

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

1.1 Product identifier

Trade name: TMSFR 5100A

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 EC regulation 1272/2008 (CLP)

Skin Irrit. 2; H315 Causes skin irritation.
Eye Irrit. 2; H319 Causes serious eye irritation.
Skin Sens. 1; H317 May cause an allergic skin reaction.
Aquatic Chronic 2; H411 Toxic to aquatic life with long lasting effects.

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 (CLP)



Signal word:

WarningHazard statements: 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.

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Precautionary statements:	P261	Avoid breathing vapours/spray.
	P273	Avoid release to the environment.
	P280	Wear protective gloves/protective clothing/eye protection.
	P302+P352	IF ON SKIN: Wash with plenty of water/soap.
	P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
	P337+P313	If eye irritation persists: Get medical advice/attention.

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.

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 Ireland: 8 hours Ireland: 8 hours	1 mg/m ³ (respirable fraction) 0.8 mg/m ³ (respirable fraction) 10 mg/m ³ (inhalable fraction)
471-34-1	Calcium carbonate	Great Britain: WEL-TWA Great Britain: WEL-TWA	10 mg/m ³ (inhalable fraction) 4 mg/m ³ (respirable fraction)
1333-86-4	Carbon	Great Britain: WEL-STEL Great Britain: WEL-TWA Ireland: 15 minutes Ireland: 8 hours	7 mg/m ³ 3.5 mg/m ³ 7 mg/m ³ 3.5 mg/m ³

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

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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 ³
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.
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12.2. Persistence and degradability

Further details:	no data available
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12.3 Bioaccumulative potential

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

Signal word:

Warning

Hazard statements:

H317

May cause an allergic skin reaction.

Precautionary statements:

P261

Avoid breathing vapours/spray.

P280

Wear protective gloves/protective clothing/eye protection.

P302+P352

IF ON SKIN: Wash with plenty of water/soap.

P333+P313

If skin irritation or rash occurs: Get medical advice/attention.

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 7, 10: 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: TMSFHR 5100B

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 EC regulation 1272/2008 (CLP)

Acute Tox. 4; H302	Harmful if swallowed.
Acute Tox. 4; H312	Harmful in contact with skin.
Skin Corr. 1B; H314	Causes severe skin burns and eye damage.
Skin Sens. 1; H317	May cause an allergic skin reaction.
STOT RE 2; H373	May cause damage to organs through prolonged or repeated exposure.
Aquatic Acute 1; H400	Very toxic to aquatic life.
Aquatic Chronic 1; H410	Very toxic to aquatic life with long lasting effects.

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

C; R34	Causes burns.
Xn; R21/22	Harmful in contact with skin and if swallowed.
Xn; R48/22	Harmful: danger of serious damage to health by prolonged exposure if swallowed.
Sens.; R43	May cause sensitisation by skin contact.
N; R50-53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.2 Label elements

Labelling (CLP)



Signal word:

Danger

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Hazard statements:	H302	Harmful if swallowed.
	H312	Harmful in contact with skin.
	H314	Causes severe skin burns and eye damage.
	H317	May cause an allergic skin reaction.
	H373	May cause damage to organs through prolonged or repeated exposure.
Precautionary statements:	H410	Very toxic to aquatic life with long lasting effects.
	P260	Do not breathe vapours.
	P273	Avoid release to the environment.
	P280	Wear protective gloves/protective clothing/eye protection/face protection.
	P301+P330+P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
	P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P310	Immediately call a POISON CENTER/doctor.	

Labelling (67/548/EEC or 1999/45/EC)**C****N**

corrosive

dangerous for the environment

R phrase(s):	R 21/22	Harmful in contact with skin and if swallowed.
	R 34	Causes 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 50/53	Very 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 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 m-Phenylenebis(methylamine), Diethylmethylbenzenediamine,
3-Aminomethyl-3,5,5-trimethylcyclohexylamine, triethylentetramine.**2.3 Other hazards**

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.

Hazardous ingredients:

Ingredient	Designation	Content	Classification
EC No. 270-877-4 CAS 68479-98-1	Diethylmethylenediamine	< 90 %	DSD/DPD: Xn; R48/22. Xi; R36. N; R50-53. Xn; R21/22. CLP: Acute Tox. 4; H302. Acute Tox. 4; H312. Eye Irrit. 2; H319. STOT RE 2; H373. Aquatic Acute 1; H400. Aquatic Chronic 1; H410.
EC No. 220-666-8 CAS 2855-13-2	3-Aminomethyl-3,5,5-trimethylcyclohexylamine	< 25 %	DSD/DPD: C; R34. Sens.; R43. R52-53. Xn; R21/22. CLP: Acute Tox. 4; H302. Acute Tox. 4; H312. Skin Corr. 1B; H314. Skin Sens. 1; H317. Aquatic Chronic 3; H412.
EC No. 216-032-5 CAS 1477-55-0	m-Phenylenebis (methylamine)	< 25 %	DSD/DPD: C; R34. Sens.; R43. R52-53. Xn; R20/22. CLP: Acute Tox. 4; H302. Acute Tox. 4; H332. Skin Corr. 1B; H314. Skin Sens. 1; H317. Aquatic Chronic 3; H412.
EC No. 203-950-6 CAS 112-24-3	Triethylenetetramine	< 25 %	DSD/DPD: Xn; R21. C; R34. Sens.; R43. R52-53. CLP: Acute Tox. 4; H312. Skin Corr. 1B; H314. 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:	Immediately get medical attention. After contact with skin, wash immediately with soap and plenty of water. Take off immediately all contaminated clothing. Cover with sterile dressing material to protect against infection.
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

Harmful in contact with skin and if swallowed. May be harmful if inhaled. Causes severe skin burns and eye damage. May cause an allergic skin reaction. May cause damage to organs through prolonged or repeated exposure.

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.
May form dangerous gases and vapours in case of fire.
Formation of numerous unknown compounds is possible.
In case of fire may be liberated: ammonia, nitrogen oxides (NO_x), carbon monoxide and carbon dioxide.

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 contact with the substance. Wear protective equipment. Avoid formation of aerosols/vapours. Do not breathe vapour/aerosol/mist. Respiratory protection in case of aerosol or vapour formation. Ensure adequate ventilation, especially in confined areas. Keep away from unprotected people.

6.2 Environmental precautions

Do not allow to penetrate into soil, waterbodies or drains.
In case of release, notify competent 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. Final cleaning. 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. Wear protective equipment. Avoid formation of aerosols/vapours. Do not breathe vapour/aerosol/mist.

Respiratory protection in case of aerosol or vapour formation. When using do not eat, drink or smoke. After work, wash hands and face.

When using do not eat, drink or smoke.

Precautions against fire and explosion:

Take standard precautions to prevent fire. Protect from excessive heat. Avoid open flames.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storerooms and containers:

Store container tightly closed in a dry and cool place. Keep container in a well-ventilated place. Refrigerated storage is recommended to maintain product quality. Do not drop, drag or bang the container. Keep away from incompatible materials.

Hints on joint storage: Incompatible materials: Nitrous acid, Sodium hypochlorite, peroxides, acrylate, strong acids, strong oxidizing agents, epoxides, aldehydes, ketone, halogenated organic compounds. Keep away from food and drinks.

Storage class: 8A = Combustible corrosive substances

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. Recommended: 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: 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: Protective work clothing, chemical resistant safety shoes.

General protection and hygiene measures:
Avoid contact with skin, eyes, and clothing. Change contaminated clothing.
Do not breathe vapour/aerosol/mist. Work place should be equipped with a shower and an eye rinsing apparatus.
After work, wash hands and face. When using do not eat, drink or smoke.

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: 121 °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:	0.84 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

SECTION 10: Stability and reactivity

10.1 Reactivity

Refer to section: Possibility of hazardous reactions.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Exothermic reactions with incompatible materials.

10.4 Conditions to avoid

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

10.5 Incompatible materials

Nitrous acid, Sodium hypochlorite, peroxides, acrylate, strong acids, strong oxidizing agents, epoxides, aldehydes, ketone, halogenated organic compounds

10.6 Hazardous decomposition products

In case of fire may be liberated: ammonia, nitrogen oxides (NO_x), 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:	<p>Acute toxicity (oral): Acute Tox. 4; H302 = Harmful if swallowed. The product has not been tested. The statement is derived from the properties of the single components. ATEmix (calculated): $300 < ATE \leq 2000$.</p> <p>Acute toxicity (dermal): Acute Tox. 4; H312 = Harmful in contact with skin. The product has not been tested. The statement is derived from the properties of the single components. ATEmix (calculated): $1000 < ATE \leq 2000$.</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. ATEmix (calculated): $ATE > 5$.</p> <p>Skin corrosion/irritation, eye damage/irritation: Skin Corr. 1B; H314 = Causes severe skin burns and eye damage. The product has not been tested. The statement is derived from the properties of the single components.</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>Chronic toxicity: Possible danger of damage to liver and kidneys.</p> <p>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: May be harmful if inhaled.
Following symptoms can occur depending on degree of seriousness: Sore throat, headache, fatigue, dizziness, cough, nausea, vomiting.
In case of ingestion: 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: Danger of loss of sight, burns.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity: Very 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: Dispose of waste according to applicable legislation.

Contaminated packaging

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

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

ADR/RID, IMDG, IATA: 2735

14.2 UN proper shipping nameADR/RID, IMDG, IATA: UN 2735, AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, N.O.S.
(3-Aminomethyl-3,5,5-trimethylcyclohexylamine, m-Phenylenebis(methylamine) and triethyltetramine)**14.3 Transport hazard class(es)**

ADR/RID: Class 8, Code: C7

IMDG: Class 8, Subrisk -

IATA: Class 8

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 80, UN number 2735
Hazard label:	8
Special provisions:	274
Limited quantities:	1 L
EQ:	E2
Contaminated packaging - Instructions:	P001 IBC02
Special provisions for packing together:	MP15
Portable tanks - Instructions:	T11
Portable tanks - Special provisions:	TP1 TP27
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:	T11
Tank instructions - Provisions:	TP1, TP27
Stowage and segregation:	Category A. "Separated from" acids.
Properties and observations:	Colourless to yellowish liquids or solutions with a pungent odour. Miscible with or soluble in water. When involved in a fire, evolve toxic gases. Corrosive to most metals, especially to copper and its alloys. React violently with acids. Cause burns to skin, eyes and mucous membranes.
Segregation group:	18



Air transport (IATA)

Hazard:	Corrosive
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:	8L



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**

Signal word:

Danger

Hazard statements:

H314

Causes severe skin burns and eye damage.

H317

May cause an allergic skin reaction.

Precautionary statements:

P280

Wear protective gloves/protective clothing/eye protection/face protection.

P301+P330+P331

IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P303+P361+P353

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P310

Immediately call a POISON CENTER/doctor.

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:

H302 = Harmful if swallowed.

H312 = Harmful in contact with skin.

H314 = Causes severe skin burns and eye damage.

H317 = May cause an allergic skin reaction.

H319 = Causes serious eye irritation.

H332 = Harmful if inhaled.

H373 = May cause damage to organs through prolonged or repeated exposure.

H400 = Very toxic to aquatic life.

H410 = Very 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 20/22 = Harmful by inhalation and if swallowed.

R 21 = Harmful in contact with skin.

R 21/22 = Harmful in contact with skin and if swallowed.

R 34 = Causes burns.

R 36 = Irritating 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 50/53 = Very 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: Classification, labelling

Changes in section 3: information on ingredients

General revision

Department issuing data sheet

Contact person:

see section 1: Dept. responsible for information

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 (REACH) and Regulation (EU) No 453/2010

Revision date: 22/12/2014

Version: 8

Language: en-GB,IE

Date of first version: 14/12/2009

TMSFHR 5100B

Material number T5100B

Page:

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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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