

Safety Data Sheet
according to 1907/2006/EC, Article 31

Printing date: 02.11.2010

Version: 2

Revision: 02.11.2010

1 Identification of the substance/mixture and of the company/undertaking**· Product details:****· Trade name: 832B-375ML, 832B-3L, 832B-12L, 832B-60L (PART A) Epoxy - Black Encapsulating & Potting Compound****· Application of the substance / the preparation:** Epoxy resin adhesive**· Manufacturer:**MG Chemicals
1210 Corporate Drive,
Burlington, Ontario L7L 5R6
CANADAPHONE: +1 905-331-1396
E-MAIL: support@mgchemicals.com
WEB www.mgchemicals.com
FAX +1 905-340-0772**· Distributor:**MG Chemicals UK Limited
DMC, Ensor House, Ensor Way,
New Mills, High Peak, SK22 4NQ,
ENGLANDPHONE: +44 1663 362888
E-MAIL:
sales@mgchemicals.com**· Information department:**

E-MAIL (Competent Person): sds@mgchemicals.com

· For hazardous material incidents ONLY—leaks, spills, fires, exposures or accidents
UK: Call CHEMTREC: +(44)-870-8200418 or international: +(1) 703-527-3887For updates on this SDS please download from www.mgchemicals.com**2 Hazards identification****· Classification of the substance or mixture****· Classification according to Regulation (EC) No 1272/2008**

GHS09 environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



GHS07

| | |
|---------------|---|
| Acute Tox. 4 | H302 Harmful if swallowed. |
| 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. |

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

Xi; Irritant

R36/38: Irritating to eyes and skin.



Xi; Sensitising

R43: May cause sensitisation by skin contact.

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N; Dangerous for the environment

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

• **Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EC" in the latest valid version.

• **Classification system:**

The classification was made according to the latest editions of the EC-lists and expanded using company data and specialized literature.

• **Label elements**

• **Labelling according to Regulation (EC) No 1272/2008**

• **Hazard pictograms**



GHS07 GHS09

• **Signal word** Warning

• **Hazard statements**

H302 Harmful if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H317 May cause an allergic skin reaction.

H411 Toxic to aquatic life with long lasting effects.

Contains epoxy constituents. May produce an allergic reaction.

• **Precautionary statements**

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves and eye protection.

P262 Do not get in eyes, on skin, or on clothing.

P273 Avoid release to the environment.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

• **Labelling according to EU guidelines:**

The product has been classified and marked in accordance with EC Directives / Ordinance on Hazardous Materials

• **Code letter and hazard designation of product:**



Xi Irritant
N Dangerous for the environment

• **Hazard-determining components of labelling:**

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

oxirane, mono[(C12-14-alkyloxy)methyl] derivs

Reaction product: Phenol polymer with formaldehyde, glycidyl ether

• **Risk phrases:**

36/38 Irritating to eyes and skin.

43 May cause sensitisation by skin contact.

51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

• **Safety phrases:**

23 Do not breathe vapour.

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- 24/25 Avoid contact with skin and eyes.
 29/56 Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point.
 37 Wear suitable gloves.
 46 If swallowed, seek medical advice immediately and show this container or label.
 60 This material and its container must be disposed of as hazardous waste.

Special labelling of certain preparations:

Contains epoxy constituents. See information supplied by the manufacturer.

3 Composition/information on ingredients

Chemical characterization:

Description: Mixture of the substances listed below with nonhazardous additions.

Dangerous components:

- | | | |
|--|--|--------|
| CAS: 25068-38-6 NLP: 500-033-5 Index number: 603-074-00-8 | reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight = 700) Xi R36/38; Xi R43; N R51/53 Aquatic Chronic 2, H411; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317 | 80-95% |
| CAS: 68609-97-2 EINECS: 271-846-8 Index number: 603-103-00-4 | oxirane, mono[(C12-14-alkyloxy)methyl] derivs Xi R38; Xi R43 Skin Irrit. 2, H315; Skin Sens. 1, H317 | 5-20% |
| CAS: 28064-14-4 | Reaction product: Phenol polymer with formaldehyde, glycidyl ether Xi R36/38; Xi R43; N R51/53 Aquatic Chronic 2, H411; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317 | < 2.5% |
- Additional information:** For the wording of the listed risk phrases refer to section 16.

4 First aid measures

General information:

Immediately remove any clothing soiled by the product.
 If symptoms persist or in case of doubt, seek medical advice.
 Remove affected persons from danger area and lay them down.

After inhalation: Supply fresh air; consult a doctor in case of pain.

After skin contact:

Immediately wash with water and soap and rinse thoroughly.
 If skin irritation continues, consult a doctor.

After eye contact: Rinse the eyes with open eyelids for 10 - 15 minutes with water. Then consult a doctor (eye specialist).

After swallowing:

Do not induce vomiting.
 Drink 2-4 glasses of water.
 Never give anything by mouth to an unconscious person.
 Call a doctor immediately.

Information for doctor:

The following symptoms may occur:

After the uptake of large quantities:
 Abdominal pain

Treatment: Symptomatic treatment

5 Firefighting measures

Suitable extinguishing agents:

Water jet spray
 Extinguishing powder

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Carbon dioxide (CO₂)

Foam

Use fire fighting measures that suit the environment.

- **For safety reasons unsuitable extinguishing agents:** Direct jet water
- **Special hazards caused by the material, its products of combustion or resulting gases:**
Dangerous decomposition products see chapter 10: stability and reactivity
- **Protective equipment:** Wear self-contained respiratory protective device.
- **Additional information:**
Collect contaminated fire fighting water separately. It must not enter the sewage system.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

6 Accidental release measures

- **Person-related safety precautions:**
Ensure adequate ventilation.
Avoid contact with eyes and skin.
Do not smoke - keep ignition sources away
Keep unprotected persons away.
Wear protective clothing.
wear protective gloves
- **Measures for environmental protection:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to penetrate the ground/soil.
In case of seepage into the ground inform responsible authorities.
- **Measures for cleaning/collecting:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.
Make sure to recycle or dispose of in suitable receptacles.
Dispose contaminated material as waste according to item 13.
Wash spill with soap and water.

7 Handling and storage

- **Handling:**
- **Information for safe handling:**
Ensure good ventilation/exhaustion at the workplace.
Avoid inhalation of vapours formed by heated product.
Avoid contact with eyes and skin.
- **Information about protection against explosions and fires:**



Keep ignition sources away - Do not smoke.

- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store cool and dry in a well ventilated area.
- **Information about storage in one common storage facility:**
Store away from foodstuffs.
Store away from feed.
Store away from oxidizing agents.
- **Further information about storage conditions:** Keep receptacle tightly sealed.

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· **Storage class:** 10 Combustible liquids

8 Exposure controls/personal protection

· **Additional information about design of technical systems:**

Install appropriate mechanical ventilation.
No further data; see item 7.

· **Components with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.
Remove all soiled and contaminated clothing immediately.
Wash hands before breaks and at the end of work.
Do not inhale gases / fumes / aerosols.
Avoid contact with the eyes and skin.
Provide eye bath.

· **Breathing equipment:**

Not necessary if you follow the instructions for use.
If vapours are formed during processing:



In case of brief exposure or low pollution use a respiratory filter device. In case of intensive or longer exposure use a respiratory protective device that is independent of circulating air.

· **Protection of hands:**

Chemical resistant gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves:**

The selection of suitable depends upon the material, and also upon the quality of the gloves. The degree of protection will vary from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material:**

The exact penetration time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:** Safety glasses

· **Body protection:** Protective work clothing.

9 Physical and chemical properties

· **General Information:**

· **Appearance:**

Form: Liquid
Colour: Black
Odour: Odourless

· **Change in condition:**

Melting point/Melting range: not determined
Boiling point/Boiling range: 216°C

· **Flash point:** 190°C

· **Self ignition temperature:** Product is not self-igniting.

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- **Danger of explosion:** Product does not present an explosion hazard.
- **Density:** 1.13 g/cm³
- **Solubility in / Miscibility with Water:** Not determined
- **Viscosity: kinematic:** 2218 mm²/s

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**
To avoid thermal decomposition do not overheat.
No decomposition if used and stored according to specifications.
- **Materials to be avoided:** Oxidants
- **Dangerous reactions:** No dangerous reactions known.
- **Dangerous products of decomposition:**
In case of fire or at high temperatures the formation of following decomposition products is possible.
Carbon monoxide and carbon dioxide
phenol components

11 Toxicological information

- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:**
Oral LD₅₀ 2000 mg/kg (rat)
- **Primary irritant effect:**
- **on the skin:**
Irritant to skin and mucous membranes.
Continuing or repeated contact with the skin may cause dermatitis.
- **on the eye:** No irritating effect.
- **Sensitization:** May cause sensitization by skin contact.
- **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:
Irritant
After swallowing: irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.
- **Sensitisation:** May cause sensitisation by skin contact.

12 Ecological information

- **Ecotoxicological effects:**
- **Aquatic toxicity:**
25068-38-6 reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight = 700)
EC₅₀ 3.3 mg/l (daphnia magna)
LC₅₀ 7.5 mg/l (Onchorhynchus mykiss)
- **Remark:** Toxic to fish.
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous to water.

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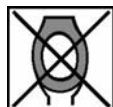
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According to appendix 4 of VwVwS dated 27.7.2005 (German regulation)



Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water even if small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Toxic to aquatic organisms

13 Disposal considerations

- **Product:**
- **Recommendation:**



Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Disposal according to instructions of local authorities.

- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **Land transport ADR/RID (cross-border)**



- **ADR/RID class:** 9 (M6) Miscellaneous dangerous substances and articles.
- **Danger code (Kemler):** 90
- **UN-Number:** 3082
- **Packaging group:** III
- **Label:** 9
- **Special marking:** Symbol (fish and tree)
- **Description of goods:** 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (bisphenol A-(epichlorhydrin); epoxy resin(average molecular weight<700), oxirane, mono[(C12-14-alkyloxy)methyl] derivs)
- **Limited quantities (LQ):** LQ7
- **Transport category:** 3
- **Tunnel restriction code:** E
- **Remarks:** Limited quantity: 5l per inner packaging, 30 kg gross per packaging unit

- **Maritime transport IMDG:**



- **IMDG Class:** 9
- **UN Number:** 3082
- **Label:** 9
- **Packaging group:** III

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- **EMS Number:** F-A,S-F
- **Marine pollutant:** Yes
Symbol (fish and tree)
- **Proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (bisphenol A-(epichlorhydrin); epoxy resin(average molecular weight<700), oxirane, mono[(C12-14-alkyloxy)methyl] derivs)

- **Air transport ICAO-TI and IATA-DGR:**



- **ICAO/IATA Class:** 9
- **UN/ID Number:** 3082
- **Label:** 9
- **Special marking:** Symbol (fish and tree)
- **Packaging group:** III
- **Proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (bisphenol A-(epichlorhydrin); epoxy resin(average molecular weight<700), oxirane, mono[(C12-14-alkyloxy)methyl] derivs)
- **Remarks:**
Packing Instructions:
For Limited Quantities: Y914 (Max Net Qty/Pkg: 30 kg G)
Passenger and Cargo Aircraft: 914 /(Max Net Qty/Pkg: 450 l)
Cargo Aircraft only: 914 (Max Net Qty/Pkg: 450 l)
- **UN "Model Regulation":** UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III

15 Regulatory information

- **Chemical safety assessment** A Chemical Safety Assessment has not been carried out.
- **National regulations**
- **Water hazard class:** Water hazard class 2 (Self-assessment): hazardous for water.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Reasons for amendments:**
Change of trade name
Safety phrases
EC Regulation 453/2010
- **Replaces version dated:** 25.11.2009
- **Relevant phrases**
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.
- **Precedence:**
R36/38 Irritating to eyes and skin.
R38 Irritating to skin.
R43 May cause sensitisation by skin contact.
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- **Department issuing MSDS:**
KFT Chemieservice GmbH
Im Leuschnerpark. 3 D-64347 Griesheim
Postfach 1451 D-64345 Griesheim

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Phone: +49 6155 86829-0 Fax: +49 6155 86829-25

Safety Data Sheet Service: +49 6155 86829-22

• **Contact:** Dr. Sonja Fischer• **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

• **Sources:** MSDS of the supplier

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- Trade name: **832B-375ML, 832B-3L, 832B-12L, 832B-60L , 8320 (PART B) Encapsulating Epoxy Kit**
- Application of the substance / the preparation: Epoxy resin adhesive

· Manufacturer:

MG Chemicals
1210 Corporate Drive,
Burlington, Ontario L7L 5R6
CANADA

PHONE: +1 905-331-1396
E-MAIL: support@mgchemicals.com
WEB www.mgchemicals.com
FAX +1 905-340-0772

· Distributor:

MG Chemicals UK Limited
DMC, Ensor House, Ensor Way,
New Mills, High Peak, SK22 4NQ,
ENGLAND

PHONE: +44 1663 362888
E-MAIL:
sales@mgchemicals.com

· Information department:

E-MAIL (Competent Person): sds@mgchemicals.com

- For hazardous material incidents ONLY—leaks, spills, fires, exposures or accidents
UK: Call CHEMTREC: +(44)-870-8200418 or international: +(1) 703-527-3887

For updates on this SDS please download from www.mgchemicals.com

2 Hazards identification

- Classification of the substance or mixture
- Classification according to Regulation (EC) No 1272/2008



GHS05 corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.



GHS07

Skin Sens. 1 H317 May cause an allergic skin reaction.

STOT SE 3 H335 May cause respiratory irritation.

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



C; Corrosive

R34: Causes burns.



Xi; Irritant

R37: Irritating to respiratory system.



Xi; Sensitising

R43: May cause sensitisation by skin contact.

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- **Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EC" in the latest valid version.

- **Classification system:**

The classification was made according to the latest editions of the EC-lists and expanded using company data and specialized literature.

- **Label elements**

- **Labelling according to Regulation (EC) No 1272/2008**

- **Hazard pictograms**



GHS05 GHS07

- **Signal word** Danger

- **Hazard statements**

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

- **Precautionary statements**

P260 Do not breathe mist/vapours/spray.

P280 Wear protective gloves/clothing.

P262 Do not get in eyes, on skin, or on clothing.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P314 Get medical advice/attention if you feel unwell.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Labelling according to EU guidelines:**

The product has been classified and marked in accordance with EC Directives / Ordinance on Hazardous Materials

- **Code letter and hazard designation of product:**



C Corrosive

- **Hazard-determining components of labelling:**

Fatty acids, C18-unsatd., dimers, polymers with tall-oil fatty acids and triethylenetetramine
3,6-diazaoctanethylenediamin

- **Risk phrases:**

34 Causes burns.

37 Irritating to respiratory system.

43 May cause sensitisation by skin contact.

- **Safety phrases:**

23 Do not breathe vapour.

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

36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

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

56 Dispose of this material and its container to hazardous or special waste collection point.

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· **Special labelling of certain preparations:**

According to directive 1999/45/EC annex IV the containers are to fitted with child-resistant fastenings and a tactile warning of danger if offered or sold to the general public.

According to regulation 1272/2008/EG annex II the containers are to fitted with child-resistant fastenings and a tactile warning of danger if offered or sold to the general public.

3 Composition/information on ingredients

· **Chemical characterization:**

· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

| | | |
|--|---|---------|
| CAS: 68082-29-1 NLP: 500-191-5 | Fatty acids, C18-unsatd., dimers, polymers with tall-oil fatty acids and triethylenetetramine ☒ Xi R36/37/38; ☒ Xi R43 ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335 | 50-100% |
| CAS: 112-24-3 EINECS: 203-950-6 Index number: 612-059-00-5 | 3,6-diazaoctanethylenediamin ☒ C R34; ☒ Xn R21; ☒ Xi R43 R52/53 ⚠ Skin Corr. 1B, H314; ⚠ Acute Tox. 4, H312; Skin Sens. 1, H317; Aquatic Chronic 3, H412 | 10-20% |

· **Additional information:** For the wording of the listed risk phrases refer to section 16.

4 First aid measures

· **General information:**

Immediately remove any clothing soiled by the product.
Remove affected persons from danger area and lay them down.
If symptoms persist or in case of doubt, seek medical advice.

· **After inhalation:**

In case of complaints possibly caused by vapours provide fresh air.
If symptoms persist, consult a doctor.
In case of unconsciousness, place patients on their side in a stable position for transportation.

· **After skin contact:**

Immediately wash with water and soap and rinse thoroughly.
If symptoms persist, consult a doctor.

· **After eye contact:**

Rinse the eyes with open eyelids for 10 - 15 minutes with water. Then consult a doctor (eye specialist).
Protect unharmed eye.

· **After swallowing:**

Do not induce vomiting; call medical help immediately.
Drink 2-4 glasses of water.
Never give anything by mouth to an unconscious person.

· **Information for doctor:**

· **The following symptoms may occur:**

Blurred vision
After inhalation:
irritant effect on the respiratory tract
After swallowing:
Gastric or intestinal disorders.
Ulcer

· **Treatment:** Symptomatic treatment

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5 Firefighting measures

- **Suitable extinguishing agents:**

Water jet spray

Fire-extinguishing powder

Foam

Use fire fighting measures that suit the environment.

- **For safety reasons unsuitable extinguishing agents:** Direct jet water

- **Special hazards caused by the material, its products of combustion or resulting gases:**

Dangerous decomposition products see chapter 10: stability and reactivity

- **Protective equipment:**

Do not inhale combustion vapours.

Wear self-contained respiratory protective device.

- **Additional information:**

Collect contaminated fire fighting water separately. It must not enter the sewage system.

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

6 Accidental release measures

- **Person-related safety precautions:**



Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation.

Do not smoke - keep ignition sources away

Avoid contact with eyes and skin.

- **Measures for environmental protection:**

Do not allow product to reach sewage system or any water course.

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to penetrate the ground/soil.

In case of seepage into the ground inform responsible authorities.

- **Measures for cleaning/collecting:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Use neutralizing agent.

Ensure adequate ventilation.

Make sure to recycle or dispose of in suitable receptacles.

Dispose contaminated material as waste according to item 13.

Wash spill area with soap and water.

7 Handling and storage

- **Handling:**

- **Information for safe handling:**

Ensure good ventilation/exhaustion at the workplace.

Avoid contact with eyes and skin.

Avoid inhalation of vapours.

- **Information about protection against explosions and fires:**



Keep ignition sources away - Do not smoke.

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- **Storage:**
 - **Requirements to be met by storerooms and receptacles:** Store cool and dry in a well ventilated area.
 - **Information about storage in one common storage facility:**
 - Store away from foodstuffs.
 - Store away from feed.
 - **Further information about storage conditions:**
 - Keep receptacle tightly sealed.
 - Protect from heat
 - **Storage class:** 8 Corrosive products (VCI)
-

8 Exposure controls/personal protection

- **Additional information about design of technical systems:**
 - Install appropriate mechanical ventilation.
 - No further data; see item 7.
- **Components with limit values that require monitoring at the workplace:**
 - The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Personal protective equipment:**
- **General protective and hygienic measures:**
 - Keep away from foodstuffs, beverages and feed.
 - Do not eat or drink while working.
 - Remove all soiled and contaminated clothing immediately.
 - Wash hands before breaks and at the end of work.
 - Use skin protection cream for skin protection.
 - Do not inhale gases / fumes / aerosols.
 - Avoid any contact with eyes and skin.
 - Provide eye bath.
 - If larger quantities are handled, provide emergency showers.
- **Breathing equipment:**
 - Not necessary if you follow the instructions for use.
 - In case of unintended release:



In case of brief exposure or low pollution use a respiratory filter device. In case of intensive or longer exposure use a respiratory protective device that is independent of circulating air.

- **Protection of hands:**
 - Chemical resistant gloves
 - The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
 - Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
 - Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
 - **Material of gloves:**
 - The selection of suitable depends upon the material, and also upon the quality of the gloves. The degree of protection will vary from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
 - **Penetration time of glove material:**
 - The exact penetration time has to be found out by the manufacturer of the protective gloves and has to be observed.
 - **Eye protection:** Tightly sealed goggles.
 - **Body protection:** Protective work clothing.
-

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9 Physical and chemical properties

- **General Information:**
- **Appearance:**
 - Form: Liquid
 - Colour: Amber coloured
- **Odour:** mouldy
- **Change in condition:**
 - Melting point/Melting range: not determined
 - Boiling point/Boiling range: not determined
- **Flash point:** 110°C
- **Self ignition temperature:** Product is not self-igniting.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Vapour pressure at 20°C:** < 1.3 hPa
- **Density:** 0.98 g/cm³
- **Solubility in / Miscibility with Water:** Partly soluble
- **Viscosity:**
 - kinematic at 20°C: 11501 mm²/s

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**
To avoid thermal decomposition do not overheat.
No decomposition if used and stored according to specifications.
- **Materials to be avoided:**
Acids
Acrylates
Aldehydes
Ketones
Peroxides
Chlorates
Permanganates
- **Dangerous reactions:** Reactions with above-mentioned substances
- **Dangerous products of decomposition:**
Forming of dangerous decomposition products possible at elevated temperatures.
In case of fire or at high temperatures the formation of following decomposition products is possible.
Carbon monoxide and carbon dioxide
Nitrogen oxides (NOx)
Hydrocarbons

11 Toxicological information

- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:**
Oral LD₅₀ 16000 mg/kg (rat)
6500 mg/kg (rabbit)
- **Primary irritant effect:**
- **on the skin:**
Caustic effect on skin and mucous membranes.
Corrosive effect on respiratory tract

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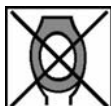
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- **on the eye:** Strong caustic effect.
- **Sensitization:** May cause sensitization by skin contact.
- **Other information (about experimental toxicology):** No teratogenic effects (animal experiments).
- **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:
Corrosive
Swallowing will lead to a strong caustic effect on mouth and throat and risk of perforation of oesophagus and stomach.
- **Sensitisation:** May cause sensitisation by skin contact.

12 Ecological information

- **Ecotoxicological effects:**
- **Aquatic toxicity:** Presently there are no ecotoxicological values available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous to water.
According to appendix 4 of VwVwS dated 27.7.2005 (German regulation)



Do not allow product to reach ground water, water course or sewage system.

Must not reach sewage water or drainage ditch undiluted or unneutralized.
Danger to drinking water even if small quantities leak into the ground.

13 Disposal considerations

- **Product:**
- **Recommendation:**



Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Disposal according to instructions of local authorities.

- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **Land transport ADR/RID (cross-border)**



- **ADR/RID class:** 8 (C9) Corrosive substances.
- **Danger code (Kemler):** 80
- **UN-Number:** 1760
- **Packaging group:** III
- **Label:** 8
- **Description of goods:** 1760 CORROSIVE LIQUID, N.O.S. (TRIETHYLENETETRAMINE)
- **Limited quantities (LQ):** LQ7

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- **Transport category:** 3
- **Tunnel restriction code:** E
- **Remarks:** Limited quantity: 5l per inner packaging, 30 kg gross per packaging unit
- **Maritime transport IMDG:**



- **IMDG Class:** 8
- **UN Number:** 1760
- **Label:** 8
- **Packaging group:** III
- **EMS Number:** F-A,S-B
- **Marine pollutant:** No
- **Proper shipping name:** CORROSIVE LIQUID, N.O.S. (TRIETHYLENETETRAMINE)
- **Air transport ICAO-TI and IATA-DGR:**



- **ICAO/IATA Class:** 8
- **UN/ID Number:** 1760
- **Label:** 8
- **Packaging group:** III
- **Proper shipping name:** CORROSIVE LIQUID, N.O.S. (TRIETHYLENETETRAMINE)
- **Remarks:**
 - Packing Instructions:
 - For Limited Quantities: Y818 (Max Net Qty/Pkg: 1,0 l)
 - Passenger and Cargo Aircraft: 818 (Max Net Qty/Pkg: 5 l)
 - Cargo Aircraft only: 820(Max Net Qty/Pkg: 60 l)
- **UN "Model Regulation":** UN1760, ÄTZENDER FLÜSSIGER STOFF, 8, III

15 Regulatory information

- **Chemical safety assessment** A Chemical Safety Assessment has not been carried out.
- **National regulations**
- **Water hazard class:** Water hazard class 2 (Self-assessment): hazardous for water.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Reasons for amendments:**
 - Change of trade name
 - Safety phrases
 - EC Regulation 453/2010
- **Replaces version dated:** 2.9.2010
- **Relevant phrases**
 - 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.
 - H319 Causes serious eye irritation.

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H335 May cause respiratory irritation.
H412 Harmful to aquatic life with long lasting effects.
R21 Harmful in contact with skin.
R34 Causes burns.
R36/37/38 Irritating to eyes, respiratory system and skin.
R43 May cause sensitisation by skin contact.
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

• Department issuing MSDS:

KFT Chemieservice GmbH
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Phone: +49 6155 86829-0 Fax: +49 6155 86829-25
Safety Data Sheet Service: +49 6155 86829-22

• Contact: Dr. Sonja Fischer**• Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

• Sources: MSDS of the supplier

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