

Safety Data Sheet

according to Regulation (EC) No 1907/2006

KUPER F 105661 (1 kg) / KUPER F 350002 (5 kg)

Revision date: 03.05.2018

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Pictograms:**Hazard statements**

- H318 Causes serious eye damage.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

- P273 Avoid release to the environment.
P280 Wear protective gloves/eye protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/doctor.

Additional advice on labelling

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

2.3. Other hazards

Adverse physicochemical effects:

See section 9 for physical and chemical properties.

Vapours of flammable solvents can accumulate in the gas phase of closed container, especially during heat treatment.

Therefore keep away from fire and sources of ignition.

Adverse human health effects and symptoms:

See section 11 for toxicological information.

Adverse environmental effects:

See section 12 for environmental information.

Other adverse effects:

Special danger of slipping by leaking/spilling product.

Results of PBT-/vPvB-assessment:

See under section 12.5 - Results of PBT and vPvB assessment.

SECTION 3: Composition/information on ingredients**3.2. Mixtures****Chemical characterization**

Emulsion of active ingredients in water

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Hazardous components

CAS No	Chemical name	Quantity		
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
64742-95-6	hydrocarbons, C9, aromatics			5 - < 10 %
	918-668-5		01-2119455851-35	
	Flam. Liq. 3, STOT SE 3, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2; H226 H335 H336 H304 H411 EUH066			
93-83-4	9-octadecenamide, N,N-bis(2-hydroxyethyl)-, (9Z)- (N,N-bis(2-hydroxyethyl)oleamide)			5 - < 10 %
	202-281-7			
	Skin Irrit. 2, Eye Dam. 1; H315 H318			
78-92-2	butan-2-ol			5 - < 10 %
	201-158-5	603-127-00-5	01-2119475146-36	
	Flam. Liq. 3, Eye Irrit. 2, STOT SE 3, STOT SE 3; H226 H319 H335 H336			
68855-61-8	amides, C14-18, N-(2-hydroxypropyl)			1 - < 5 %
	272-495-3			
	Eye Irrit. 2; H319			
111-42-2	2,2'-iminodiethanol (diethanolamine)			1 - < 5 %
	203-868-0	603-071-00-1	01-2119488930-28	
	Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1, STOT RE 2; H302 H315 H318 H373			
112-34-5	2-(2-butoxyethoxy)ethanol, diethylene glycol monobutyl ether			1 - < 5 %
	203-961-6	603-096-00-8		
	Eye Irrit. 2; H319			
112-34-5	2-(2-butoxyethoxy)ethanol			1 - < 5 %
	203-961-6	603-096-00-8	01-2119475104-44	
	Eye Irrit. 2; H319			
3811-73-2	pyridine-2-thiol-1-oxide, sodium salt (sodium pyrithione)			< 0.1 %
	223-296-5			
	Acute Tox. 4, Acute Tox. 4, Eye Dam. 1, Aquatic Acute 1 (M-Factor = 100), Aquatic Chronic 2; H332 H302 H318 H400 H411			

Full text of H and EUH statements: see section 16.

Further Information

The above mentioned EC-No. (Provisional List Number 9xx-xxx-x) is a specific subset of the specified CAS-No. and was associated with the registration process automatically (without CAS-No. or numeric identifier). An official announcement by the EC inventory will follow after evaluation of substance identity by the ECHA. The new nomenclature of hydrocarbon solvents is only related with group names of the HSPA (Hydrocarbon Solvents Producers Association). The previously used CAS-No. continues serving as a reference for different global inventories. The classification of hydrocarbon mixtures made in consideration of the applicable notes in annex VI of regulation (EC) No. 1272/2008.

The fraction of aliphatic, alicyclic and aromatic hydrocarbons is < 10%.

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

Remove affected person from the danger area and lay down.
Take off immediately all contaminated clothing and wash it before reuse.
Put victim at rest, cover with a blanket and keep warm.
Do not leave affected person unattended.
If a person vomits when lying on his back, place him in the recovery position.
If breathing is irregular or stopped, administer artificial respiration.
If unconscious place in recovery position and seek medical advice.
Never give anything by mouth to an unconscious person or a person with cramps.
In the event of cardiac arrest immediately perform cardiopulmonary resuscitation.
In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Self-protection of the first aider:

Wear personal protection equipment (refer to section 8).



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First Aid.

Notes for the doctor:

No special measures are necessary.

After inhalation

Remove victim out of the danger area.

Provide fresh air.

Consult a doctor immediately in the case of inhaling spray mist and show him packing or label.

After contact with skin

Wash immediately with:

Water and soap

Rub greasy ointment into the skin.

Do not wash with:

Solvents/Thinner

In case of skin irritation, consult a physician.

After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

Remove contact lenses, if present and easy to do. Continue rinsing.

If present: Initial treatment with Previn. (Previn is a registered trademark).

Protect uninjured eye.

After ingestion

Do NOT induce vomiting.

Give nothing to eat or drink.

Never give anything by mouth to an unconscious person or a person with cramps.

Call a physician immediately.

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

The following symptoms may occur:

Cough

Acidosis

Depression of central nervous system

Headache

Nausea

Drowsiness

Dizziness

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

Treat symptomatically.

A suitable eye rinse equipment shall be provided, if required.

Use eye rinse liquid with room temperature, if possible.

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**

Full water jet

Water spray jet

Water mist

Extinguishing powder (ABC-powder)

Foam

Carbon dioxide (CO₂)

Fire class: not relevant

Unsuitable extinguishing media

None known

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products:

None known

The product itself does not burn.

5.3. Advice for firefighters

Usual measures of preventive and averting fire protection.

Co-ordinate fire-fighting measures to the fire surroundings.



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Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special protective equipment for firefighters
not relevant

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes and clothes.
Do not breathe vapour/aerosol.
In case of warning: Remove all sources of ignition.
Prevent further leakage or spillage if safe to do so.
Provide adequate ventilation.
Special danger of slipping by leaking/spilling product.

For non-emergency personnel:
Use personal protection equipment.
Walk out of the danger zone and notify trained personnel.
Emergency procedures:
Keep the factory emergency plan and the information chain.

For emergency responders:
Use personal protection equipment.
The personal protective equipment must be adapted to the situation.
Suitable material:
See under section 8.2 - Personal protection equipment.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.
Do not allow to enter into soil/subsoil.
Ensure waste is collected and contained.
In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

6.3. Methods and material for containment and cleaning up

For containment:
Repair leaks if without risk.
Move containers from spill area.
Make sure spills can be contained, e.g. in sump pallets or kerbed areas.
Prevent spread over a wide area (e.g. by containment or oil barriers).
Cover drains.

For cleaning up:
Clean-up methods - large spillage:
Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).
Shovel into suitable container for disposal.
Local authorities should be advised if significant spillages cannot be contained.
Clean-up methods - small spillage:
Clear spills immediately.
Wipe up with absorbent material (eg. cloth, fleece).
Collect in closed and suitable containers for disposal.
Clear contaminated areas thoroughly.
Recommended cleansing agent:
Clean with detergents. Avoid solvent cleaners.
Retain contaminated washing water and dispose it.
Ensure all waste water is collected and treated via a waste water treatment plant.
Ventilate affected area.

Suitable material for taking up:
Sand
Kieselguhr
Universal binder
Absorbing material, organic

Unsuitable material for taking up:



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None known

6.4. Reference to other sections

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Advice on safe handling**

Measures to prevent aerosol and dust generation:

It is recommended to design all work processes always so that the following is excluded:

Inhalation of vapours or spray/mists

Eye contact

Skin contact

Technical ventilation of workplace

Recirculation of exhaust air is not recommended.

Always close containers tightly after the removal of product.

Advice on protection against fire and explosion

Measures to prevent fire:

The product is not: Combustible

The formation of combustible vapours is possible at temperatures above: +28 °C (Flash point - 15 °C)

Vapours can form explosive mixtures with air.

Only use the material in places where open light, fire and other flammable sources can be kept away.

Usual measures for fire prevention.

Fire-fighting equipment on the basis of class B.

Further information on handling

Environmental precautions:

Transfer wash-downs in sealed containers.

Provide for retaining containers, eg. floor pan without outflow.

For restriction of emission on volatile organic compounds (VOC) the solvent vapours should be supplied to an exhaust air purification facility (filter, gas washer, incineration).

Advices on general occupational hygiene:

Wear personal protection equipment (refer to section 8).

Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500.

General industrial hygiene practice.

Handle in accordance with good industrial hygiene and safety practice.

Working places should be designed to allow cleaning at any time.

Floors, walls and other surfaces in the hazard area must be cleaned regularly.

When using do not eat, drink, smoke, sniff.

Thorough skin-cleansing after handling the product.

Used working clothes should not be worn outside the work area.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Suitable floor material:

Floors should be impervious, resistant to liquids and easy to clean.

Protect against:

Heat

Cold

Recommended storage temperature: +10 ... +30 °C

Keep away from:

Food and feedingstuffs

Packaging materials:

Suitable container/equipment material:

Keep/Store only in original container.

Unsuitable container/equipment material:

See under section 8.2 - Hand protection.

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Advice on storage compatibility

Do not store together with:

Storage class:

1 (Explosive hazardous substances)

6.2 (Infectious substances)

7 (Radioactive substances)

Further information on storage conditions

Technical measures and storage conditions:

The valid water and zoning ordinances must be observed.

Keep container tightly closed.

Protect containers against damage.

Ensure adequate ventilation of the storage area.

Do not store outside.

See also instructions on the label.

7.3. Specific end use(s)

Recommendation:

Possibilities for substitution and references to less hazardous products:

This product was designed for a special application purpose and optimized appropriately.

In case of questions regarding product and application, please contact our field service in line with customer service or our technical sales department.

Observe technical data sheet.

Industrial sector specific solutions:

Hazardous substance information systems of professional associations:

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
112-34-5	2-(2-Butoxyethoxy)ethanol	10	67.5		TWA (8 h)	WEL
		15	101.2		STEL (15 min)	WEL
78-92-2	Butan-2-ol	100	308		TWA (8 h)	WEL
		150	462		STEL (15 min)	WEL
-	Trimethylbenzenes, all isomers or mixtures	25	125		TWA (8 h)	WEL
		-	-		STEL (15 min)	WEL

DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
64742-53-6	distillates (petroleum), hydrotreated light naphthenic			
	Worker DNEL, long-term	inhalation	local	5,4 mg/m ³
78-92-2	butan-2-ol			
	Worker DNEL, long-term	dermal	systemic	405 mg/kg bw/day
	Worker DNEL, long-term	inhalation	systemic	212 mg/m ³
	Consumer DNEL, long-term	dermal	systemic	203 mg/kg bw/day
	Consumer DNEL, long-term	inhalation	systemic	52 mg/m ³
	Consumer DNEL, long-term	oral	systemic	15 mg/kg bw/day

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PNEC values

CAS No	Substance	
Environmental compartment		Value
78-92-2	butan-2-ol	
Freshwater		47,1 mg/l
Marine water		47,1 mg/l
Freshwater sediment		196,19 mg/kg
Marine sediment		196,19 mg/kg
Secondary poisoning		1000 mg/kg
Micro-organisms in sewage treatment plants (STP)		761 mg/l
Soil		11,58 mg/kg

Additional advice on limit values

GESTIS - International Limit Values - Institut für Arbeitsschutz der Deutschen Gesetzlichen Unfallversicherung (IFA):

<http://limitvalue.ifa.dguv.de>

Country information (EU)

<http://www.dguv.de/ifa/fachinfos/occupational-exposure-limit-values/foreign-and-eu-limit-values/index.jsp>Country information (GB) (<http://www.hse.gov.uk/pubns/books/eh40.htm>)

Occupational Exposure Limits of EU-memberstates - European Agency for Safety and Health at Work (OSHA)

<http://osha.europa.eu/en/topics/ds/oel/index.stm/members.stm>Source of law: EH40 (GB) (<http://www.hse.gov.uk>)

Recommended monitoring procedures:

Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents (BS EN 14042):

Personal air monitoring

Room air monitoring

Test tube

Preliminary concentration measurements:

Suitable detector tubes for measuring the current concentration in the air at the workplace: DRÄGER test tubes - short-term tubes (<http://www.gasmesstechnik.de>)DRÄGER test tubes - Short-term tubes - Alcohol 100 / a (lower alcohols, measuring range: 100 - 3000 ppm, response time: 90 sec) (<http://www.gasmesstechnik.de>)DRÄGER test tubes - Short-term tubes - Petroleum hydrocarbons 10 / a (n-octane, measuring range: 10 - 300 ppm, response time: 60 sec) (<http://www.gasmesstechnik.de>)DRÄGER test tubes - Short-term tubes - Petroleum hydrocarbons 100 / a (n-octane, measuring range: 100 - 2500 ppm, response time: 30 sec) (<http://www.gasmesstechnik.de>)

Exposure limits at intended use:

DNEL-/PNEC-values:

There are no exposure scenarios attached in the Appendix of this Safety Data Sheet.

Risk management measures according to used control banding approach:

Control banding for chemicals according to the ILO CHEMICAL CONTROL TOOLKIT (ICCT): ICCT-Guidelines and Control Guidance Sheets (http://www.ilo.org/legacy/english/protection/safework/ctrl_banding/toolkit/main_guide.pdf)

Used model:

Consider appropriate model solutions according to good engineering practices on designing the working process, if available.

8.2. Exposure controls

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Appropriate engineering controls

Substance/mixture related measures to prevent exposure during identified uses:

Technical measures to prevent exposure:

Design of appropriate work processes and engineering controls and the use of adequate materials (physical cut-off of man and machine, model solutions as certified working methods, working appliance according to the state of the art, optimization of process / spray robots, working appliance for prevention of skin contact, models of working times).

Organisational measures to prevent exposure:

Execution of collective protection measures at source and appropriate organisational measures (local exhaust ventilation, ventilation by technical means, general ventilation, measures on averting a danger at breakdowns / at emergencies / after accidents, first-aid-measures, manner related measures: operating instruction / instruction of employees, occupational medicine health precaution).

Structural measures to prevent exposure:

Execution of individual and personnel protection measures (personal protective equipment - PPE).

If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn.

Technical measures and the application of suitable work processes have priority over personal protection equipment.

References for design of technical equipment:

See under section 7.1 - Precautions for safe handling.

Summary of the risk management measures for exposure scenario:

Use only the following product amount per time unit:

No information available.

Minimum room-width and room-height for handling/application:

No information available.

Minimum room ventilation rate for handling/application (air changes per hour):

No information available.

Individual protection measures, such as personal protective equipment

Eye/face protection

If required according to hazard assessment:

Suitable eye protection:

Eye glasses with side protection (EN 166)

Recommended eye protection articles:

UVEX I-VO / UVEX I-3 / UVEX SUPER OTG

Or comparable articles from other companies.

Hand protection

Skin protection:

Preventive skin protection.:

Draw up skin protection programme.

Before starting work, apply water-resistant skincare preparations.

e.g. saniwip®, dualin® (PETER GREVEN PHYSIODERM)

Wash hands before breaks and after work.

e.g. ecosan®, topscrub® soft / topscrub® extra / topscrub® nature (PETER GREVEN PHYSIODERM)

After cleaning apply high-fat content skin care cream.

e.g. physioderm® creme, cura soft® / cUrea soft® (PETER GREVEN PHYSIODERM)

Apply skin care products after work.

If required according to hazard assessment:

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits.

The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.

Decrease wearing protection gloves to an inevitable degree to avoid skin rash.

Technical and organizational protective actions have to be preferred.

Breakthrough times and swelling properties of the material must be taken into consideration.



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Check leak tightness/impermeability prior to use.
Wear cotton undermitten if possible.
Change preventive gloves once by hour or use special skin-protective preparations for protective gloves carrier,
e.g. physioderm® proGlove (PETER GREVEN PHYSIODERM)
Take recovery periods for skin regeneration.
Do not wear gloves near rotary machines and tools.
Dispose preventive gloves after defect or expiry of wearing time. Replace when worn.
In the case of wanting to use the gloves again, clean them before taking off and air them well.

Wearing time with permanent contact:

Suitable gloves type:

Gloves with long cuffs

Recommended glove articles:

Suitable materials at long term, direct contact (Recommended: Preventive index 6, accordingly > 480 min. permeation time in accordance to EN 374):

Nitrile rubber / NBR (KCL-CAMATRIL VELOURS® - Art. No. 730) - Layer thickness: 0,4 mm

Or comparable articles from other companies.

Unsuitable material:

NR (natural rubber, natural latex)

Wearing time with occasional contact (splashes):

Suitable gloves type:

Disposable gloves

Recommended glove articles:

Suitable materials at short term contact or splash (Recommended: Preventive index 3, accordingly > 60 min. permeation time in accordance to EN 374):

Disposable gloves of special nitrile rubber / NBR (KCL-DERMATRIL® P - Art. No. 743) - Layer thickness: 0,2 mm

Or comparable articles from other companies.

The statements are based on self-tests, literary reference and information of glove manufacturers or have been derived from similar substances by analogy.

Source: CHEMIKALIEN-MANAGER - KCL software for hand protection.

It has to be noticed, that daily time of use of chemical protective gloves may be quite shorter in practice because of many factors of influence (e.g. thermal and mechanical stress as well as special conditions on the floor) than the permeation time determined in accordance to EN 374.

The respective permeation time doubles/halvens at about 1,5 times larger/lower layer thickness.

Declared permeation times according to EN 374 are not carried out under practical conditions. Therefore a maximum wearing time up to 50 % of breakthrough time is recommended.

They relate to the pure solvent as mean component.

Barrier creams are not substitutes for body protection.

Skin protection

If required according to hazard assessment:

Suitable protective clothing:

Overall, Natural fibres (e.g. cotton) (EN 340)

Chemical resistant safety shoes with conductible sole (EN ISO 20345)

Wash contaminated clothing prior to re-use.

Used working clothes should not be worn outside the work area.

Street clothing should be stored separately from work clothing.

Thermal hazards:

No thermal hazards during use of this product.

Respiratory protection

If required according to hazard assessment:

Respiratory protection necessary at:

exceeding exposure limit values +

high concentrations / prolonged exposure / insufficient ventilation / insufficient exhaust

Use only respiratory protection equipment with CE-symbol including four digit test number.

Filter types: A, B, E, K. Class 1: Maximum permitted contaminant concentration in inhaled air = 1000 mL/m³ (0.1 % by

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vol.); class 2: maximum permitted contaminant concentration in inhaled air = 5000 mL/m³ (0.5 % by vol.); class 3: maximum permitted contaminant concentration in inhaled air = 10000 mL/m³ (1.0 % by vol.)
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. Observe the wear time limits according GefStoffV in combination with the rules for using respiratory protection apparatus (BGR 190).
The use of filter equipment requires a minimum oxygen content of 17 Vol-% in the surrounding atmosphere and that the maximum permitted gas concentration - normally 0,5 Vol-% - is not exceeded.

Suitable respiratory protection apparatus:

Half-face mask or quarter facepiece: maximum use concentration for substances with exposure limits: P1 filter: up to a max. of 4 times the exposure limit. P2 filter: up to a max. of 10 times the exposure limit. P3 filter: up to a max. of 30 times the expo.

Recommended respiratory protection articles:

Half mask or quarter mask with combination filter A1P1/A2P2 for gases, vapors and particles. (EN 140, EN 14387)
Filtering half mask or quarter mask with combination filter FFA1 P1/FFA2P2 for gases, vapors and particles. (EN 405)
Gas filtering Half-face mask FFA (EN 405)
Model 4251 (FFA1P1 - 1000 ml/m³) / 4255 (FFA2P2SL - 5000 ml/m³) (3M)
Half-face mask or Quarter-face mask with gas filter (EN 140, EN 14387)
Filter type 6051 (A1 - 1000 ml/m³) / 6055 (A2 - 5000 ml/m³) (3M)
Full-face mask with gas filter (EN 136, EN 14387)
Gas filter type: A, Indication colour: brown
Or comparable articles from other companies.

Environmental exposure controls

Environmental exposure controls:

Technical measures to prevent exposure:
Discharge exhaust air only with suitable separators to atmosphere.
Organisational measures to prevent exposure:
Should not be released into the environment.
Structural measures to prevent exposure:

Use the following recovery and/or abatement technique for cleaning waste gases:

Exhaust air scrubber
Adsorption

Further information see under section 6.2 - Environmental precautions.

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

Physical state: liquid
Colour: brown
Odour: characteristic

pH-Value: 9,7 (50 g/l) **Test method** DIN 19268

Changes in the physical state

Melting point: < 0 °C literature value
Initial boiling point and boiling range: > 98 °C literature value
Sublimation point: not applicable
Softening point: not applicable
Pour point: not applicable
Flash point: 43 °C EN ISO 2719
Sustaining combustion: Not sustaining combustion UN Test L.2

Flammability

Solid: not applicable (Liquid)
Gas: not applicable (Liquid)

Explosive properties

Vapour/air-mixtures are explosive at intense warming.
The statements for steam pressure, ignition point and explosion levels apply to the solvent / solvent mixture.

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Lower explosion limits:	0,6 vol. %
Upper explosion limits:	10,6 vol. %
Ignition temperature:	not relevant
Auto-ignition temperature	
Solid:	Not pyrophoric.
Gas:	Not pyrophoric.
Decomposition temperature:	not relevant

Oxidizing properties

not relevant

Vapour pressure:	Corresponds to the vapour pressure of water. <	literature value
(at 20 °C)		23 hPa
Vapour pressure:	Corresponds to the vapour pressure of water. <	literature value
(at 50 °C)		123 hPa
Density (at 20 °C):	0,98 g/cm ³	DIN 51757
Bulk density:	not applicable (Liquid)	
Water solubility:	emulsifiable	
(at 20 °C)		

Solubility in other solvents

miscible with most organic solvents (Alcohols, aldehydes, Ketone)

Partition coefficient:	not applicable (Mixtures)	
Viscosity / dynamic:	not determined	
Viscosity / kinematic:	<= 20,5 mm ² /s	DIN 53015
(at 40 °C)		
Flow time:	121 s	3 DIN EN ISO 2431
(at 23 °C)		
Vapour density:	not determined	
Evaporation rate:	not determined	
Solvent separation test:	not applicable	
Solvent content:	not determined	

9.2. Other information

Solid content: not determined

Odour threshold: < 25 ppm (butan-2-ol, literature value)

Surface tension: No data available

Fat solubility (g/L): No data available

Calculated oxidation potential of the mixture (OP): not relevant

Substance group relevant properties:

Data relevant with regard to physical hazard classes (supplemental):

Explosives

not applicable

Flammable gases

Non-flammable. / not applicable (Liquid)

flammable aerosols

Non-flammable. / not applicable (Liquid)

Oxidising gases

Not oxidising. / not applicable (Liquid)

Gases under pressure

not applicable (Liquid)

Flammable liquids

Non-flammable.

In use may form flammable/explosive vapour-air mixture.

UN Recommendations on the Transport of Dangerous Goods -

Manual of Tests and Criteria, Part III, Subsection 32.5.2.

Test temperature of 60.5 °C (UN Test L.2).

Not sustaining combustion

Test temperature of 75 °C (UN Test L.2).

Not sustaining combustion

flammable solids

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Non-flammable. / not applicable (Liquid)
Self-reactive substances and mixtures
not applicable
Pyrophoric liquids
Not pyrophoric.
Pyrophoric solids
Not pyrophoric. / not applicable (Liquid)
self-heating substances and mixtures
not applicable
Substances or mixtures which, in contact with water, emit flammable gases
not applicable
Oxidising liquids
Not oxidising.
Oxidising solids
Not oxidising. / not applicable (Liquid)
Organic peroxides
not applicable
Corrosive to metals.
Not corrosive to metals.

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

The product is chemically stable under recommended conditions of storage, use and temperature.

10.2. Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

10.4. Conditions to avoid

Heat, flames and sparks.

Further information see under section 7.2 - Conditions for safe storage, including any incompatibilities.

Further information see under section 10.5 - Incompatible materials.

10.5. Incompatible materials

Violent reaction with:

Hazardous substances that release flammable gases when in contact with water

Oxidising agent, strong

Further information see under section 7.1 - Precautions for safe handling.

10.6. Hazardous decomposition products

Does not decompose when used for intended uses.

No known hazardous decomposition products.

Under fire conditions: See under section 5.2 - Special hazards arising from the substance or mixture.

SECTION 11: Toxicological information**11.1. Information on toxicological effects****Toxicokinetics, metabolism and distribution**

There are no data available on the preparation/mixture itself.

The product has not been tested.

Information on likely routes of exposure /

Symptoms related to the physical, chemical and toxicological characteristics:

See under section 4.2 - Most important symptoms and effects, both acute and delayed.

Exposure route:

In case of ingestion:

Ingestion causes nausea, weakness and central nervous system effects.

In case of skin contact:

May cause skin irritation in susceptible persons.

Prolonged or repeated skin contact may cause removal of natural fat from the skin resulting in dermatitis (skin inflammation).

In case of inhalation:

slightly irritant but not relevant for classification.

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In case of eye contact:
strongly irritant.
Corneal opacity.

Delayed and immediate effects as well as chronic effects from short and long-term exposure:
Not relevant

Interactive effects:
Not relevant

Absence of specific data:
No data is available on the product itself. Description of possible hazardous to health effects is based on experience and/or toxicological characteristics of several components.
However, some data are not complete regarding particular main components. Nevertheless according to the experience of the manufacturer there are no other hazards expected than those which are already mentioned on the label.

Mixture versus substance information:
Not relevant

Acute toxicity

Based on available data, the classification criteria are not met.

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CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
64742-95-6	hydrocarbons, C9, aromatics				
	oral	LD50 3492 mg/kg	Rat [female]	ECHA	
	dermal	LD50 > 3160 mg/kg	Rabbit	ECHA	similar to OECD 402
	inhalation (4 h) vapour	LC50 (> 10,2) mg/l	Rat	ECHA	similar to OECD 403
93-83-4	9-octadecenamide, N,N-bis(2-hydroxyethyl)-, (9Z)- (N,N-bis(2-hydroxyethyl)oleamide)				
	oral	LD50 10000 mg/kg	Rat [male]	ECHA [700-972-2]	
	dermal	LD50 > 2000 mg/kg	Rabbit	ECHA [700-972-2]	
78-92-2	butan-2-ol				
	oral	LD50 2054 mg/kg	Rat [male]	ECHA	similar to OECD 423
	dermal	LD50 > 2000 mg/kg	Rat	ECHA	similar to OECD 402
111-42-2	2,2'-iminodiethanol (diethanolamine)				
	oral	LD50 1100 mg/kg	Rat [male]	ECHA	similar to OECD 401
	inhalation (4 h) aerosol	LC50 (> 3,35) mg/l	Rat [male]	ECHA	
112-34-5	2-(2-butoxyethoxy)ethanol, diethylene glycol monobutyl ether				
	oral	LD50 2410 mg/kg	Mouse [male]	ECHA	similar to OECD 401
	dermal	LD50 2764 mg/kg	Rabbit [male]	ECHA	similar to OECD 402
112-34-5	2-(2-butoxyethoxy)ethanol				
	oral	LD50 2410 mg/kg	Mouse [male]	ECHA	similar to OECD 401
	dermal	LD50 2764 mg/kg	Rabbit [male]	Supplier / ECHA	similar to OECD 402
3811-73-2	pyridine-2-thiol-1-oxide, sodium salt (sodium pyrithione)				
	oral	LD50 (1208) mg/kg	Rat [female]	ECHA	OECD 401
	dermal	LD50 (1800) mg/kg	Rabbit [female]	ECHA	EPA OPP 81-2
	inhalation vapour	ATE 11 mg/l			
	inhalation (4 h) aerosol	LC50 (1,08) mg/l	Rat	ECHA	EU Method B.2

Irritation and corrosivity

Causes serious eye damage.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Sensitising effects

Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

SECTION 12: Ecological information**12.1. Toxicity**

Aquatic toxicity:

Acute (short-term) fish toxicity:

There are no data available on the preparation/mixture itself. The product has not been tested.

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Acute (short-term) toxicity to crustacea:

There are no data available on the preparation/mixture itself. The product has not been tested.

Acute (short-term) toxicity to aquatic algae and cyanobacteria:

There are no data available on the preparation/mixture itself. The product has not been tested.

Chronic (long-term) toxicity to crustacea:

There are no data available on the preparation/mixture itself. The product has not been tested.

Chronic (long-term) fish toxicity:

There are no data available on the preparation/mixture itself. The product has not been tested.

Toxicity to other aquatic plants/organisms:

No data available (Substances/Ingredient)

Terrestrial toxicity:**Acute and subchronic bird toxicity:**

No data available (Substances/Ingredient)

Bird reproduction toxicity:

No data available (Substances/Ingredient)

Acute earthworm toxicity:

No data available (Substances/Ingredient)

Chronical earthworm toxicity (reproduction):

No data available (Substances/Ingredient)

Useful insect toxicity:

No data available (Substances/Ingredient)

Acute plant toxicity:

No data available (Substances/Ingredient)

Chronic plant toxicity:

No data available (Substances/Ingredient)

Toxicity to soil macroorganisms except of arthropods:

No data available (Substances/Ingredient)

Effects on soil microorganisms:

No data available (Substances/Ingredient)

Behaviour in waste water treatment plants:

No data available

Observe local regulations concerning effluent treatment.



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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
64742-95-6	hydrocarbons, C9, aromatics					
	Acute fish toxicity	LC50 9,2 mg/l	96 h	Oncorhynchus mykiss	ECHA	OECD 203
	Acute algae toxicity	ErC50 2,9 mg/l	72 h	Pseudokirchneriella subcapitata	ECHA	OECD 201
	Acute crustacea toxicity	EC50 3,2 mg/l	48 h	Daphnia magna	ECHA	OECD 202
	Fish toxicity	NOEC (1,228) mg/l	28 d	Oncorhynchus mykiss	ECHA	
	Algae toxicity	NOEC (0,22) mg/l	3 d	Pseudokirchneriella subcapitata	ECHA	OECD 201
	Crustacea toxicity	NOEC (2,144) mg/l	21 d	Daphnia magna	ECHA	
	Acute bacteria toxicity	(> 99 mg/l)	0,5 h	Activated sludge	ECHA	OECD 209 [10 min]
93-83-4	9-octadecenamide, N,N-bis(2-hydroxyethyl)-, (9Z)- (N,N-bis(2-hydroxyethyl)oleamide)					
	Acute fish toxicity	LC50 5,1 mg/l	96 h	Danio rerio	ECHA [700-972-2]	OECD 203
78-92-2	butan-2-ol					
	Acute fish toxicity	LC50 2993 mg/l	96 h	Pimephales promelas	ECHA	OECD 203
	Acute algae toxicity	ErC50 2029 mg/l	96 h	Pseudokirchneriella subcapitata	ECHA	similar to OECD 201
	Acute crustacea toxicity	EC50 308 mg/l	48 h	Daphnia magna	ECHA	OECD 202
	Algae toxicity	NOEC 1240 mg/l	4 d	Pseudokirchneriella subcapitata	ECHA	similar to OECD 201
	Acute bacteria toxicity	(> 500 mg/l)		Pseudomonas putida	Supplier / ECHA	DIN 38412 p8 [16h]
111-42-2	2,2'-iminodiethanol (diethanolamine)					
	Acute fish toxicity	LC50 460 mg/l	96 h	Oncorhynchus mykiss	ECHA	
	Acute algae toxicity	ErC50 9,5 mg/l	72 h	Pseudokirchneriella subcapitata	ECHA	EPA 600/9-78-018
	Acute crustacea toxicity	EC50 30,1 mg/l	48 h	Ceriodaphnia dubia	ECHA	ASTM E729-80
	Fish toxicity	NOEC > 1 mg/l		Freshwater fish	ECHA	
	Algae toxicity	NOEC (0,6) mg/l	3 d	Pseudokirchneriella subcapitata	ECHA	EPA 600/9-78-018
	Crustacea toxicity	NOEC (0,78) mg/l	21 d	Daphnia magna	ECHA	Draft EEC XI/681/86
	Acute bacteria toxicity	(> 1000 mg/l)	0,5 h	Activated sludge	ECHA	OECD 209
112-34-5	2-(2-butoxyethoxy)ethanol, diethylene glycol monobutyl ether					
	Acute fish toxicity	LC50 1300 mg/l	96 h	Lepomis macrochirus	ECHA	similar to OECD 203
	Acute algae toxicity	ErC50 > 100 mg/l	96 h	Desmodesmus subspicatus	ECHA	OECD 201
	Acute crustacea toxicity	EC50 > 100 mg/l	48 h	Daphnia magna	ECHA	EU Method C.2
	Algae toxicity	NOEC 100 mg/l	4 d	Desmodesmus subspicatus	ECHA	OECD 201
	Acute bacteria toxicity	(> 1995 mg/l)	0,5 h	Activated sludge	ECHA	OECD 209 [EC10]
112-34-5	2-(2-butoxyethoxy)ethanol					
	Acute fish toxicity	LC50 1300 mg/l	96 h	Lepomis macrochirus	Supplier / ECHA	similar to OECD 203
	Acute algae toxicity	ErC50 > 100 mg/l	96 h	Desmodesmus subspicatus	Supplier / ECHA	OECD 201
	Acute crustacea toxicity	EC50 > 100 mg/l	48 h	Daphnia magna	ECHA	EU Method C.2
	Algae toxicity	NOEC 100 mg/l	4 d	Desmodesmus subspicatus	ECHA	OECD 201
	Acute bacteria toxicity	(> 1995 mg/l)	0,5 h	Activated sludge	ECHA	OECD 209 [EC10]
3811-73-2	pyridine-2-thiol-1-oxide, sodium salt (sodium pyrithione)					
	Acute fish toxicity	LC50 0,0066 mg/l	96 h	Oncorhynchus mykiss	Supplier	

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	Acute algae toxicity	ErC50	0,46 mg/l	72 h	Pseudokirchneriella subcapitata	Supplier / ECHA	OECD 201
	Acute crustacea toxicity	EC50	0,022 mg/l	48 h	Daphnia magna	Supplier / ECHA	EPA OPP 72-2
	Algae toxicity	NOEC	0,08 mg/l	3 d	Pseudokirchneriella subcapitata	Supplier / ECHA	OECD 201

12.2. Persistence and degradability

Abiotic degradation:

Physicochemical elimination:

Oxidation:

not applicable (Mixtures)

No data available (Substances/Ingredient)

Hydrolysis:

not applicable (Mixtures)

No data available (Substances/Ingredient)

Photochemical elimination:

Photolysis:

not applicable (Mixtures)

No data available (Substances/Ingredient)

Ozonolysis:

not applicable (Mixtures)

No data available (Substances/Ingredient)

Biodegradation:

not applicable (Mixtures)

CAS No	Chemical name	Method	Value	d	Source
64742-95-6	hydrocarbons, C9, aromatics	OECD Guideline 301 F	78 %	28	ECHA
	readily biodegradable				
93-83-4	9-octadecenamide, N,N-bis(2-hydroxyethyl)-, (9Z)- (N,N-bis(2-hydroxyethyl)oleamide)	OECD Guideline 301 B	72-100 %	28	ECHA [700-972-2]
	readily biodegradable				
		OECD Guideline 301 D	70 %	28	ECHA [700-972-2]
	readily biodegradable, but failing 10-day window				
78-92-2	butan-2-ol	similar to EU Method C.5, similar to EU Method C.6	86 %	5	ECHA
	readily biodegradable				
111-42-2	2,2'-iminodiethanol (diethanolamine)	OECD Guideline 301 F	93 %	28	ECHA
	readily biodegradable				
112-34-5	2-(2-butoxyethoxy)ethanol, diethylene glycol monobutyl ether	OECD Guideline 301 C	85 %	28	ECHA
	readily biodegradable				
112-34-5	2-(2-butoxyethoxy)ethanol	OECD Guideline 301 C	85 %	28	ECHA
	readily biodegradable				
3811-73-2	pyridine-2-thiol-1-oxide, sodium salt (sodium pyrithione)	OECD Guideline 301 B	60 %	18	ECHA
	readily biodegradable				

12.3. Bioaccumulative potential

not applicable (Mixtures)

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Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
93-83-4	9-octadecenamide, N,N-bis(2-hydroxyethyl)-, (9Z)- (N,N-bis(2-hydroxyethyl)oleamide)	5,51
78-92-2	butan-2-ol	0,65
111-42-2	2,2'-iminodiethanol (diethanolamine)	-2,46
112-34-5	2-(2-butoxyethoxy)ethanol, diethylene glycol monobutyl ether	1
112-34-5	2-(2-butoxyethoxy)ethanol	1
3811-73-2	pyridine-2-thiol-1-oxide, sodium salt (sodium pyrithione)	< -1,09

BCF

CAS No	Chemical name	BCF	Species	Source
93-83-4	9-octadecenamide, N,N-bis(2-hydroxyethyl)-, (9Z)- (N,N-bis(2-hydroxyethyl)oleamide)	112,53		ECHA [700-972-2]

12.4. Mobility in soil

Surface tension:

See under section 9.1 - Information on basic physical and chemical properties.

Distribution:

Water-air (volatility rate, Henry-constant):

not applicable (Mixtures)

No data available (Substances/Ingredient)

Soil-Water (Adsorption coefficient):

not applicable (Mixtures)

No data available (Substances/Ingredient)

Soil-Air (volatility rate):

not applicable (Mixtures)

No data available (Substances/Ingredient)

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Other adverse effects

Ozone depletion potential (ODP):

No data available (Substances/Ingredient)

Photochemical ozone creation potential (POCP):

No data available (Substances/Ingredient)

Global warming potential (GWP):

No data available (Substances/Ingredient)

Endocrine disrupting potential:

No data available

AOX: Product does not contain any organic halogens.

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Advice on disposal**

Waste treatment options:

Transfer to an emulsion fission reactor or an emulsion evaporation system, observing official regulations.

Dispose of waste according to applicable legislation.

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

Properties of waste which render it hazardous:

Irritant.

Ecotoxic

Evidence for disposal must be provided.

Consult the appropriate local waste disposal expert about waste disposal.

Waste for recycling is to be classified and labelled.

For recycling, contact recycling exchanges.

May not be disposed or deposited together with domestic garbage.

Do not mix with other wastes.



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Do not flush into surface water or sanitary sewer system.

Do not dispose of waste into sewer.

Before discharge in public drains (e.g. residues of washing- and rinsing liquids) please observe the relevant regulations.

In case of further questions please contact your waste- or environmental representative or the responsible authority.

Clean IBCs or drums at approved facility only.

The waste producer is responsible for correct coding and designation of his wastes.

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

List of proposed waste codes/waste designations in accordance with EWC:

Waste disposal number of waste from residues/unused products

120109 WASTES FROM SHAPING AND PHYSICAL AND MECHANICAL SURFACE TREATMENT OF METALS AND PLASTICS; wastes from shaping and physical and mechanical surface treatment of metals and plastics; machining emulsions and solutions free of halogens; hazardous waste

Waste disposal number of used product

120109 WASTES FROM SHAPING AND PHYSICAL AND MECHANICAL SURFACE TREATMENT OF METALS AND PLASTICS; wastes from shaping and physical and mechanical surface treatment of metals and plastics; machining emulsions and solutions free of halogens; hazardous waste

Waste disposal number of contaminated packaging

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances; hazardous waste

Contaminated packaging

Other disposal recommendations:

Contaminated packages must be completely emptied and can be re-used following proper cleaning.

Cleaning by recycling company.

Recommended cleansing agent:

Clean with detergents. Avoid solvent cleaners.

Handle contaminated packages in the same way as the substance itself.

Non-contaminated packages may be recycled.

Packing which cannot be properly cleaned must be disposed of.

As well uncleaned (empty) containers remain contaminated by product residues and may be hazardous by vapours. They have to be disposed by specialists or have to be supplied to a licensed reconditioning.

The conditions of the regional reconditioning companies have to be observed.

SECTION 14: Transport information**Land transport (ADR/RID)****Other applicable information (land transport)**

Not classified as dangerous in the meaning of transport regulations.

Inland waterways transport (ADN)**Other applicable information (inland waterways transport)**

Not classified for this transport way.

Marine transport (IMDG)**Other applicable information (marine transport)**

Not classified as dangerous in the meaning of transport regulations.

Air transport (ICAO-TI/IATA-DGR)**Other applicable information (air transport)**

Not classified as dangerous in the meaning of transport regulations.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

not relevant

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

not relevant

Other applicable information

not relevant

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

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EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 55: 2-(2-butoxyethoxy)ethanol, diethylene glycol monobutyl ether; 2-(2-butoxyethoxy)ethanol
2010/75/EU (VOC): 11 % (111 g/l)**Additional information**

Authorisations and/or restrictions on use:

Authorisations:

Authorisation of Chemicals (REACH) as regards Annex XIV:
not relevant

Restrictions on use:

Restriction of chemicals (REACH) as regards annex XVII:

No. 55 - 2-(2-butoxyethoxy)ethanol

Informations on Regulation (EC) No. 1272/2008 - Annex VI, Part 1:

Note P is valid: The classification as a carcinogen or mutagen need not apply if it can be shown that the substance contains less than 0,1 % w/w benzene (EINECS No 200-753-7) (< 1 mg/kg - DIN 51405, ASTM D 4367).

Note L is valid: The classification as a carcinogen need not apply if it can be shown that the substance contains less than 3 % DMSO extract as measured by IP 346.

Other regulations (EU):

Regulation (EC) No 1005/2009 - Substances that deplete the ozone layer:
not relevantRegulation (EC) No. 648/2004 and No 907/2006 - Detergents:
not relevantRegulation (EC) No. 649/2012 - Export and import of dangerous chemicals:
not relevantRegulation (EC) No. 850/2004 and No. 519/2012 - Persistent organic pollutants:
not relevantRegulation (EC) No. 428/2009 and No. 388/2012 and No. 1382/2014 - Control of exports, or transfer, brokering and transit of dual-use goods (Dual-Use Regulation):
not relevantRegulation (EC) No. 273/2004 - Drug precursors:
not relevantRegulation (EC) No. 111/2005 - Definition of rules for the monitoring of trade in drug precursors between the Union and third countries:
not relevantDirective 2012/18/EC - Control of major accident hazards involving dangerous substances (Seveso III):
not relevantDirective 2004/42/EC - Use of organic solvents in certain paints and lacquers:
not relevant

Directive 2010/75/EU - Industrial Emissions Directive (Directive IE) - succession to Directive 1999/13/EC - Limitation of emissions of volatile organic compounds (VOC-Directive):

When using this substance / mixture it has to be checked whether the activities are subject to the requirements of IE-RL, Chapter V (installations and activities with the use of organic solvents - VOC).

Aerosol directive (75/324/EEC):
not relevantBiocide directive (98/8/EC):
not relevantRegulation (EU) No. 528/2012 on biocides
In accordance with Regulation (EU) No. 528/2012 on biocides

Observe in addition any national regulations!

EC-Chemical inventories: All ingredients are listed in EINECS / ELINCS or excepted from listing.

National regulatory information

Employment restrictions:

Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water contaminating class (D):

2 - clearly water contaminating

Additional information



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Other regulations, restrictions and prohibition regulations:

European product inventories (Registration status on mixtures):

Kemikalieinspektionen / Produktregistret / Swedish Chemicals Inspectorate - Keml (<http://www.kemi.se>):

This product was not registered.

Schweizerische Eidgenossenschaft - Bundesamt für Gesundheit - BAG (<http://www.bag.admin.ch>) / Anmeldestelle

Chemikalien (<http://www.cheminfo.ch>) / Informationssystem für gefährliche und umweltrelevante Stoffe - IGS

(<http://igs.naz.ch/index.html>):

This product was not registered.

International chemical inventories (Registration status on substances): No data available

15.2. Chemical safety assessment

For the following substances of this mixture a chemical safety assessment has been carried out:

distillates (petroleum), hydrotreated light naphthenic

hydrocarbons, C9, aromatics

butan-2-ol

2-(2-butoxyethoxy)ethanol

SECTION 16: Other information

Changes

This version replaces all former issues.

Changes made in this revision see section: 1, 4, 6, 7, 8, 9, 12, 15, 16.

Abbreviations and acronyms

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

ATE: Acute Toxicity Estimate.

CAS: Chemical Abstracts Service.

CEN: Comité Européen de Normalisation (European Committee for Standardisation).

CLP: Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008.

C&L: Classification & Labeling.

DNEL: Derived No-Effect Level.

EAK: European Waste Catalogue (replaced by LoW – see below).

EC50: Effective concentration, 50 percent.

ECHA: European Chemicals Agency.

EC: European community.

EINECS: European Inventory of Existing Commercial Chemical Substances.

ELINCS: European List of Notified Chemical Substances.

EN: European standard.

EWC: European Economic Community.

EEA: European Economic Area (EU + Iceland, Liechtenstein and Norway).

EU: European Union.

GHS: Globally Harmonized System of Classification and Labelling of Chemicals.

IATA-DGR: International Air Transport Association Dangerous Goods Regulations.

IBC-Code: International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk (International Bulk Chemical Code).

IC50 / ErC50: Inhibitory concentration, 50 percent.

ICAO-TI: International Civil Aviation Organization Technical Instruction.

IMDG: International Maritime Dangerous Goods.

ISO: A standard of International Standards Organisation.

IUPAC: International Union for Pure and Applied Chemistry.

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LC50: Lethal concentration, 50 percent.
LD50: Lethal Dose, 50 percent.
log Kow (Pow): octanol-water partition coefficient.
LoW: List of Wastes (see <http://ec.europa.eu/environment/waste/framework/list.htm>).
MARPOL: Maritime Pollution Convention (Convention for the Prevention of Pollution from Ships).
OC: Operational Conditions.
OECD: Organisation for Economic Co-operation and Development.
OSHA: Occupational Safety and Health Agency.
PBT: Persistent, bioaccumulabe and toxic.
PEC: Predicted Effect Concentration.
PNEC: Predicted No-Effect Concentration.
PPE: Personal Protection Equipment.
(Q)SAR: Quantitative-Structure-Activity-Relationship.
REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals; Regulation (EC) No 1907/2006.
RID: Regulations concerning the International Carriage of Dangerous Goods by Rail.
RMM: Risk Management Measure.
STEL: Short time exposure limit.
SVHC: Substances of Very High Concern.
STOT - RE: Specific Target Organ Toxicity - Repeated Exposure.
STOT - SE: Specific Target Organ Toxicity - Single Exposure.
TWA: Time Weighted Average.
vPvB: Very persistent and very bioaccumulable.
WoE: Weight of Evidence.

For abbreviations and acronyms, see table at <http://abbrev.esdscom.eu>

Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]

Classification	Classification procedure
Eye Dam. 1; H318	Calculation method
Aquatic Chronic 3; H412	Calculation method

Relevant H and EUH statements (number and full text)

H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H373 May cause damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.
EUH066 Repeated exposure may cause skin dryness or cracking.

Further Information

Full text of all R-, H-, EUH-phrases which are referred to in section 2 and 3 of this safety data sheet - see previous list.
These (this) R-, H-, EUH-phrases/R-, H-, EUH-phrase apply/applies to the substance(s) of content, however, it does not necessarily show the classification of the product.

Key literature references and sources for data:

The classification corresponds to current EC-lists, but is completed by statements of technical literature and company data.

Other public accessible sources:

Regulation (EC) No. 1907/2006 (REACH) in the valid version in each case

Regulation (EC) No. 1272/2008 (CLP) in the valid version in each case

Further information and practical guides on the internet:

European Chemicals Agency - ECHA (<http://echa.europa.eu>)

ECHA - Information on Chemicals (<http://echa.europa.eu/information-on-chemicals>)

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

KUPER F 105661 (1 kg) / KUPER F 350002 (5 kg)

Revision date: 03.05.2018

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ECHA - Candidate List of Substances of Very High Concern for Authorisation (<http://echa.europa.eu/de/candidate-list-table>)
ECHA - List of restrictions table (<http://echa.europa.eu/de/addressing-chemicals-of-concern/restrictions/list-of-restrictions/list-of-restrictions-table>)
ECHA - Authorisation List (<http://echa.europa.eu/hr/addressing-chemicals-of-concern/authorisation/recommendation-for-inclusion-in-the-authorisation-list/authorisation-list>)
ECHA - C&L Inventory (<http://echa.europa.eu/en/web/guest/regulations/clp/cl-inventory>)
eChemPortal (<http://www.echemportal.org>)
The access to European Union law - EUR-Lex (<http://eur-lex.europa.eu>)
Health and Safety Executive (<http://www.hse.gov.uk>) / Control of Substances Hazardous to Health Regulations - COSHH (<http://www.coshh-essentials.org.uk/Home.asp>)
Pollution Prevention and Control Act and Pollution Prevention and Control Regulations

Recommended restriction of application:

See under section 1.2 - Uses advised against.

Use this product only for intended purpose in accordance with our product informations.

Please refer to our internet website for more information (<http://www.acmos.com>).**Training advice:**

Yearly briefing and instruction of employees by means of operating instructions according to article 8 of EC-directive 98/24/EC.

Inquiry office: Laboratory (Division: Occupational- /Product security)

Contact person: Mr. Dryhaus (Telephone: +49-421-5189-0, Telefax: +49-421-5189-871)

Office hours: Mo - Th from 7.30 - 16.15 h and Fr from 7.30 - 13.30 h. Out of office hours no call diversion.

Disclaimer:

The information is based on present level of our knowledge. It does not, however, give assurances of product properties and establishes no contract legal rights. The information contained herein are, to our knowledge at the time of their creation to be correct and been taken from sources deemed to be reliable. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release. The receiver of our product is singularly responsible for adhering to existing laws and regulations. All descriptions are approximate values, they are not specified for construction of specifications. This safety data sheet does not represent any operating instruction according to national chemical regulations. It may be used for creation, but must not replace it. The employer is not relieved from his duties. All technical information to occupational protection are directed predominately to experts first (safety engineers, occupational medicines).