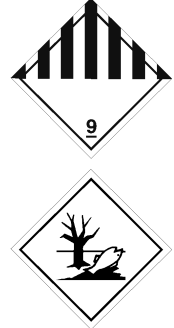
## 14.5 Environmental hazards

Marine pollutant: Yes

## 14.6 Special precautions for user

### Land transport (ADR/RID)

Warning board:	ADR/RID: Kemmler-number 90, UN number 3077
Hazard label:	9
Special provisions:	274 335 601
Limited quantities:	5 kg
EQ:	E1
Contaminated packaging - Instructions:	P002 IBC08 LP02 R001
Contaminated packaging - Special provisions:	PP12 B3
Special provisions for packing together:	MP10
Portable tanks - Instructions:	T1 BK1 BK2
Portable tanks - Special provisions:	TP33
Tank coding:	SGAV LGBV
Tunnel restriction code:	E



### Sea transport (IMDG)

EmS:	F-A, S-F
Special provisions:	274, 335, 966, 967
Limited quantities:	5 kg
EQ:	E1
Contaminated packaging - Instructions:	P002, LP02
Contaminated packaging - Provisions:	PP12
IBC - Instructions:	IBC08
IBC - Provisions:	B3
Tank instructions - IMO:	-
Tank instructions - UN:	T1, BK2, BK2, BK3
Tank instructions - Provisions:	TP33
Stowage and segregation:	Category A. When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.
Properties and observations:	-

### Air transport (IATA)

Hazard:	Miscellaneous
EQ:	E1
Passenger Ltd.Qty.:	Pack.Instr. Y956 - Max. Net Qty/Pkg. 30 kg G
Passenger:	Pack.Instr. 956 - Max. Net Qty/Pkg. 400 kg
Cargo:	Pack.Instr. 956 - Max. Net Qty/Pkg. 400 kg
Special Provisioning:	A97 A158 A179
ERG:	9L

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

no data available

## SECTION 15: Regulatory information

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

#### National regulations - Great Britain

Hazchem-Code: 2Z



**National regulations - EC member states****Labelling of packaging with <= 125mL content**

R phrase(s):	R 43	May cause sensitisation by skin contact.
	R 51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
S phrase(s):	S 24/25	Avoid contact with skin and eyes.
	S 26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
	S 28	After contact with skin, wash immediately with soap and plenty of water.
	S 37/39	Wear suitable gloves and eye/face protection.
	S 61	Avoid release to the environment. Refer to special instructions/Safety data sheets.

**15.2 Chemical Safety Assessment**

For this mixture a chemical safety assessment is not required.

**SECTION 16: Other information****Further information**

Wording of the H-phrases under paragraph 2 and 3:

- H312 = Harmful in contact with skin.
- H315 = Causes skin irritation.
- H317 = May cause an allergic skin reaction.
- H319 = Causes serious eye irritation.
- H332 = Harmful if inhaled.
- H411 = Toxic to aquatic life with long lasting effects.
- H412 = Harmful to aquatic life with long lasting effects.

Wording of the R-phrases under section 2 and 3:

- R 20/21 = Harmful by inhalation and in contact with skin.
- R 36/38 = Irritating to eyes and skin.
- R 43 = May cause sensitisation by skin contact.
- R 51/53 = Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R 52/53 = Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Reason of change: Changes in section 2: Labelling  
Changes in section 3-15: General revision

**Department issuing data sheet**

Contact person: see section 1: Dept. responsible for information

For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

This data sheet cannot cover all possible situations which the user may experience during processing. Each aspect of your operation should be examined to determine if, and which additional precautions may be necessary. All health and safety information contained in this data sheet should be provided to your employees and customers. It is your responsibility to develop appropriate workplace instructions and training programmes for employees.

As the conditions and methods of use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for any use of this product. The information supplied on this safety data sheet complies with our current level of knowledge as well as with national and EU regulations. All statements or suggestions are made without warranty, expressed or implied, regarding accuracy of information, the hazards connected with the use of the product or the results to be obtained from the use thereof.

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

### 1.1 Product identifier

Trade name: Infusioncoat® 1B

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

General use: Curing agent.  
Reserved for industrial and professional use.

### 1.3 Details of the supplier of the safety data sheet

Company name: AIRTECH EUROPE SARL

Street/POB-No.: Z.I. Haneboesch

Postal Code, city: 4562 Differdange  
Luxemburg

WWW: www.airtech.lu

E-mail: sales@airtech.lu

Telephone: +352-582282-1

Telefax: +352-584935

Dept. responsible for information:

Telephone: +352-582282-1, E-mail: sales@airtech.lu

### 1.4 Emergency telephone number

GIZ-Nord, Germany Telephone: +49 (0)551-19240

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

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

T; R25 Toxic if swallowed.

C; R35 Causes severe burns.

Xn; R48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed.

Sens.; R43 May cause sensitisation by skin contact.

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

### 2.2 Label elements

#### Labelling (67/548/EEC or 1999/45/EC)



T

toxic



N

dangerous for the environment

R phrase(s):

R 25

Toxic if swallowed.

R 35

Causes severe burns.

R 43

May cause sensitisation by skin contact.

R 48/22

Harmful: danger of serious damage to health by prolonged exposure if swallowed.

R 51/53

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

**Infusioncoat® 1B**

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S phrase(s):	S 1	Keep locked up.
	S 26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
	S 36/37/39	Wear suitable protective clothing, gloves and eye/face protection.
	S 45	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
	S 61	Avoid release to the environment. Refer to special instructions/Safety data sheets.

**Special labelling**

Text for labelling:

Contains epoxy containing compounds: Bisphenol A epoxy resin.  
 Contains 4,4'-Methylenebis(cyclohexylamine), alpha-(4-Aminocyclohexyl)-p-toluidine and cyclohex-1,2-ylenediamine.

**2.3 Other hazards**

May be harmful in contact with skin. May be harmful if inhaled. Special danger of slipping by leaking/spilling product.

**SECTION 3: Composition / information on ingredients**

3.1 Substances: not applicable

**3.2 Mixtures**

Chemical characterisation: A mixture of amines and resin

Hazardous ingredients:

Ingredient	Designation	Content	Classification
EC No. 249-051-2 CAS 28480-77-5	alpha-(4-Aminocyclohexyl)-p-toluidine	< 65 %	DSD/DPD: T; R25. C; R34. Sens.; R43. CLP: Acute Tox. 3; H301. Skin Corr. 1B; H314. Skin Sens. 1; H317.
EC No. 217-101-2 CAS 1739-84-0	1,2-Dimethylimidazole	< 65 %	DSD/DPD: Xn; R22. Xi; R41. Xi; R38. CLP: Acute Tox. 4; H302. Skin Irrit. 2; H315. Eye Dam. 1; H318.
EC No. 217-168-8 CAS 1761-71-3	4,4'-Methylenebis(cyclohexylamine)	< 20 %	DSD/DPD: Xn; R22. Xn; R48/22. C; R35. Sens.; R43. N; R51-53. CLP: Acute Tox. 4; H302. Skin Corr. 1A; H314. Skin Sens. 1; H317. STOT RE 2; H373. Aquatic Chronic 2; H411.
EC No. - CAS 25085-99-8	Bisphenol A epoxy resin	< 15 %	DSD/DPD: Xi, N; R 36/38, 43, 51/53 CLP: Skin Irrit. 2; H315. Eye Irrit. 2; H319. Skin Sens. 1; H317. Aquatic Chronic 2; H411.
EC No. 210-484-7 CAS 616-47-7	1-Methylimidazole	< 15 %	DSD/DPD: C; R34. Xn; R21/22. CLP: Acute Tox. 4; H302. Acute Tox. 4; H312. Skin Corr. 1B; H314.
EC No. 211-776-7 CAS 694-83-7	Cyclohex-1,2-ylenediamine	< 15 %	DSD/DPD: C; R35. Xi; R37. Xn; R20/21/22. CLP: Acute Tox. 4; H302. Acute Tox. 4; H312. Acute Tox. 4; H332. Skin Corr. 1A; H314. STOT SE 3; H335.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

General information:	First aider: Pay attention to self-protection!
In case of inhalation:	Move victim to fresh air, put at rest and loosen restrictive clothing. In case of breathing stop use artificial aspiration immediately. In case of breathing difficulties administer oxygen. Seek medical attention.
In case of skin contact:	After contact with skin, wash immediately with soap and plenty of water. Change contaminated clothing. Immediately get medical attention.
After eye contact:	Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently seek the immediate attention of an ophthalmologist.
After swallowing:	Immediately get medical attention. Never give anything by mouth to an unconscious person. Rinse mouth immediately and drink plenty of water. Do not induce vomiting without medical assistance.

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

In case of inhalation:

Strongly irritant. The following symptoms may occur: Sore throat, headache, fatigue, dizziness, cough, nausea, vomiting.

In case of ingestion:

Toxic if swallowed. Burns in the mouth, pharynx, oesophagus, and gastrointestinal tract. Other symptoms: Danger of stomach perforation. Abdominal pain, nausea, sore throat, vomiting, thirst and coma.

After contact with skin: Burns, causes poorly healing wounds.

After eye contact: Redness, pain, Danger of loss of sight.

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

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media:

Water fog, extinguishing powder, foam, carbon dioxide.

Extinguishing media which must not be used for safety reasons:

High power water jet

### 5.2 Special hazards arising from the substance or mixture

This material is combustible, but will not ignite readily.

Harmful and/or toxic vapours may be produced in the event of thermal decomposition.

In case of fire may be liberated: aldehydes, acids, nitrogen oxides (NO<sub>x</sub>), phenols, Nitrosamine, carbon monoxide and carbon dioxide. Formation of numerous unknown compounds is possible.

### 5.3 Advice for firefighters

Special protective equipment for firefighters:

Wear a self-contained breathing apparatus and chemical protective clothing.

Additional information:

Hazchem-Code: 2X

Seal off endangered area. Heating causes rise in pressure with risk of bursting. Cool endangered containers with water spray and, if possible, remove from danger zone. Fight fire from a safe distance. Stay upwind/keep distance from source. Use water spray jet to knock down vapours. Do not allow fire water to penetrate into surface or ground water.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Avoid formation of aerosols/vapours. Avoid inhalation and contact with skin and eyes. Wear protective equipment. Ensure adequate ventilation, especially in confined areas. Keep away from unprotected people.

### 6.2 Environmental precautions

Do not allow to enter into ground-water, surface water or drains. If necessary notify appropriate authorities.

### 6.3 Methods and material for containment and cleaning up

Soak up with absorbent materials such as sand, siliceous earth, acid- or universal binder. Store in special closed containers and dispose of according to ordinance. Thoroughly clean surrounding area. Dispose of waste according to applicable legislation.

Additional information: Special danger of slipping by leaking/spilling product.

### 6.4 Reference to other sections

Refer additionally to section 8 and 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Advices on safe handling: Provide adequate ventilation, and local exhaust as needed. Execute works under fume hood. Avoid contact with skin, eyes, and clothing. Avoid the formation of aerosol. Do not breathe vapour/aerosol/mist. Do not ingest. Wear protective equipment. When using do not eat, drink or smoke. Wash hands before breaks and after work.

Precautions against fire and explosion: Take standard precautions to prevent fire.

### 7.2 Conditions for safe storage, including any incompatibilities

Requirements for storerooms and containers:

Store container tightly closed in a dry and cool place. Do not drop, drag or bang the container. Store containers in upright position. Protect from moisture contamination. Store in a well-ventilated place. Keep away from sources of ignition. Keep away from incompatible materials. Shelf life: 12 months at 22 °C.

Hints on joint storage: Incompatible materials: Nitrous acid, Sodium hypochlorite, peroxides, strong acids, mineral acids, strong oxidizing agents. Keep away from food and drinks.

Storage class: 6.1 C = Combustible substances of acute toxicity, category 3 / hazardous substances that are toxic or produce chronic effects

### 7.3 Specific end use(s)

No information available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Additional information: Contains no substances with occupational exposure limit values.

### 8.2 Exposure controls

Provide adequate ventilation, and local exhaust as needed. Execute works under fume hood.

**Personal protection equipment****Occupational exposure controls**

Respiratory protection:	If vapours form, use respiratory protection. Recommended: Use filter type A (= against vapours of organic substances) according to EN 14387. The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used.
Hand protection:	Protective gloves according to EN 374. Glove material: Rubber or neoprene Layer thickness (recommended): >0.5 mm. Breakthrough time: not tested. Observe glove manufacturer's instructions concerning penetrability and breakthrough time.
Eye protection:	Tightly sealed goggles according to EN 166.
Body protection:	Protective work clothing, chemical resistant safety shoes.
General protection and hygiene measures:	Avoid contact with skin, eyes, and clothing. Take off immediately all contaminated clothing. Do not breathe vapour/aerosol/mist. Work place should be equipped with a shower and an eye rinsing apparatus. When using do not eat, drink or smoke. After work, wash hands and face.

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

Appearance:	Form: liquid Colour: amber
Odour:	amine-like
Odour threshold:	no data available
pH value:	alkaline
Melting point/freezing point:	no data available
Initial boiling point and boiling range:	no data available
Flash point/flash point range:	> 93 °C
Evaporation rate:	no data available
Flammability:	This material is combustible, but will not ignite readily.
Explosive properties:	no data available
Explosion limits:	no data available
Vapour pressure:	negligible
Vapour density:	no data available
Density:	0.76 g/mL
Solubility:	no data available
Partition coefficient: n-octanol/water:	no data available
Auto-ignition temperature:	no data available
Thermal decomposition:	no data available
Viscosity, dynamic:	no data available
Explosive properties:	no data available
Oxidizing characteristics:	no data available

**9.2 Other information**

Additional information:	no data available
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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

May be corrosive to metals.

### 10.2 Chemical stability

Stable under recommended storage conditions.

Shelf life: 12 months at 22 °C.

### 10.3 Possibility of hazardous reactions

Exothermic reactions with incompatible materials.

### 10.4 Conditions to avoid

Protect from excessive heat. Avoid open flames. Avoid formation of aerosols/vapours.

### 10.5 Incompatible materials

Nitrous acid, Sodium hypochlorite, peroxides, strong acids, mineral acids, strong oxidizing agents, metals.

### 10.6 Hazardous decomposition products

Formation of numerous unknown compounds is possible. In case of fire may be liberated: aldehydes, acids, nitrogen oxides (NO<sub>x</sub>), phenols, Nitrosamine, carbon monoxide and carbon dioxide.

Thermal decomposition: no data available

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Toxicological effects:	<p>Acute toxicity (oral): Acute Tox. 3; H301 = Toxic if swallowed. The product has not been tested. The statement is derived from the properties of the single components. ATEmix (calculated): 50&lt;ATE&lt;300.</p> <p>Acute toxicity (dermal): Based on available data, the classification criteria are not met. The product has not been tested. The statement is derived from the properties of the single components.</p> <p>Acute toxicity (inhalative): Based on available data, the classification criteria are not met. The product has not been tested. The statement is derived from the properties of the single components.</p> <p>Skin corrosion/irritation, eye damage/irritation: Skin Corr. 1A; H314 = Causes severe skin burns and eye damage.</p> <p>Sensitisation to the respiratory tract: Lack of data.</p> <p>Skin sensitisation: Skin Sens. 1; H317 = May cause an allergic skin reaction. The product has not been tested. The statement is derived from the properties of the single components.</p> <p>Germ cell mutagenicity/Genotoxicity: Lack of data.</p> <p>Carcinogenicity: Lack of data.</p> <p>Reproductive toxicity: Lack of data.</p> <p>Effects on or via lactation: Lack of data.</p> <p>Specific target organ toxicity (single exposure): Lack of data.</p> <p>Specific target organ toxicity (repeated exposure): STOT RE 2; H373 = May cause damage to organs through prolonged or repeated exposure. The product has not been tested. The statement is derived from the properties of the single components.</p> <p>Information about 4,4'-Methylenebis(cyclohexylamine): NOAEL, Rat, oral: 15 mg/kg bw/d Target organ: Liver NOAEC, Rat, inhalative: 12 mg/m<sup>3</sup> Target organ: Liver Aspiration hazard: Lack of data.</p>
Other information:	<p>Amines (vapours): May cause damage to liver and kidneys through prolonged or repeated exposure. Pre-existing skin and respiratory conditions including dermatitis, asthma and chronic lung disease might be aggravated by exposure.</p>

### Symptoms

In case of inhalation:  
Strongly irritant. The following symptoms may occur: Sore throat, headache, fatigue, dizziness, cough, nausea, vomiting.

In case of ingestion:  
Toxic if swallowed. Burns in the mouth, pharynx, oesophagus, and gastrointestinal tract.  
Other symptoms: Danger of stomach perforation. Abdominal pain, nausea, sore throat, vomiting, thirst and coma.

After contact with skin: Burns, causes poorly healing wounds.

After eye contact: Redness, pain, Danger of loss of sight.



## SECTION 12: Ecological information

### 12.1 Toxicity

Aquatic toxicity: Toxic to aquatic life with long lasting effects.

### 12.2. Persistence and degradability

Further details: no data available

### 12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water:  
no data available

### 12.4 Mobility in soil

no data available

### 12.5 Results of PBT and vPvB assessment

no data available

### 12.6 Other adverse effects

General information: Do not allow to enter into ground-water, surface water or drains.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

Waste key number: 08 04 09\* = Waste adhesives and sealants containing organic solvents or other dangerous substances.

MFSU = manufacture, formulation, supply and use

\* = Evidence for disposal must be provided.

Recommendation: Incinerate as hazardous waste according to applicable local, state, and federal regulations.

#### Contaminated packaging

Recommendation: Dispose of waste according to applicable legislation. Handle contaminated packages in the same way as the substance itself. Non-contaminated packages may be recycled. Do not remove label until container is thoroughly cleaned.

## SECTION 14: Transport information

### 14.1 UN number

ADR/RID, IMDG, IATA: 2922

### 14.2 UN proper shipping name

ADR/RID, IMDG, IATA: UN 2922, CORROSIVE LIQUID, TOXIC, N.O.S.  
(4,4'-Methylenebis(cyclohexylamine) and alpha-(4-Aminocyclohexyl)-p-toluidine)

### 14.3 Transport hazard class(es)

ADR/RID: Class 8, Code: CT1

IMDG, IATA: Class 8, Subrisk 6.1

### 14.4 Packing group

ADR/RID, IMDG, IATA: II

## 14.5 Environmental hazards

Marine pollutant: Yes

## 14.6 Special precautions for user

### Land transport (ADR/RID)

Warning board: ADR/RID: Kemmler-number 86, UN number 2922  
Hazard label: 8+6.1  
Special provisions: 274  
Limited quantities: 1 L  
EQ: E2  
Contaminated packaging - Instructions: P001 IBC02  
Special provisions for packing together: MP15  
Portable tanks - Instructions: T7  
Portable tanks - Special provisions: TP2  
Tank coding: L4BN  
Tunnel restriction code: E



### Sea transport (IMDG)

EmS: F-A, S-B  
Special provisions: 274  
Limited quantities: 1 L  
EQ: E2  
Contaminated packaging - Instructions: P001  
Contaminated packaging - Provisions: -  
IBC - Instructions: IBC02  
IBC - Provisions: -  
Tank instructions - IMO: -  
Tank instructions - UN: T7  
Tank instructions - Provisions: TP2  
Stowage and segregation: Category B. Clear of living quarters.  
Properties and observations: Causes burns to skin, eyes and mucous membranes. Toxic if swallowed, by skin contact or by inhalation.

### Air transport (IATA)

Hazard: Corrosive & Toxic  
EQ: E2  
Passenger Ltd.Qty.: Pack.Instr. Y840 - Max. Net Qty/Pkg. 0.5 L  
Passenger: Pack.Instr. 851 - Max. Net Qty/Pkg. 1 L  
Cargo: Pack.Instr. 855 - Max. Net Qty/Pkg. 30 L  
Special Provisioning: A3 A803  
ERG: 8P

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

no data available

## SECTION 15: Regulatory information

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

#### National regulations - Great Britain

Hazchem-Code: 2X

#### National regulations - EC member states

##### Labelling of packaging with <= 125mL content

R phrase(s):	R 25	Toxic if swallowed.
	R 35	Causes severe burns.
	R 43	May cause sensitisation by skin contact.
	R 51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
S phrase(s):	S 1	Keep locked up.
	S 26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
	S 36/37/39	Wear suitable protective clothing, gloves and eye/face protection.
	S 45	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
	S 61	Avoid release to the environment. Refer to special instructions/Safety data sheets.

### 15.2 Chemical Safety Assessment

For this mixture a chemical safety assessment is not required.

## SECTION 16: Other information

### Further information

Wording of the H-phrases under paragraph 2 and 3:

- H301 = Toxic if swallowed.
- 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.
- H332 = Harmful if inhaled.
- H335 = May cause respiratory irritation.
- H373 = May cause damage to organs through prolonged or repeated exposure.
- H411 = Toxic to aquatic life with long lasting effects.

Wording of the R-phrases under section 2 and 3:

- R 20/21/22 = Harmful by inhalation, in contact with skin and if swallowed.
- R 21/22 = Harmful in contact with skin and if swallowed.
- R 22 = Harmful if swallowed.
- R 25 = Toxic if swallowed.
- R 34 = Causes burns.
- R 35 = Causes severe burns.
- R 36/38 = Irritating to eyes and skin.
- R 37 = Irritating to respiratory system.
- R 38 = Irritating to skin.
- R 41 = Risk of serious damage to eyes.
- R 43 = May cause sensitisation by skin contact.
- R 48/22 = Harmful: danger of serious damage to health by prolonged exposure if swallowed.
- R 51/53 = Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Reason of change: Changes in section 2: classification, labelling, P-phrases  
Changes in section 3: Composition / Information on ingredients  
Changes in section 8-15: General revision

**Department issuing data sheet**

Contact person: see section 1: Dept. responsible for information

For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

This data sheet cannot cover all possible situations which the user may experience during processing. Each aspect of your operation should be examined to determine if, and which additional precautions may be necessary. All health and safety information contained in this data sheet should be provided to your employees and customers. It is your responsibility to develop appropriate workplace instructions and training programmes for employees.

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