

Safety data sheet according to 1907/2006/EC, Article 31

Printing date 19.05.2015

Version number 1

Revision: 19.05.2015

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

- 1.1 Product identifier

- Trade name: **ergo 7418**

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

No further relevant information available.

- **Application of the substance / the mixture** Epoxy resin adhesive

- 1.3 Details of the supplier of the safety data sheet

- Manufacturer/Supplier:

Kisling AG

Motorenstrasse 102

CH-8620 Wetzikon

Telefon: +41-(0) 58-272 0 272

Telefax: +41-(0) 58-272 0 273

- **Further information obtainable from:** Safety Department

- **Department issuing MSDS:** ergo@kisling.com

- **1.4 Emergency telephone number:** Swiss Toxicological Information Centre: +41-(0) 44-2 51 51 51

SECTION 2: Hazards identification

- 2.1 Classification of the substance or mixture

- Classification according to Regulation (EC) No 1272/2008

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 Directive 1999/45/EC

Xi; Irritant

R36/38: Irritating to eyes and skin.

Xi; Sensitising

R43: May cause sensitisation by skin contact.

N; Dangerous for the environment

R51/53: 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 EU" in the latest valid version.

- Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

- 2.2 Label elements

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

The product is classified and labelled according to the CLP regulation.

- Hazard pictograms



GHS07 GHS09

- Signal word Warning

(Contd. on page 2)

CHGEN

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 19.05.2015

Version number 1

Revision: 19.05.2015

Trade name: ergo 7418

(Contd. of page 1)

- Hazard-determining components of labelling:reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700)**- Hazard statements**

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.

- Precautionary statements

P261 Avoid breathing mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P273 Avoid release to the environment.

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.

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

- Additional information:

EUH205 Contains epoxy constituents. May produce an allergic reaction.

- 2.3 Other hazards**- Results of PBT and vPvB assessment****- PBT:** Not applicable.**- vPvB:** Not applicable.**SECTION 3: Composition/information on ingredients****- 3.2 Mixtures****- Description:** Adhesive**- Dangerous components:**

CAS: 25068-38-6	reaction product: bisphenol-A-(epichlorhydrin) epoxy resin	25-<100%
NLP: 500-033-5	(number average molecular weight \leq 700)	
Index number: 603-074-00-8	Xi R36/38; Xi R43; N R51/53	
Reg.nr.: 01-2119456619-26-xxxx	Aquatic Chronic 2, H411; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317	

- Additional information: For the wording of the listed risk phrases refer to section 16.**SECTION 4: First aid measures****- 4.1 Description of first aid measures****- General information:** Remove any clothing soiled by the product.**- After inhalation:**

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

- After skin contact:

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

If skin irritation continues, consult a doctor.

- After eye contact:

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

- After swallowing:

Rinse out mouth and then drink plenty of water.

If swallowed, do not induce vomiting: seek medical advice and show this container or label.

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

No further relevant information available.

(Contd. on page 3)

-CHGEN-

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 19.05.2015

Version number 1

Revision: 19.05.2015

Trade name: ergo 7418

(Contd. of page 2)

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

No further relevant information available.

SECTION 5: Firefighting measures**- 5.1 Extinguishing media****- Suitable extinguishing agents:**CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.**- For safety reasons unsuitable extinguishing agents:** Water with full jet**- 5.2 Special hazards arising from the substance or mixture**

Formation of toxic gases is possible during heating or in case of fire.

- 5.3 Advice for firefighters**- Protective equipment:**

Wear self-contained respiratory protective device.

Do not inhale explosion gases or combustion gases.

- Additional information

Cool endangered receptacles with water spray.

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

SECTION 6: Accidental release measures**- 6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

- 6.2 Environmental precautions:

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.

- 6.3 Methods and material for containment and cleaning up:

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

Dispose of the material collected according to regulations.

- 6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 10 for information on "stability and reactivity".

See Section 13 for disposal information.

SECTION 7: Handling and storage**- 7.1 Precautions for safe handling** No special precautions are necessary if used correctly.**- Information about fire - and explosion protection:** No special measures required.**- 7.2 Conditions for safe storage, including any incompatibilities****- Storage:****- Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.**- Information about storage in one common storage facility:** Store away from foodstuffs.**- Further information about storage conditions:** Keep receptacle tightly sealed.**- 7.3 Specific end use(s)** No further relevant information available.**SECTION 8: Exposure controls/personal protection****- Additional information about design of technical facilities:** No further data; see item 7.**- 8.1 Control parameters****- Ingredients 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.

(Contd. on page 4)

-CHGEN-

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 19.05.2015

Version number 1

Revision: 19.05.2015

Trade name: ergo 7418

(Contd. of page 3)

- DNELs**7631-86-9 silicon dioxide, chemically prepared**Inhalative | Langzeit, Systemische Effekte | 4 mg/m³ (all)

- **Additional information:** The lists valid during the making were used as basis.

- 8.2 Exposure controls**- Personal protective equipment:****- General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Clean skin thoroughly immediately after handling the product.

- Respiratory protection:

Use suitable respiratory protective device in case of insufficient ventilation.

Filter A/P2

- Protection of hands:

Protective gloves (EN 374)

Check protective gloves prior to each use for their proper condition.

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 the suitable gloves does not only depend on the material, but also on further marks of quality and varies 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 break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:** Safety glasses

- **Body protection:** Use protective suit.

SECTION 9: Physical and chemical properties

- 9.1 Information on basic physical and chemical properties**- General Information****- Appearance:**

Form: Pasty
Colour: Light yellow

- **Odour:** Characteristic

- **Odour threshold:** Not determined.

- **pH-value:** Not determined.

- Change in condition

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: Undetermined.

- **Flash point:** > 100 °C

- **Flammability (solid, gaseous):** Not applicable.

(Contd. on page 5)

-CHGEN-

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 19.05.2015

Version number 1

Revision: 19.05.2015

Trade name: ergo 7418

(Contd. of page 4)

- Ignition temperature:**Decomposition temperature:** Not determined.**- Self-igniting:** Product is not self-igniting.**- Danger of explosion:** Product does not present an explosion hazard.**- Explosion limits:****Lower:** Not determined.**Upper:** Not determined.**- Vapour pressure:** Not determined.**- Density:** Not determined.**- Relative density** Not determined.**- Vapour density** Not determined.**- Evaporation rate** Not determined.**- Solubility in / Miscibility with water:**

Not miscible or difficult to mix.

- Partition coefficient (n-octanol/water): Not determined.**- Viscosity:****Dynamic:** Not determined.**Kinematic:** Not determined.**- 9.2 Other information** No further relevant information available.**SECTION 10: Stability and reactivity****- 10.1 Reactivity****- 10.2 Chemical stability****- Thermal decomposition / conditions to be avoided:**

No decomposition if used and stored according to specifications.

- 10.3 Possibility of hazardous reactions

Reacts with strong alkali.

Reacts with strong acids.

Reacts with strong oxidising agents.

- 10.4 Conditions to avoid No further relevant information available.**- 10.5 Incompatible materials:** No further relevant information available.**- 10.6 Hazardous decomposition products:**

No dangerous products of decomposition if used and stored according to specifications.

SECTION 11: Toxicological information**- 11.1 Information on toxicological effects****- Acute toxicity****- LD/LC50 values relevant for classification:****25068-38-6 reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700)**

Oral | LD50 | 11400 mg/kg (rat)

7631-86-9 silicon dioxide, chemically prepared

Oral | LD50 | >10 000 mg/kg (rat) (Literatur)

Dermal | LD50 | >5000 mg/kg (rab) (Literatur)

- Primary irritant effect:**- Skin corrosion/irritation** Irritant to skin and mucous membranes.

(Contd. on page 6)

CHGEN

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 19.05.2015

Version number 1

Revision: 19.05.2015

Trade name: ergo 7418

(Contd. of page 5)

- **Serious eye damage/irritation** Causes serious eye irritation.
- **Respiratory or skin sensitisation** Sensitisation possible through skin contact.
- **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Irritant
No experimentally found toxicological data are available for this preparation.

SECTION 12: Ecological information

- 12.1 Toxicity

- Aquatic toxicity:

7631-86-9 silicon dioxide, chemically prepared

EC50/24 h >10 000 mg/l (DA) (OECD 202)

LC50/96 h >10 000 mg/l (Danio rerio) (OECD 203)

- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Toxic for fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Danger to drinking water if even small quantities leak into the ground.
Do not allow product to reach ground water, water course or undiluted sewage system.
Also poisonous for fish and plankton in water bodies.
Toxic for aquatic organisms
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation** Disposal must be made according to official regulations.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

- 14.1 UN-Number

- ADR, IMDG, IATA

UN3082

- 14.2 UN proper shipping name

- ADR

3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700))

- IMDG

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)), MARINE POLLUTANT

- IATA

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (reaction product: bisphenol-A-

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31



Printing date 19.05.2015

Version number 1

Revision: 19.05.2015

Trade name: ergo 7418

(Contd. of page 6)

-	(epichlorhydrin) epoxy resin (number average molecular weight \leq 700))
- 14.3 Transport hazard class(es)	
- ADR	
	
- Class	9 (M6) Miscellaneous dangerous substances and articles.
- Label	9
- IMDG, IATA	
	
- Class	9 Miscellaneous dangerous substances and articles.
- Label	9
- 14.4 Packing group	
- ADR, IMDG, IATA	III
- 14.5 Environmental hazards:	
- Marine pollutant:	Yes Symbol (fish and tree)
- Special marking (ADR):	Symbol (fish and tree)
- Special marking (IATA):	Symbol (fish and tree)
- 14.6 Special precautions for user	Warning: Miscellaneous dangerous substances and articles.
- Danger code (Kemler):	90
- EMS Number:	F-A,S-F
- 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
- Transport/Additional information:	
- ADR	
- Limited quantities (LQ)	5L
- Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
- Transport category	3
- Tunnel restriction code	E
- IMDG	
- Limited quantities (LQ)	5L
- Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
- UN "Model Regulation":	UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700)), 9, III

-CHGEN-

(Contd. on page 8)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 19.05.2015

Version number 1

Revision: 19.05.2015

Trade name: ergo 7418

(Contd. of page 7)

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **National regulations:**
- **Waterhazard class:** Water hazard class 2 (Self-assessment): hazardous for water.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 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.

- 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.
- R36/38 Irritating to eyes and skin.
- R43 May cause sensitisation by skin contact.
- R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

- 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)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- DNEL: Derived No-Effect Level (REACH)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
- Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
- Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
- Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2

-CHGEN-

Safety data sheet according to 1907/2006/EC, Article 31

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

- 1.1 Product identifier

- Trade name: **ergo 7419**

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

No further relevant information available.

- **Application of the substance / the mixture** Epoxy resin adhesive

- 1.3 Details of the supplier of the safety data sheet

- Manufacturer/Supplier:

Kisling AG

Motorenstrasse 102

CH-8620 Wetzikon

Telefon: +41-(0) 58-272 0 272

Telefax: +41-(0) 58-272 0 273

- **Further information obtainable from:** Safety Department

- **Department issuing MSDS:** ergo@kisling.com

- **1.4 Emergency telephone number:** Swiss Toxicological Information Centre: +41-(0) 44-2 51 51 51

SECTION 2: Hazards identification

- 2.1 Classification of the substance or mixture

- Classification according to Regulation (EC) No 1272/2008

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

Eye Dam. 1 H318 Causes serious eye damage.

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 Directive 1999/45/EC

Xi; Irritant

R38-41: Irritating to skin. Risk of serious damage to eyes.

Xi; Sensitising

R43: May cause sensitisation by skin contact.

N; Dangerous for the environment

R51/53: 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 EU" in the latest valid version.

- Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

- 2.2 Label elements

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

The product is classified and labelled according to the CLP regulation.

- Hazard pictograms



GHS05

GHS07

GHS09

- Signal word Danger

(Contd. on page 2)

CHGEN

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 19.05.2015

Version number 1

Revision: 19.05.2015

Trade name: ergo 7419

(Contd. of page 1)

- Hazard-determining components of labelling:

Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines
 N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine
 Butadien-Acrylonitril-Copolymer
 2-piperazin-1-ylethylamine

- Hazard statements

H314 Causes severe skin burns and eye damage.
 H317 May cause an allergic skin reaction.
 H411 Toxic to aquatic life with long lasting effects.

- Precautionary statements

P260 Do not breathe mist/vapours/spray.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P310 Immediately call a POISON CENTER/doctor.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- 2.3 Other hazards**- Results of PBT and vPvB assessment****- PBT:** Not applicable.**- vPvB:** Not applicable.**SECTION 3: Composition/information on ingredients****- 3.2 Mixtures****- Description:** Adhesive**- Dangerous components:**

CAS: 68683-29-4	Butadien-Acrylonitril-Copolymer Xi R43 ----- Skin Irrit. 2, H315; Skin Sens. 1, H317	25-<100%
CAS: 68410-23-1 EC number: 614-452-7	Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines Xi R38-41; N R51/53 ----- Eye Dam. 1, H318; Aquatic Chronic 2, H411; Skin Irrit. 2, H315	25-<100%
CAS: 10563-29-8 EINECS: 234-148-4	N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine C R35; Xn R21/22; Xi R43 ----- Skin Corr. 1A, H314; Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Sens. 1, H317	10-<25%
CAS: 68082-29-1 NLP: 500-191-5	Amino Polyamide Xi R38-41; N R51/53 ----- Met. Corr.1, H290; Eye Dam. 1, H318; Aquatic Chronic 2, H411; Skin Irrit. 2, H315	5-<10%
CAS: 140-31-8 EINECS: 205-411-0 Index number: 612-105-00-4	2-piperazin-1-ylethylamine C R34; Xn R21/22; Xi R43 R52/53 ----- Acute Tox. 3, H311; Skin Corr. 1B, H314; Acute Tox. 4, H302; Skin Sens. 1, H317; Aquatic Chronic 3, H412	3-<5%
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; Eye Dam. 1, H318; Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Sens. 1, H317; Aquatic Chronic 3, H412	1-<3%

(Contd. on page 3)

-CHGEN-

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 19.05.2015

Version number 1

Revision: 19.05.2015

Trade name: ergo 7419

(Contd. of page 2)

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

SECTION 4: First aid measures

- **4.1 Description of first aid measures**

- **General information:** Remove any clothing soiled by the product.

- **After inhalation:**

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

- **After skin contact:**

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

If skin irritation continues, consult a doctor.

- **After eye contact:**

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

- **After swallowing:**

Rinse out mouth and then drink plenty of water.

If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label.

- **4.2 Most important symptoms and effects, both acute and delayed**

No further relevant information available.

- **4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**

- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.

- **5.2 Special hazards arising from the substance or mixture**

Formation of toxic gases is possible during heating or in case of fire.

- **5.3 Advice for firefighters**

- **Protective equipment:**

Wear self-contained respiratory protective device.

Do not inhale explosion gases or combustion gases.

- **Additional information**

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

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

- **6.2 Environmental precautions:**

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.

- **6.3 Methods and material for containment and cleaning up:**

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

Dispose of the material collected according to regulations.

- **6.4 Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 10 for information on "stability and reactivity".

See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** No special precautions are necessary if used correctly.

- **Information about fire - and explosion protection:** No special measures required.

(Contd. on page 4)

-CHGEN-

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 19.05.2015

Version number 1

Revision: 19.05.2015

Trade name: ergo 7419

(Contd. of page 3)

- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.
- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **8.1 Control parameters**
- **Ingredients 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.

- DNELs

112-24-3 3,6-diazaoctanethylenediamin

Oral	Akut, Systemische Effekte	20 mg/kg (all)
	Langzeit, Systemische Effekte	0,41 mg/kg bw/day (all)
Dermal	Akut, Lokale Effekte	1 mg/kg (all)
	Akut, Systemische Effekte	8 mg/kg bw (all)
	Langzeit, Lokale Effekte	0,028 mg/kg bw/day (ber)
	Langzeit, Systemische Effekte	0,57 mg/kg bw/day (ber)
Inhalative	Akut, Systemische Effekte	1600 mg/m ³ (all)
		5380 mg/m ³ (ber)
	Langzeit, Systemische Effekte	0,29 mg/m ³ (all)
		1 mg/m ³ (ber)

- PNECs

112-24-3 3,6-diazaoctanethylenediamin

PNEC Boden	19,1 mg/kg Boden (-)
PNEC Kläranlage	4,25 mg/l (-)
PNEC Meerwasser	0,038 mg/l (-)
PNEC Meerwassersediment	19,2 mg/kg Sediment (-)
PNEC Süßwasser	0,19 mg/l (-)
PNEC Süßwassersediment	95,9 mg/kg Sediment (-)

- **Additional information:** The lists valid during the making were used as basis.

- 8.2 Exposure controls

- Personal protective equipment:

- General protective and hygienic measures:

- The usual precautionary measures are to be adhered to when handling chemicals.
- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing
- Wash hands before breaks and at the end of work.
- Avoid contact with the eyes and skin.

- Respiratory protection:

- Use suitable respiratory protective device in case of insufficient ventilation.
- Combination filter ABEK-ST-P3

- Protection of hands:

- Protective gloves (EN 374)
- Check protective gloves prior to each use for their proper condition.

(Contd. on page 5)

CHGEN

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 19.05.2015

Version number 1

Revision: 19.05.2015

Trade name: ergo 7419

(Contd. of page 4)

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 the suitable gloves does not only depend on the material, but also on further marks of quality and varies 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 break trough 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: Use protective suit.

SECTION 9: Physical and chemical properties

- 9.1 Information on basic physical and chemical properties

- General Information

- Appearance:

Form: Pasty
Colour: Light yellow

- Odour: Characteristic

- Odour threshold: Not determined.

- pH-value: Not determined.

- Change in condition

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: Undetermined.

- Flash point: Not applicable.

- Flammability (solid, gaseous): Not applicable.

- Ignition temperature:

Decomposition temperature: Not determined.

- Self-igniting: Product is not self-igniting.

- Danger of explosion: Product does not present an explosion hazard.

- Explosion limits:

Lower: Not determined.

Upper: Not determined.

- Vapour pressure: Not determined.

- Density: Not determined.

- Relative density Not determined.

- Vapour density Not determined.

- Evaporation rate Not determined.

- Solubility in / Miscibility with water:

Not miscible or difficult to mix.

- Partition coefficient (n-octanol/water): Not determined.

- Viscosity:

Dynamic: Not determined.

Kinematic: Not determined.

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 19.05.2015

Version number 1

Revision: 19.05.2015

Trade name: ergo 7419

(Contd. of page 5)

- 9.2 Other information

No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity**
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions** Strong exothermic reaction with acids.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:**
No dangerous products of decomposition if used and stored according to specifications.

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity**

- LD/LC50 values relevant for classification:**10563-29-8 N⁺-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine**

Oral LD50 1670 mg/kg (rat)

Dermal LD50 1310 mg/kg (rab)

112-24-3 3,6-diazaoctanethylenediamin

Oral LD50 1716 mg/kg (rab)

Dermal LD50 1465 mg/kg (rab)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Irritant to skin and mucous membranes.
- **Serious eye damage/irritation**
Strong irritant with the danger of severe eye injury.
Causes serious eye damage.
- **Respiratory or skin sensitisation** Sensitisation possible through skin contact.
- **Other information (about experimental toxicology):**
OECD 435 (CORROSITEX): Non-corrosive substance
- **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Irritant
No experimentally found toxicological data are available for this preparation.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Toxic for fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Danger to drinking water if even small quantities leak into the ground.
Do not allow product to reach ground water, water course or undiluted sewage system.

(Contd. on page 7)

CHGEN

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 19.05.2015

Version number 1

Revision: 19.05.2015

Trade name: ergo 7419

(Contd. of page 6)

Also poisonous for fish and plankton in water bodies.

Toxic for aquatic organisms

- 12.5 Results of PBT and vPvB assessment- **PBT:** Not applicable.- **vPvB:** Not applicable.- **12.6 Other adverse effects** No further relevant information available.**SECTION 13: Disposal considerations****- 13.1 Waste treatment methods**- **Recommendation** Disposal must be made according to official regulations.**- Uncleaned packaging:**- **Recommendation:** Disposal must be made according to official regulations.**SECTION 14: Transport information****- 14.1 UN-Number**- **ADR, IMDG, IATA**

UN2735

- 14.2 UN proper shipping name- **ADR**

2735 AMINES, LIQUID, CORROSIVE, N.O.S. (N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine, Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines), ENVIRONMENTALLY HAZARDOUS

- **IMDG**

AMINES, LIQUID, CORROSIVE, N.O.S. (N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine, Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines), MARINE POLLUTANT

- **IATA**

AMINES, LIQUID, CORROSIVE, N.O.S. (N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine, Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines)

- 14.3 Transport hazard class(es)- **ADR**- **Class**

8 (C7) Corrosive substances.

- **Label**

8

- **IMDG**- **Class**

8 Corrosive substances.

- **Label**

8

(Contd. on page 8)

-CHGEN-

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 19.05.2015

Version number 1

Revision: 19.05.2015

Trade name: ergo 7419

(Contd. of page 7)

- IATA

- Class 8 Corrosive substances.
- Label 8

- 14.4 Packing group
- ADR, IMDG, IATA III

- 14.5 Environmental hazards:
- Marine pollutant: Yes
Symbol (fish and tree)
- Special marking (ADR): Symbol (fish and tree)

- 14.6 Special precautions for user Warning: Corrosive substances.
- Danger code (Kemler): 80
- EMS Number: F-A,S-B
- Segregation groups Alkalis

- 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.

- Transport/Additional information:

- ADR
- Limited quantities (LQ) 5L
- Excepted quantities (EQ) Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml
- Transport category 3
- Tunnel restriction code E

- UN "Model Regulation": UN2735, AMINES, LIQUID, CORROSIVE, N.O.S. (N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine, Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines), 8, III, ENVIRONMENTALLY HAZARDOUS

SECTION 15: Regulatory information

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

- National regulations:

- Waterhazard class: Water hazard class 2 (Self-assessment): hazardous for water.

- 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 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.

- Relevant phrases

H290 May be corrosive to metals.
H302 Harmful if swallowed.
H311 Toxic in contact with skin.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.

(Contd. on page 9)

-CHGEN-

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 19.05.2015

Version number 1

Revision: 19.05.2015

Trade name: ergo 7419

(Contd. of page 8)

- H315 Causes skin irritation.
 H317 May cause an allergic skin reaction.
 H318 Causes serious eye damage.
 H411 Toxic to aquatic life with long lasting effects.
 H412 Harmful to aquatic life with long lasting effects.
 R21 Harmful in contact with skin.
 R21/22 Harmful in contact with skin and if swallowed.
 R34 Causes burns.
 R35 Causes severe burns.
 R38 Irritating to skin.
 R41 Risk of serious damage to eyes.
 R43 May cause sensitisation by skin contact.
 R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
 R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

- 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)
 IMDG: International Maritime Code for Dangerous Goods
 IATA: International Air Transport Association
 GHS: Globally Harmonised System of Classification and Labelling of Chemicals
 EINECS: European Inventory of Existing Commercial Chemical Substances
 ELINCS: European List of Notified Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 DNEL: Derived No-Effect Level (REACH)
 PNEC: Predicted No-Effect Concentration (REACH)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 Met. Corr. 1: Corrosive to metals, Hazard Category 1
 Acute Tox. 4: Acute toxicity, Hazard Category 4
 Acute Tox. 3: Acute toxicity, Hazard Category 3
 Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A
 Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B
 Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
 Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1
 Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
 Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2
 Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

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