



PRODUCT: ETHYL DIGLYCOL ETHER (EDGE) REVISION: 4 DATED: 15/11/2023 PAGE 1 OF 11

PRODUCT SPECIFICATION			
Product Name	Ethyl Di-Glycol Ether		
Alternative Name	Diethylene glycol ethyl ether, 2-Ethoxyethoxyethanol		
Specification Reference	ETDIET/3 (15/10/0051208)		
SALES SPECIFICATION			
Property	Units	Lower	Upper
Ethyl Diglycol	% wt	99.0	
Monoethylene Glycol	% wt		0.5
Appearance	Clear		
Acidity (as acetic acid)	% wt		0.01
Water	% wt		0.10
Colour	PtCo		10
Suspended matter	Substantially free		
NOTES			
Exclusion of Liability			
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Health and Safety			
A Material Safety Data Sheet has been issued describing the health, safety and environmental properties of this product, identifying the potential hazards and giving advice on the handling precautions and emergency procedures. This must be consulted fully before handling, storage and use.			



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SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

1.1 Product Identifier

Chemical Name (EINECS)	Ethyl diglycol ether
Chemical Formula	C ₆ H ₁₄ O ₃
Synonyms	2-(2-ethoxyethoxy)ethanol, ethanol, 2-(2ethoxyethoxy)-DEGEE Diethyleneglycolethylether, EDGE
CAS Number	111-90-0
EINECS Number	203-919-7
REACH Registration Number	01-2119475105-42-XXXX

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

Identified use(s)

Exposure Scenario title	Exposure Scenario Group	Sector of Use	Applicable Use Descriptors (PROC or PC)	Applicable Use Descriptors
Formulation of mixtures containing substance	Industrial	SU 10	PROC 5, PROC 1, PROC 2, PROC 8a, PROC 8b, PROC 15, PROC 14, PROC 9	ERC 2
Manufacture, use as a process chemical and chemical intermediate, including distribution	Industrial	SU 8	PROC 1, PROC 2, PROC 3, PROC 4, PROC 8a, PROC 8b, PROC 15	ERC 1
	Industrial	SU 9	PROC 1, PROC 2, PROC 3, PROC 4, PROC 8a, PROC 8b, PROC 15	ERC 1
Pharmaceutical products and personal care products	Consumer		PC 29, PC 28, PC 39	ERC 8a
Use in coatings	Consumer		PC 9a, PC 18	ERC 8a
	Consumer		PC 9a, PC 18	ERC 8d
	Professional		PROC 1, PROC 11, PROC 10, PROC 8a, PROC 13	ERC 8a
	Professional		PROC 1, PROC 11, PROC 10, PROC 8a, PROC 13	ERC 8d
Use in household products	Consumer		PC 34, PC 31, PC 35, PC 3	ERC 8a
Use in hydraulic fluids	Consumer		PC 17	ERC 9b
	Industrial		PROC 1, PROC 2, PROC 8a, PROC 20	ERC 9a
	Industrial		PROC 1, PROC 2, PROC 8a, PROC 20	ERC 9b
	Professional		PROC 2, PROC 3, PROC 8a, PROC 20	ERC 9a
	Professional		PROC 2, PROC 3, PROC 8a, PROC 20	ERC 9b
Use in textile processing	Industrial		PROC 1, PROC 2, PROC 3, PROC 4, PROC 5, PROC 8a, PROC 8b, PROC 13	ERC 4

Uses advised against

Group	Use advised against	Use descriptors	Environmental release category (ERC)
Consumer	No uses advised against		
Industrial	No uses advised against		
Professional	No uses advised against		

Group	Use advice against	Use descriptors	Article (AC)
Consumer	No uses advised against		
Industrial	No uses advised against		
Professional	No uses advised against		

1.3 Details of the supplier of the safety data sheet

Tennants Distribution Limited
Hazelbottom Road



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Cheetham
Manchester
M8 0GR
Tel: 44(0)161 205 4454
Fax: 44(0) 161 203 4298
Email: msds@tennantsdistribution.com

1.4 Emergency telephone number

Tel: 44(0)844 335 0001 (24 hours)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

2.1.1 Regulation 1272/2008 (CLP)

Not classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

2.2 Label elements

2.2.1 According to Regulation (EC) No. 1272/2008 (CLP).

Not classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

Not classified as dangerous according to the criteria of directive(s) 67/548/EEC and/or 1999/45/EC

2.3 Other hazards

No further information

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances

Name REACH Registration No.	CAS No. EC No.	Conc.	Classification according to CLP	Note	Remark
2-(2-ethoxyethoxy)ethanol 01-2119475105-42-XXXX	111-90-0 203-919-7	≥99%	N/A	(2)	Mono-constituent

(2) Substance with a Community workplace exposure limit

4. FIRST AID MEASURES

4.1 Description of first aid measures

General Advice

Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital. Never give alcohol to drink.

Inhalation

Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

Skin contact

Rinse with water. Soap may be used. Take victim to a doctor if irritation persists.

Eye contact

Rinse with water. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists.

Ingestion

Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Do not induce vomiting. Give activated charcoal. Consult a doctor/medical service if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed

4.2.1 Acute symptoms

After inhalation: No data available

After skin contact: Red skin.

After eye contact: Slight irritation. Redness of the eye tissue.

After ingestion: AFTER ABSORPTION OF HIGH QUANTITIES: Central nervous system depression. Dizziness. Coordination disorders. Disturbance of consciousness. Headache. Nausea. Decreased renal function.

4.2.2 Delayed symptoms



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If applicable and available it will be listed below.
4.3 Indication of any immediate medical attention and special treatment needed If applicable and available it will be listed below.
5. FIRE FIGHTING MEASURES
5.1 Extinguishing Media Preferably: alcohol resistant foam. Water spray. Polyvalent foam. BC powder. Carbon dioxide. Unsuitable extinguishing media: Solid water jet ineffective as extinguishing medium.
5.2 Special hazards arising from the substance or mixture Upon combustion CO and CO ₂ are formed.
5.3 Advice for fire-fighters 5.3.1 Instructions: Cool tanks/drums with water spray/remove them into safety. 5.3.2 Special protective equipment for fire-fighters: Gloves. Protective clothing. Heat/fire exposure: compressed air/oxygen apparatus.
6. ACCIDENTAL RELEASE MEASURES
6.1 Personal precautions, protective equipment and emergency procedures 6.1.1 For non-emergency personnel See heading 8.2 6.1.2 For emergency responders Gloves. Protective clothing Suitable protective clothing See heading 8.2
6.2 Environmental precautions Contain released substance, pump into suitable containers. Plug the leak, cut off the supply..
6.3 Methods and material for containment and cleaning up Take up liquid spill into a non-combustible material e.g.: sand, earth, vermiculite or powdered limestone. Scoop absorbed substance into closing containers. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.
6.4 Reference to other sections See heading 13
7. HANDLING AND STORAGE
The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use. 7.1 Precautions for safe handling Keep away from naked flames/heat. At temperature > flashpoint: use spark-/explosion proof appliances. Finely divided: keep away from ignition sources/sparks. Gas/vapour heavier than air at 20°C. Observe normal hygiene standards. Keep container tightly closed. Remove contaminated clothing immediately. Cool before opening.
7.2 Conditions for safe storage, including any incompatibilities 7.2.1 Safe storage requirements: Store in a dry area. Ventilation at floor level. Store at room temperature. Keep out of direct sunlight. Meet the legal requirements. 7.2.2 Keep away from: Heat sources, oxidizing agents, (strong) acids, (strong) bases, metals, peroxides, water/moisture. 7.2.3 Suitable packaging material: Steel, Stainless steel, polypropylene, glass. 7.2.4 Non suitable packaging material: Aluminium, copper.
7.3 Specific end use(s) For relevant identified uses, see exposure scenarios attached in annex. See information supplied by the manufacturer.
8. EXPOSURE CONTROLS/PERSONAL PROTECTION
8.1 Control parameters
8.1.1 Occupational exposure If limit values are applicable and available these will be listed below. a) Occupational exposure limit values



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The Netherlands

2-(2-Ethoxy-ethoxy)ethanol Time-weighted average exposure limit 8 h 32 ppm 180 mg/m³

Private occupational exposure limit value

Germany

2-(2-Ethoxyethoxy)ethanol Time-weighted average exposure limit 8 h 6 ppm 35 mg/m³ TRGS 900

b) National biographical limit values

If limit values are applicable and available these will be listed below.

8.1.2 Sampling Methods

Product Name	Test	Number
Diethylene glycol ethyl ether (Volatile organic compound)	NIOSH	2549

8.1.3 Applicable limit values when using the substance or mixture as intended

If limit values are applicable and available these will be listed below.

8.1.4 DNEL/PNEC values

Ethyl diglycol ether

DNEL - Workers

Effect level (DNEL/DMEL)	Type	Value	Remark
	Long-term systemic effects dermal	50 mg/kg bw/day	
	Long-term local effects inhalation	18 mg/m ³	

DNEL – General Population

Effect level (DNEL/DMEL)	Type	Value	Remark
	Long-term systemic effects dermal	25 mg/kg bw/day	
	Long-term systemic effects inhalation	18.3 mg/m ³	
	Long term -systemic effects oral	25 mg/kg bw/day	

PNEC

Compartments	Value	Remark
Fresh water	0.74 mg/l	
Marine water	0.074 mg/l	
Aqua (intermittent release)	10 mg/l	
Fresh water sediment	2.74 mg/kg sediment dw	
Marine water sediment	0.274 mg/kg sediment dw	
SOIL	0.15 mg/kg soil dw	
STP	500 mg/l	

8.1.5 Control banding

If applicable and available it will be listed below:

8.2 Exposure controls

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

Appropriate engineering controls

Keep away from naked flames/heat. At temperature > flashpoint: use spark-/explosion proof appliances. Finely divided: keep away from ignition sources/sparks. Before use: check for peroxides and eliminate them. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.

8.2.2 Individual protection measures, such as personal protective equipment

Observe normal hygiene standards. Keep container tightly closed. Do not eat, drink or smoke during work.

Respiratory protection

High gas/vapour concentration: gas mask with filter type A On heating: gas mask with filter type A.

Eye protection

Safety glasses

Hand protection

Gloves: Material for protective clothing (good resistance): PVC, butyl rubber

Skin protection

Protective clothing



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Environmental exposure controls See 6.2,6.3 and 13	
9. PHYSICAL AND CHEMICAL PROPERTIES	
9.1 Information on basic physical and chemical properties	
Appearance	Liquid
Colour	Colourless
Odour	Pleasant odour Fruity odour Mild odour
Odour threshold	1 ppm 6 mg/m ³
Particle size	Not applicable
Explosion limits	No data available
Flammability	Non-flammable
Log Kow	-54; Test data; 20°C
Dynamic viscosity	0.0044 Pa.s; 20°C
Kinematic viscosity	No data available
Melting point	-0.54°C; 1013 hPa
Boiling point/boiling range	196°C; 1013 hPa
Flash point	91 °C
Evaporation rate	518; ether 0.1; butyl acetate
Vapour pressure	0.168 hPa @ 25 °C
Relative vapour density	4.6
Relative density	0.9885 @20 °C
Solubility – Water	Complete
Auto-ignition temperature	204 °C; 1013 hPa
Explosive properties	No chemical group associated with explosive properties
Oxidising properties	No chemical group associated with oxidising properties
pH	No data available
9.2 Other information	
Specific conductivity	25000pS/m
Surface tension	0.070 N/m @ 20°C
Relative density saturated vapour/air mixture	1
Saturation concentration	998 kg/m ³
10. STABILITY AND REACTIVITY	
10.1 Reactivity Temperature above flashpoint: higher fire/explosion hazard.	
10.2 Chemical stability Unstable on exposure to air. Hygroscopic.	
10.3 Possibility of hazardous reactions Reacts slowly on exposure to air: peroxidation resulting in increased fire or explosion risk. Reacts violently with (strong) oxidizers: (increased) risk of fire. Reacts exothermically with (some) bases. Reacts violently with (some) acids.	
10.4 Conditions to avoid Keep away from naked flames/heat. At temp>flashpoint: use spark-/explosion proof appliances. Finely divided: spark- and explosion proof appliances. Finely divided: keep away from ignition sources/sparks.	
10.5 Incompatible materials Oxidizing agents, (strong) acids, (strong) bases, metals, peroxides, water/moisture, aluminium, copper.	
10.6 Hazardous decomposition products Reacts with (some) metals: release of highly flammable gases/vapours (hydrogen). Upon combustion: CO and CO ₂ are formed.	
11. TOXICOLOGICAL INFORMATION	



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Toxicology, 2001; ECETOC Technical Report). Glycol ethers follow two main oxidative pathways of metabolism, either via alcohol dehydrogenase (ADH) or the microsomal CYP mixed function oxidase (MFO) (O-demethylation or O-dealkylation). The first pathway gives rise to the formation and excretion of alkoxyacetic acids. The second mainly leads to the production and exhalation of carbon dioxide (CO₂) via ethylene glycol (MEG), which enter intermediary metabolism via the tricarboxylic acid (TCA) cycle. Glycol ethers may also be conjugated with glucuronide or sulfate, but this is thought to occur mainly after saturation of the other metabolic pathways.

According to their pathways of metabolism, the glycol ethers may be divided into three groups:

- ethylene glycol mono- and di-alkyl ethers and their acetates;
- diethylene glycol mono- and di-alkyl ethers and their acetates;
- propylene glycol ethers

Monoethylene glycol ethers bearing a primary OH-group (alkoxyethanols) are primary alcohols that are oxidised via ADH and aldehyde dehydrogenase (ALDH) to their corresponding alkoxyacetic acids. In addition to ADH-mediated oxidation of glycol ethers bearing a primary alcohol function, microsomal oxidation (catalysed by CYP MFO: O-demethylation or O-dealkylation) may also occur, but this pathway has relatively lower capacity. Diethylene glycols may be similarly metabolised by the equivalent primary OH group

Diethylene glycols such as 2 -(2 -ethoxyethoxy) ethanol (22EE) may also undergo low level formation of ether cleavage and formation of alkoxyacetic acid such as ethoxyacetic acid (EAA). However, since 22EE shows no evidence of the developmental or testicular toxicity associated with EAA, this is not thought to be a significant route of metabolism.

The metabolism of glycol ethers is considered a pre-requisite for their systemic toxicity, as the alkoxyacetic acids and perhaps their acetaldehyde precursors are regarded as the ultimate toxicants. Evidence of this comes from: protection of toxicity afforded by inhibition of alcohol and aldehyde dehydrogenases; similar toxicity profiles of ethylene glycol ethers and their alkoxyacetic acid metabolites; and the differential toxicities of those glycol ethers metabolized via the oxidative and O-dealkylase pathways (Miller et al, 1984; Ghanayem et al, 1987)

Some specific studies are available on the toxicokinetics of this substance. In a toxicokinetic study, 20 mg/kg of 14C radiolabelled 2 -(2 -ethoxyethoxy) ethanol was administered in male and female rats by oral and i. v. route. The absolute bioavailability of the radioactivity was 79 -95%. The C_{max} corresponded to about 32 -35 mg eq/kg and 23 -27 mg eq/kg for i. v. and oral routes, respectively, at 0.25 and 0.25 -0.50 hrs post dose. With regards to concentrations in plasma, high concentrations were observed in hypophysis, thyroid, adrenals and bone marrow at the same sampling time. The plasmatic t_{1/2} corresponded to 37 to 84 hours and the radioactivity was rapidly excreted in urine whatever the sex and the route of administration (85% to 90% within 24 hours post dose)

The excretion of glucuronic acid following the oral and subcutaneous administration of 2 -(2 -ethoxyethoxy) ethanol in rabbits was determined. The total percentage increase of glucuronic acid excretion suggests that the test substance is excreted in a conjugate form as a glucuronide but this represents a small percentage of the total amount administered (0.8 -2.3%). The metabolic conversion of 2 -(2 -ethoxyethoxy) ethanol to (2-ethoxyethoxy) -acetic acid was documented in an adult human volunteer (age and sex unspecified) given a single oral dose of 11.2 mmol diethylene glycol monoethyl ether. A summary review is also available of various experimental studies conducted to assess the absorption, distribution and excretion of 2 -(2 -ethoxyethoxy) ethanol through various routes of administration. The evidence obtained indicates that diethylene glycol monoethyl ether distributes rather rapidly from the blood into the tissues where over 80 per cent is metabolized, presumably oxidized, without demonstrable occurrence of such possible degradation products as

ethylene glycol or diethylene glycol. The excreted product was found to be pure diethylene glycol monoethyl ether, with some glucuronic acid. The prime metabolites appear to be either 2 -(2 -ethoxyethoxy) acetic acid, conjugates of the original substance or the substance itself unchanged, primarily excreted in urine. The data indicate a low potential for bioaccumulation. In a well conducted metabolism study, 14C-Diethylene glycol monoethyl ether was administered as a single 1g/kg dose by gavage to four rats for the purpose of identifying the major metabolites. Blood samples were collected at 0.75h and at 24h. Urinary samples were collected before administration and between 0 -8h and 8 - 24h. After administration of the test substance, 90% of the administered radioactivity was excreted in urine within the first 24 hours. 14C-Diethylene glycol monoethylether was extensively metabolised; only 3% of the urinary excreted radioactivity corresponded to unchanged parent compound. The two major urinary metabolites were identified as Ethoxyethoxyacetic acid and Diethylene glycol, which represented 83% and 5.4% respectively of the excreted urinary radioactivity respectively. In plasma, only Ethoxyethoxyacetic acid and unchanged 14C-Diethylene glycol monoethylether were found which is consistent with urinary results. A further study was carried out to confirm at low dose the biotransformation of diethylene glycol monoethylether to ethoxyethoxyacetic acid. Two doses were studied: 15 rats received a single dose of 100mg/kg of diethylene glycol monoethylether by oral route and 15 others



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20mg/kg. Blood samples were collected at 0.5h, 1h, 3h, 6h and at 24h. Urinary samples were collected before administration and between 0 -8h and 8 -24h. The results obtained confirmed the presence of unchanged diethylene glycol monoethylether and ethoxyethoxyacetic acid as major metabolites for the 0.5hr plasma sampling times. In urine the amount recovered by the analysis of ethoxyethoxyacetic acid is low: about 17% of the administered dose for the rats treated with 20mg/kg of diethyleneglycol monoethylether and about 40% of the administered dose for the rats treated with 100mg/kg of diethyleneglycol monoethylether. Value used for CSA: no bioaccumulation potential. Dermal absorption: An in vitro dermal absorption study using human skin showed that 2 -(2 -ethoxyethoxy) ethanol is able to pass through the stratum corneum at a rate of 0.125mg/cm²/hr but does not cause any damage to the skin in the process. There is a lag time of less than 1 hour for the substance to cross the skin and appear in the receptor fluid. This suggests that adsorption via the skin is likely to be less than 100% for skin deposition rates of >1mg/cm² over an 8 hour exposure period.

The following information is taken into account for any hazard/risk assessment: Humans:0.125 cm²/hr (damage ratio1.2; control 1-2)

Ethyl diglycol ether

	Parameter	Method	Value	Exposure time	Species	
Acute toxicity: oral	LD50	Equivalent or similar to OECD 401	6031mg/kg bw		Mouse (Male)	Experimental value
Acute toxicity: dermal	LD50	Equivalent or similar to OECD 402	9143mg/kg bw		Rabbit (Male)	Experimental value
Acute toxicity: inhalation	LCO	Equivalent or similar to OECD 403	25 mg/m ³	8 h	Rabbit (Male/female)	Experimental value

Conclusion

Low acute toxicity by the oral route
Low acute toxicity by the dermal route
Low acute toxicity by the inhalation route
Not classified for acute toxicity

	Results	Method	Exposure time	Time point	Species	
Corrosion/irritation: eye	Not irritating	OECD 405:AcuteEye Irritation /Corrosion		24;48;72 hours	Rabbit	Experimental value
Corrosion/irritation: skin	Not irritating	Equivalent or similar to OECD 404		5hrs;1;2;3;7days	Rabbit	Experimental value

Conclusion

Not classified as irritating to the skin
Not classified as irritating to the eyes

	Result	Method	Exposure time	Observation time	Species	
Sensitisation: skin	Not sensitising	Patch test			Human	Experimental value

	Parameter	Method	Value	Organ	Effect	Exposure time	Species	
Specific target organ toxicity: oral	NOAEL	Equivalent or similar to OECD 409	1000 mg/kg bw/day			91 days (continuous)	Dog (Male/female)	Experimental value
Specific target organ toxicity: dermal	NOAEL	Equivalent or similar to OECD 410	300 mg/kg bw/day		Histopathological changes	28 days	Rabbit (Male/female)	Experimental value
	NOAEL	Equivalent or similar to OECD 410	>1000mg/kg bw/day		Systemic effect	28 days	Rabbit (Male/female)	Experimental value
	NOAEL	Equivalent or similar to OECD 410	100mg/kg bw/day		Reversible irritation	28 days	Rabbit (Male/female)	Experimental value
Specific target organ toxicity: inhalation	No data available							

Conclusion

Low sub-chronic toxicity by the oral route
Low sub-chronic toxicity by the dermal route
No sub-chronic hazard by the inhalation route



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	Result	Method	Exposure time	Test substrate	Organ	Effect	
Germ cell mutagenicity	Negative	Equivalent or similar to OECD 474		Mouse (Male)			Experimental value
	Negative	Equivalent or similar to OECD 486		Rat (Male)			Experimental value

Carcinogenicity

No (test) data available

	Parameter	Method	Value	Exposure time	Species	Organ	Effect	
Developmental toxicity	NOAEL	Equivalent to OECD 414	1000 mg/kg bw/day	6 - 17 days (gestation, daily)	Rat			Experimental value
Effects on fertility	NOAEL(P)	Equivalent or similar to OECD 416	2200 mg/kg bw/day	126 days (continuous)	Mouse (Male/female)		No effect	Experimental value
	NOAEL(F1)	Equivalent or similar to OECD 416	2200 mg/kg bw/day	126 days (continuous)	Mouse (Male/female)			Experimental value
	NOAEL(F2)	Equivalent or similar to OECD 416	4400 mg/kg bw/day	126 days (continuous)	Mouse (Male/female)			Experimental value

Conclusion CMR

No carcinogenicity data available

Not classified for mutagenic or genotoxic toxicity

Not classified for reprotoxic or developmental toxicity

Toxicity – other effects

No (test) data available

Chronic effects from short and long term exposure

ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Decreased renal function.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Ethyl diglycol ether

	Parameter/Method	Value	Duration	Species	Test design	Fresh/salt water	
Acute toxicity fish	LC50 OECD 203: Fish, Acute Toxicity Test	6010mg/l	96h	Ictalurus punctatus	Flow through system	Fresh water	Experimental value
	LC50 Equivalent or similar to OECD 203	>10000mg/l	96h	Menidia sp.	Static system	Marine water	Experimental value
Acute toxicity invertebrates	LC50 Equivalent or similar to OECD 202	1982 mg/l	48h	Daphnia Magna	Static system	Fresh water	Experimental value
	EC50 Other	7611 mg/l	48h	Mollusca	Flow through system	Salt water	Experimental value
Toxicity algae and other aquatic plants	EC50 OECD 201: Alga, Growth inhibition Test	>14861 mg/l	96h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value Nominal concentration
	EC50	1346 mg/l	72h		Static system	Fresh water	QSAR
Long term aquatic invertebrates	EC10 Equivalent or similar to OECD 211	7.4 mg/l	7days	Ceriodaphnia dubia	Semi-static	Fresh water	Experimental value
Toxicity aquatic micro-organisms	IC50 Other	>5000mg/l	16h	Sewer micro-organisms	Static system	Fresh water	Experimental value Nominal concentration

Conclusion

Not harmful to fish

Not harmful to invertebrates (Daphnia)

Not harmful to algae

Not harmful to bacteria

12.2 Persistence and degradability

Biodegradation in water

Method	Value	Duration	
OECD 301B:	100%	16 days	Experimental value

Phototransformation in air (DT50 air)

Method	Value	Conc OH radicals	Reference
AOPWIN v1.92	4.1 h	1.5E6 /cm ³	QSAR



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Conclusion

Readily biodegradable in water

12.3 Bio accumulative potential

Log Kow

Method	Temperature	Value	Remark	Reference
	20°C	-0.54		Test data

Conclusion

Not bioaccumulative

12.4 Mobility in soil

Percent distribution

Method	Fraction air	Fraction biota	Fraction sediment	Fraction soil	Fraction water	Reference
Mackay level I	0.99%	0%	0%	1.06%	97.94%	QSAR

Conclusion

Low potential for absorption in soil

12.5 Results of PBT and vPvB assessment

Substance does not meet the criteria of PBT, nor the criteria of vPvB according to annex XIII of Regulation (EC) No 1907/2006, so is neither PBT nor vPvB..

12.6 Other adverse effects

Endocrine disrupting properties

No evidence of endocrine disrupting properties

Greenhouse gases

Not included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014)

Ozone-depleting potential (ODP)

Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009)

13. DISPOSAL CONSIDERATIONS

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

13.1 Waste treatment methods

Provisions relating to waste

Waste material code (Directive 2008/98/EC, decision 2000/0532/EC).

07 01 04* (other organic solvents, washing liquids and mother liquors). Depending on branch of industry and production process, also other EURAL codes may be applicable. Hazardous waste according to Directive 2008/98/EC.

Disposal methods

Recycle by distillation. Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber with energy recovery. Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Obtain the consent of pollution control authorities before discharging to wastewater treatment plants. Do not discharge into surface water.

Packaging/Container

Waste material code packaging (Directive 2008/98/EC). 15 01 10* (packaging containing residues of or contaminated by dangerous substances).

14. TRANSPORT INFORMATION

14.1 UN Number

It is not considered as dangerous goods within ADR/RID/IMDG/IATA

ADN: UN No. 9003

14.2 Proper Shipping Name

Not applicable - ADR/RID/IMDG/IATA

ADN: Substances with a flash point above 60°C and not more than 100°C

14.3 Transport hazard class

Not applicable

14.4 Packing group



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Not applicable

14.5 Environmental

It is not considered hazardous to the environment.

14.6 Special precautions for users

It is not considered as dangerous goods.

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

Not applicable

15. REGULATORY INFORMATION

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

European legislation:

Information exposure scenarios

Substance is not classified as dangerous, so no exposure scenarios are available.

REACH Candidate list

Contains component(s) included in candidate list of substances of very high concern (SVHC) for authorisation (Article 59 of Regulation (EC) No 1907/2006)

REACH Annex XVII - Restriction

Contains component(s) subject to restrictions of Annex XVII of Regulation (EC) No. 1907/2006: restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles.

Reference legislation

See column 1: 3. See column 1: 30. See column 1: 40.

Volatile organic compounds (VOC) 100 %

National Legislation - Netherlands

Waterbezwaarlijkheid	11
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National Legislation - Germany

Schwangerschaft Gruppe	C	
TA-Luft	2-(2-ethoxyethoxy)ethanol	TA-Luft Klasse 5.2.5
WGK	1	Classification water polluting in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 27 July 2005 (Anhang 2)

National legislation France: No data available

National legislation Belgium: No data available

Other relevant data: No data available

15.2 Chemical safety assessment

A chemical safety assessment has been performed.

16. OTHER INFORMATION

Full text of any H-statements referred to under headings 2 and 3:

H226 Flammable liquid and vapour.

H302 Harmful if swallowed.

H331 Toxic if inhaled.

H360FD May damage fertility. May damage the unborn child.

(*) = INTERNAL CLASSIFICATION BY BIG

PBT-substances = persistent, bioaccumulative and toxic substances

DSD Dangerous Substance Directive

DPD Dangerous Preparation Directive

CLP (EU-GHS) Classification, labelling and packaging (Globally Harmonised System in Europe)

Source of key data used to compile the data sheet

Supplier information

Modifications from last revision: Safety Data Sheet has been updated in Sections 3 and 12. MSDS reference changed from ETDIET to EDGE

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