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Revision date / version: 14.03.2024 / 0025

Replacing version dated / version: 12.11.2023 / 0024

Valid from: 14.03.2024 PDF print date: 14.03.2024 Marine Super Diesel Additive

# Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

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

#### 1.1 Product identifier

### **Marine Super Diesel Additive**

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

Additives

#### Uses advised against:

No information available at present.

#### 1.3 Details of the supplier of the safety data sheet

LIQUI MOLY GmbH Jerg-Wieland-Str. 4 89081 Ulm-Lehr Tel.: (+49) 0731-1420-0

Fax: (+49) 0731-1420-0 Fax: (+49) 0731-1420-88

Qualified person's e-mail address: info@chemical-check.de, k.schnurbusch@chemical-check.de Please DO NOT use for requesting Safety Data Sheets.

#### 1.4 Emergency telephone number

Emergency information services / official advisory body:

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#### Telephone number of the company in case of emergencies:

+49 (0) 700 / 24 112 112 (LMR)

+1 872 5888271 (LMR)

#### **SECTION 2: Hazards identification**

#### 2.1 Classification of the substance or mixture

## Classification according to Regulation (EC) 1272/2008 (CLP)

Hazard class	Hazard category	Hazard statement
Acute Tox.	4	H332-Harmful if inhaled.
Acute Tox.	4	H302-Harmful if swallowed.

Asp. Tox. 1 H304-May be fatal if swallowed and enters airways.

Aguatic Acute 1 H400-Very toxic to aguatic life.

Aquatic Chronic 1 H410-Very toxic to aquatic life with long lasting effects.

#### 2.2 Label elements

Labeling according to Regulation (EC) 1272/2008 (CLP)



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H332-Harmful if inhaled. H302-Harmful if swallowed. H304-May be fatal if swallowed and enters airways. H410-Very toxic to aquatic life with long lasting effects.

P101-If medical advice is needed, have product container or label at hand. P102-Keep out of reach of children.

P261-Avoid breathing vapours or spray.  $\dot{\mbox{\sc P273-Avoid}}$  release to the environment.

P301+P310-IF SWALLOWED: Immediately call a POISON CENTER / doctor. P312-Call a POISON CENTRE / doctor if you feel unwell. P331-Do NOT induce vomiting.

P405-Store locked up.

P501-Dispose of contents / container to an approved waste disposal facility.

EUH044-Risk of explosion if heated under confinement.

EUH066-Repeated exposure may cause skin dryness or cracking.

2-Ethylhexanol

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics 2-ethylhexyl nitrate

#### 2.3 Other hazards

The mixture does not contain any vPvB substance (vPvB = very persistent, very bioaccumulative) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).

The mixture does not contain any PBT substance (PBT = persistent, bioaccumulative, toxic) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).

The mixture does not contain any substance with endocrine disrupting properties (< 0,1 %).

#### **SECTION 3: Composition/information on ingredients**

#### 3.1 Substances

## n.a. 3.2 Mixtures

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics	
Registration number (REACH)	01-2119457273-39-XXXX
Index	
EINECS, ELINCS, NLP, REACH-IT List-No.	918-481-9
CAS	
content %	40-60
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	EUH066
	Asp. Tox. 1, H304

2-ethylhexyl nitrate	
Registration number (REACH)	01-2119539586-27-XXXX
Index	
EINECS, ELINCS, NLP, REACH-IT List-No.	248-363-6
CAS	27247-96-7
content %	30-50



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Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	EUH044
	EUH066
	Acute Tox. 4, H302
	Acute Tox. 4, H312
	Acute Tox. 4, H332
	Aquatic Acute 1, H400 (M=1)
	Aquatic Chronic 1, H410 (M=1)
Specific Concentration Limits and ATE	ATE (oral): 500 mg/kg
	ATE (dermal): 1100 mg/kg
	ATE (as inhalation, Aerosol): 1,5 mg/l/4h
	ATE (as inhalation, Vapours): 11 mg/l/4h

2-Ethylhexanol	Substance for which an EU exposure limit value applies.
Registration number (REACH)	01-2119487289-20-XXXX
Index	
EINECS, ELINCS, NLP, REACH-IT List-No.	203-234-3
CAS	104-76-7
content %	1-<5
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Acute Tox. 4, H332
	Skin Irrit. 2, H315
	Eye Irrit. 2, H319
	STOT SE 3, H335
Specific Concentration Limits and ATE	ATE (as inhalation, Vapours): 11 mg/l/4h
	ATE (as inhalation, Dusts or mist): 2,7 mg/l/4h

Distillates (petroleum), hydrotreated heavy paraffinic	
Registration number (REACH)	01-2119484627-25-XXXX
Index	649-467-00-8
EINECS, ELINCS, NLP, REACH-IT List-No.	265-157-1
CAS	64742-54-7
content %	0,1-<5
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Asp. Tox. 1, H304

For the text of the H-phrases and classification codes (GHS/CLP), see Section 16.

The substances named in this section are given with their actual, appropriate classification!

For substances that are listed in appendix VI, table 3.1 of the regulation (EC) no. 1272/2008 (CLP regulation) this means that all notes that may be given here for the named classification have been taken into account.

If, for example, the note P is applied for a hydrocarbon then this has already been taken into account for the classification named here. Quote: "Note P - 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)."

Article 4 of the regulation (EC) no. 1272/2008 (CLP regulation) was also observed and taken into account for the classification named here. The addition of the highest concentrations listed here can result in a classification. Only when this classification is listed in Section 2 does it apply. In all other cases the total concentration is below the classification.

#### **SECTION 4: First aid measures**

#### 4.1 Description of first aid measures

First-aiders should ensure they are protected!

Never pour anything into the mouth of an unconscious person!

#### Inhalation

Remove person from danger area.

Supply person with fresh air and consult doctor according to symptoms.

If the person is unconscious, place in a stable side position and consult a doctor.

#### Skin contact

Remove polluted, soaked clothing immediately, wash thoroughly with plenty of water and soap, in case of irritation of the skin (flare), consult a doctor.

## Eve contact

Remove contact lenses.

Wash thoroughly for several minutes using copious water. Seek medical help if necessary.

#### Ingestion

Rinse the mouth thoroughly with water.

Do not induce vomiting. Consult doctor immediately.



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Danger of aspiration.

In case of vomiting, keep head low so that the stomach content does not reach the lungs.

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

If applicable delayed symptoms and effects can be found in section 11 and the absorption route in section 4.1.

The following may occur:

Irritation of the eyes

Irritation of the respiratory tract

Headaches Dizziness

Coordination disorders

Effects/damages the central nervous system

Methhaemoglobin formation

With long-term contact:

Drying of the skin.

Dermatitis (skin inflammation)

Ingestion:

Nausea

Vomiting

Danger of aspiration.

Oedema of the lungs

Chemical pneumonitis (condition similar to pneumonia)

In certain cases, the symptoms of poisoning may only appear after an extended period / after several hours.

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

Gastric lavage (stomach washing) only under endotracheal intubation.

Subsequent observation for pneumonia and pulmonary oedema.

#### **SECTION 5: Firefighting measures**

## 5.1 Extinguishing media Suitable extinguishing media

CO<sub>2</sub>

Extinction powder

Foam

#### Unsuitable extinguishing media

High volume water jet

#### 5.2 Special hazards arising from the substance or mixture

In case of fire the following can develop:

Oxides of carbon

Oxides of nitrogen

Hydrocarbons

Toxic gases

Explosive vapour/air or gas/air mixtures.

#### 5.3 Advice for firefighters

For personal protective equipment see Section 8.

In case of fire and/or explosion do not breathe fumes.

Protective respirator with independent air supply.

According to size of fire

Full protection, if necessary.

Cool container at risk with water.

Dispose of contaminated extinction water according to official regulations.

#### SECTION 6: Accidental release measures

## 6.1 Personal precautions, protective equipment and emergency procedures

#### 6.1.1 For non-emergency personnel

In case of spillage or accidental release, wear personal protective equipment as specified in section 8 to prevent contamination.

Ensure sufficient ventilation, remove sources of ignition.

Avoid dust formation with solid or powder products.

Leave the danger zone if possible, use existing emergency plans if necessary.

Avoid contact with eyes or skin.



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If applicable, caution - risk of slipping.

#### 6.1.2 For emergency responders

See section 8 for suitable protective equipment and material specifications.

#### 6.2 Environmental precautions

If leakage occurs, dam up.

Resolve leaks if this possible without risk.

Prevent from entering drainage system.

Prevent surface and ground-water infiltration, as well as ground penetration.

If accidental entry into drainage system occurs, inform responsible authorities.

#### 6.3 Methods and material for containment and cleaning up

Soak up with absorbent material (e.g. universal binding agent, sand, diatomaceous earth) and dispose of according to Section 13.

Fill the absorbed material into lockable containers.

#### 6.4 Reference to other sections

For personal protective equipment see Section 8 and for disposal instructions see Section 13.

#### **SECTION 7: Handling and storage**

In addition to information given in this section, relevant information can also be found in section 8 and 6.1.

#### 7.1 Precautions for safe handling

#### 7.1.1 General recommendations

Ensure good ventilation.

Avoid inhalation of the vapours.

If applicable, suction measures at the workstation or on the processing machine necessary.

Keep away from sources of ignition - Do not smoke.

Take measures against electrostatic charging, if appropriate.

Avoid contact with eyes or skin.

Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.

Observe directions on label and instructions for use.

Use working methods according to operating instructions.

#### 7.1.2 Notes on general hygiene measures at the workplace

General hygiene measures for the handling of chemicals are applicable.

Wash hands before breaks and at end of work.

Keep away from food, drink and animal feedingstuffs.

Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

#### 7.2 Conditions for safe storage, including any incompatibilities

Keep out of access to unauthorised individuals.

Store product closed and only in original packing.

Not to be stored in gangways or stair wells.

Do not store with flammable or self-igniting materials.

Under all circumstances prevent penetration into the soil.

Protect from direct sunlight and warming.

Store in a well ventilated place.

Store cool.

#### 7.3 Specific end use(s)

No information available at present.

Observe the instructions for good working practice and the recommendations for risk assessment.

Consult hazardous substance information systems, e.g. from the professional associations, the chemical industry or different industries, depending on the application (building materials, wood, chemistry, laboratory, leather, metal).

#### **SECTION 8: Exposure controls/personal protection**

#### 8.1 Control parameters

Workplace exposure limit (WEL) of the total hydrocarbon solvent content of the mixture (RCP method according to EH40): 800 mg/m3

Chemical Name	Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics			
WEL-TWA: 800 mg/m3	WEL-STEL:			
Monitoring procedures:	- Draeger - Hydrocarbons 0,1%/c (81 03 571)			



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<ul> <li>Draeger - Hydrocarbons 2/a (81 03 581)</li> <li>Compur - KITA-187 S (551 174)</li> </ul>						
BMGV:			Other information: paragraphs 84-87, E	(OEL acc. to RCP-method, H40)		
Chemical Name	2-Ethylhexanol					
WEL-TWA: 1 ppm (5,4 mg/m3) (W	/EL-TWA, EU)	WEL-STEL:				
Monitoring procedures:	-	Draeger - Alcohol 100/a (CH 29 70	1)			
BMGV:			Other information:			

Chemical Name	Oil mist, mineral		
WEL-TWA: 5 mg/m3 (Mineral oil, e	excluding metal	WEL-STEL:	
working fluids, ACGIH)			
Monitoring procedures:	-	Draeger - Oil Mist 1/a (67 33 031)	
BMGV:		Other information:	

2-ethylhexyl nitrate						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	0,8	μg/l	
	Environment - marine		PNEC	0,08	μg/l	
	Environment - soil		PNEC	0,00019	mg/kg dw	
	Environment - sediment, freshwater		PNEC	0,00074	mg/kg dw	
	Environment - sediment, marine		PNEC	0,00074	mg/kg dw	
	Environment - sewage treatment plant		PNEC	10	mg/l	
Consumer	Human - dermal	Long term, systemic effects	DNEL	0,52	mg/kg bw/day	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	0,087	mg/m3	
Consumer	Human - oral	Long term, systemic effects	DNEL	0,025	mg/kg bw/day	
Consumer	Human - dermal	Long term, local effects	DNEL	0,022	mg/cm2	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	1	mg/kg bw/day	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	0,35	mg/m3	
Workers / employees	Human - dermal	Long term, local effects	DNEL	0,044	mg/cm2	

2-Ethylhexanol						
Area of application	Exposure route /	Effect on health	Descriptor	Value	Unit	Note
	Environmental					
	compartment					
	Environment - freshwater		PNEC	0,017	mg/l	
	Environment - marine		PNEC	0,0017	mg/l	
	Environment - sporadic		PNEC	0,17	mg/l	
	(intermittent) release					
	Environment - sewage		PNEC	10	mg/l	
	treatment plant					
	Environment - sediment,		PNEC	0,284	mg/kg dw	
	freshwater					
	Environment - sediment,		PNEC	0,028	mg/kg dw	
	marine					
	Environment - soil		PNEC	0,047	mg/kg dw	
	Environment - oral (animal		PNEC	55	mg/kg feed	
	feed)					
Consumer	Human - oral	Long term, systemic	DNEL	1,1	mg/kg	
		effects			body	
					weight/day	



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Consumer	Human - inhalation	Short term, local effects	DNEL	53,2	mg/m3	
Consumer	Human - dermal	Long term, systemic effects	DNEL	11,4	mg/kg bw/day	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	2,3	mg/m3	
Consumer	Human - oral	Short term, systemic effects	DNEL	1,1	mg/kg bw/day	
Consumer	Human - inhalation	Long term, local effects	DNEL	26,6	mg/m3	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	12,8	mg/m3	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	23	mg/kg bw/day	
Workers / employees	Human - inhalation	Short term, local effects	DNEL	53,2	mg/m3	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	53,2	mg/m3	
Workers / employees	Human - oral	Long term, systemic effects	DNEL	12,8	mg/m3	

Distillates (petroleum), hydrotreated heavy paraffinic											
Area of application	Exposure route /	Effect on health	Descriptor	Value	Unit	Note					
	Environmental										
	compartment										
	Environment - oral (animal	PNEC	9,33	mg/kg feed							
	feed)										
Consumer	Human - inhalation	Long term, local effects	DNEL	1,2	mg/m3						
Workers / employees	Human - inhalation	Long term, local effects	DNEL	5,4	mg/m3						

- United Kingdom | WEL-TWA = Workplace Exposure Limit Long-term exposure limit 8-hour TWA (= time weighted average) reference period (EH40/2005 Workplace exposure limits (Fourth Edition 2020)).
- (EU) = Directive 91/322/EEC, 98/24/EC, 2000/39/EC, 2004/37/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU or 2019/1831/EU: (8) = Inhalable fraction (2004/37/CE, 2017/164/EU). (9) = Respirable fraction (2004/37/CE, 2017/164/EU). (11) = Inhalable fraction (2004/37/CE). (12) = Inhalable fraction. Respirable fraction in those Member States that implement, on the date of the entry into force of this Directive, a biomonitoring system with a biological limit value not exceeding 0,002 mg Cd/g creatinine in urine (2004/37/CE).
- | WEL-STEL = Workplace Exposure Limit Short-term exposure limit 15-minute reference period (EH40/2005 Workplace exposure limits (Fourth Edition 2020)).
- (EU) = Directive 91/322/EEC, 98/24/EC, 2000/39/EC, 2004/37/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU or 2019/1831/EU:
- (8) = Inhalable fraction (2004/37/EC, 2017/164/EU). (9) = Respirable fraction (2004/37/EC, 2017/164/EU). (10) = Short-term exposure limit value in relation to a reference period of 1 minute (2017/164/EU). |
- | BMGV = Biological monitoring guidance value (EH40/2005 Workplace exposure limits (Fourth Edition 2020)).
- (EU) = Directive 98/24/EC or 2004/37/EC or SCOEL (Biological Limit Value BLV, Recommendation from the Scientific Committee on Occupational Exposure Limits (SCOEL)) |
- Other information (EH40/2005 Workplace exposure limits (Fourth Edition 2020)): Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage.
- (EU) = Directive 91/322/EEC, 98/24/EC, 2000/39/EC, 2004/37/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU or 2019/1831/EU:
- (13) = The substance can cause sensitisation of the skin and of the respiratory tract (2004/37/CE), (14) = The substance can cause sensitisation of the skin (2004/37/CE).

#### 8.2 Exposure controls

#### 8.2.1 Appropriate engineering controls

Ensure good ventilation. This can be achieved by local suction or general air extraction.

If this is insufficient to maintain the concentration under the WEL or AGW values, suitable breathing protection should be worn. Applies only if maximum permissible exposure values are listed here.

Suitable assessment methods for reviewing the effectiveness of protection measures adopted include metrological and non-metrological investigative techniques.

These are specified by e.g. EN 14042.

EN 14042 "Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents".

#### 8.2.2 Individual protection measures, such as personal protective equipment

General hygiene measures for the handling of chemicals are applicable.

Wash hands before breaks and at end of work.



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Keep away from food, drink and animal feedingstuffs.

Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

Eye/face protection:

Tight fitting protective goggles with side protection (EN 166).

Skin protection - Hand protection:

Solvent resistant protective gloves (EN ISO 374).

If applicable

Protective nitrile gloves (EN ISO 374).

Protective gloves made of polyvinyl alcohol (EN ISO 374). Protective Viton® / fluoroelastomer gloves (EN ISO 374).

Minimum layer thickness in mm:

0,4

Permeation time (penetration time) in minutes:

> 480

The breakthrough times determined in accordance with EN 16523-1 were not obtained under practical conditions.

The recommended maximum wearing time is 50% of breakthrough time.

Protective hand cream recommended.

Skin protection - Other:

Protective working garments (e.g. safety shoes EN ISO 20345, long-sleeved protective working garments).

Respiratory protection:

If OES or MEL is exceeded.

Gas mask filter A (EN 14387), code colour brown

At high concentrations:

Respiratory protection appliance (insulation device) (e.g. EN 137 or EN 138)

Observe wearing time limitations for respiratory protection equipment.

Thermal hazards:

Not applicable

Additional information on hand protection - No tests have been performed.

In the case of mixtures, the selection has been made according to the knowledge available and the information about the contents. Selection of materials derived from glove manufacturer's indications.

Final selection of glove material must be made taking the breakthrough times, permeation rates and degradation into account.

Selection of a suitable glove depends not only on the material but also on other quality characteristics and varies from manufacturer to manufacturer.

In the case of mixtures, the resistance of glove materials cannot be predicted and must therefore be tested before use.

The exact breakthrough time of the glove material can be requested from the protective glove manufacturer and must be observed.

#### 8.2.3 Environmental exposure controls

No information available at present.

#### **SECTION 9: Physical and chemical properties**

#### 9.1 Information on basic physical and chemical properties

Physical state: Liquid
Colour: Brown
Odour: Characteristic

Melting point/freezing point:

There is no information available on this parameter.

Boiling point or initial boiling point and boiling range:

There is no information available on this parameter.

Flammability: Flamm

Lower explosion limit: 0,7 Vol-% (Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics,

<2% aromatics)

Upper explosion limit: 6 Vol-% (Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics,

<2% aromatics)

63 °C

Auto-ignition temperature: There is no information available on this parameter.

Decomposition temperature: There is no information available on this parameter.

Mixture is non-soluble (in water).

<7 mm2/s (40°C)

Kinematic viscosity:

Flash point:



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Solubility: Insoluble

Partition coefficient n-octanol/water (log value):

Vapour pressure:

Does not apply to mixtures.

There is no information available on this parameter.

Density and/or relative density: 0,87 g/ml (15°C)

Relative vapour density:

Particle characteristics:

Vapours heavier than air.

Does not apply to liquids.

9.2 Other information

Explosives: Product is not explosive. Possible build up of explosive/highly

flammable vapour/air mixture.

1

## **SECTION 10: Stability and reactivity**

#### 10.1 Reactivity

Oxidising liquids:

Risk of explosion if heated under confinement.

#### 10.2 Chemical stability

Stable with proper storage and handling.

#### 10.3 Possibility of hazardous reactions

No dangerous reactions are known.

#### 10.4 Conditions to avoid

Heating, open flame, ignition sources

#### 10.5 Incompatible materials

Avoid contact with strong oxidizing agents.

Avoid contact with strong alkalis.

Avoid contact with strong acids.

#### 10.6 Hazardous decomposition products

No decomposition when used as directed.

### **SECTION 11: Toxicological information**

#### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Possibly more information on health effects, see Section 2.1 (classification).

Marine Super Diesel Additive						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	ATE	1250	mg/kg			calculated value
Acute toxicity, by dermal route:	ATE	>2000	mg/kg			calculated value
Acute toxicity, by inhalation:	ATE	>20	mg/l/4h			calculated value,
						Vapours
Acute toxicity, by inhalation:	ATE	3,7	mg/l/4h			calculated value,
						Aerosol
Skin corrosion/irritation:						n.d.a.
Serious eye damage/irritation:						n.d.a.
Respiratory or skin						n.d.a.
sensitisation:						
Germ cell mutagenicity:						n.d.a.
Carcinogenicity:						n.d.a.
Reproductive toxicity:						n.d.a.
Specific target organ toxicity -						n.d.a.
single exposure (STOT-SE):						
Specific target organ toxicity -						n.d.a.
repeated exposure (STOT-RE):						
Aspiration hazard:						n.d.a.
Symptoms:						n.d.a.

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>5000	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	Analogous conclusion
Acute toxicity, by dermal route:	LD50	>5000	mg/kg	Rabbit	OECD 402 (Acute	Analogous
					Dermal Toxicity)	conclusion



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Acute toxicity, by inhalation:	LC50	>4951	mg/m3/4h	Rat	OECD 403 (Acute Inhalation Toxicity)	Analogous conclusion,
					innaiation roxicity)	Vapours
Skin corrosion/irritation:					OECD 404 (Acute	Not irritant,
					Dermal	Analogous
					Irritation/Corrosion)	conclusion
Serious eye damage/irritation:					OECD 405 (Acute Eye	Not irritant,
, ,					Irritation/Corrosion)	Analogous
					· ·	conclusion
Respiratory or skin					OECD 406 (Skin	Not sensitizising,
sensitisation:					Sensitisation)	Analogous
					,	conclusion
Germ cell mutagenicity:					OECD 473 (In Vitro	Negative,
					Mammalian	Analogous
					Chromosome	conclusion
					Aberration Test)	
Germ cell mutagenicity:					OECD 474 (Mammalian	Negative,
					Erythrocyte	Analogous
					Micronucleus Test)	conclusion
Germ cell mutagenicity:				Salmonella	OECD 471 (Bacterial	Negative
				typhimurium	Reverse Mutation Test)	
Carcinogenicity:					OECD 453 (Combined	Negative,
					Chronic	Analogous
					Toxicity/Carcinogenicity	conclusion
					Studies)	
Reproductive toxicity:					OECD 414 (Prenatal	Negative,
					Developmental Toxicity	Analogous
					Study)	conclusion
Specific target organ toxicity -					OECD 408 (Repeated	Negative,
repeated exposure (STOT-RE):					Dose 90-Day Oral	Analogous
					Toxicity Study in	conclusion
A					Rodents)	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
Aspiration hazard:						Yes
Symptoms:						unconsciousness
						, headaches,
						dizziness,
						mucous
						membrane
						irritation

2-ethylhexyl nitrate						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	ATE	500	mg/kg			
Acute toxicity, by dermal route:	ATE	1100	mg/kg			
Acute toxicity, by inhalation:	ATE	11	mg/l/4h			Vapours
Acute toxicity, by inhalation:	ATE	1,5	mg/l/4h			Aerosol
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant, Repeated exposure may cause skin dryness or cracking.
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Not irritant
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	No (skin contact)
Germ cell mutagenicity:				Mouse	OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)	Negative
Germ cell mutagenicity:				Human being	OECD 473 (In Vitro Mammalian Chromosome Aberration Test)	Negative



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Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative
Reproductive toxicity:	NOAEL	20	mg/kg bw/d	Řat	OECD 421 (Reproduction/Developm ental Toxicity Screening Test)	Negative, oral
Specific target organ toxicity - repeated exposure (STOT-RE), dermal:	NOAEL	500	mg/kg bw/d	Rabbit		Negativedermal
Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.:	NOAEL	863	mg/m3	Rat	OECD 413 (Subchronic Inhalation Toxicity - 90- Day Study)	Vapours, Analogous conclusion(90 d)
Symptoms:						headaches, dizziness, nausea, drop in blood pressure, diarrhoea, unconsciousness , eyes, reddened

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	2047	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	>3000	mg/kg	Rat	OECD 402 (Acute Dermal Toxicity)	
Acute toxicity, by inhalation:	LC50	2,7	mg/l/4h		,	Aerosol
Acute toxicity, by inhalation:	LC50	>0,89-5,3	mg/l/4h	Rat	OECD 403 (Acute Inhalation Toxicity)	
Acute toxicity, by inhalation:	ATE	11	mg/l/4h			Vapours
Acute toxicity, by inhalation:	ATE	2,7	mg/l/4h			Dusts or mist
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Skin Irrit. 2
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Eye Irrit. 2
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	No (skin contact)literature
Germ cell mutagenicity:				Mouse	OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)	Negative
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative
Germ cell mutagenicity:				Mammalian	OECD 473 (In Vitro Mammalian Chromosome Aberration Test)	NegativeChineson hamster
Carcinogenicity:	NOAEL	750	mg/kg bw/d	Mouse	OECD 451 (Carcinogenicity Studies)	Negative
Reproductive toxicity:	NOAEL	3000	ppm	Rat	OECD 416 (Two- generation Reproduction Toxicity Study)	Negative
Reproductive toxicity (Developmental toxicity):				Mouse	OECD 414 (Prenatal Developmental Toxicity Study)	Negativeoral
Specific target organ toxicity - single exposure (STOT-SE):						Irritation of the respiratory tract, STOT SE 3, H335
Specific target organ toxicity - repeated exposure (STOT-RE), oral:	NOAEL	125	mg/kg bw/d	Rat	OECD 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)	



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Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.:	NOAEC	0,6384	mg/l	Rat	OECD 413 (Subchronic Inhalation Toxicity - 90- Day Study)	Vapours
Symptoms:						unconsciousness, drop in blood pressure, vomiting, headaches, cramps, drowsiness, mucous membrane irritation, dizziness, nausea
Specific target organ toxicity - repeated exposure (STOT-RE), oral:	NOAEL	200	mg/kg bw/d	Mouse		

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>5000	mg/kg	Rat	OECD 401 (Acute Oral	Analogous
					Toxicity)	conclusion
Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Rabbit	OECD 402 (Acute	Analogous
					Dermal Toxicity)	conclusion
Acute toxicity, by inhalation:	LC50	>5,53	mg/l/4h	Rat	OECD 403 (Acute	Aerosol,
, , , , , , , , , , , , , , , , , , ,		,,,,,,	3		Inhalation Toxicity)	Analogous
					, ,	conclusion
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute	Not irritant,
					Dermal `	Analogous
					Irritation/Corrosion)	conclusion
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye	Not irritant,
					Irritation/Corrosion)	Analogous
					,	conclusion
Respiratory or skin				Guinea pig	OECD 406 (Skin	No (skin
sensitisation:					Sensitisation)	contact),
					,	Analogous
						conclusion
Germ cell mutagenicity:					OECD 473 (In Vitro	NegativeChinese
,					Mammalian	hamster
					Chromosome	
					Aberration Test)	
Germ cell mutagenicity:				Salmonella	OECD 471 (Bacterial	Negative,
0 ,				typhimurium	Reverse Mutation Test)	Analogous
				*'	,	conclusion
Germ cell mutagenicity:				Mouse	OECD 474 (Mammalian	Negative,
					Erythrocyte	Analogous
					Micronucleus Test)	conclusion
Germ cell mutagenicity:				Mammalian	OECD 476 (In Vitro	Negative,
<b>,</b>					Mammalian Cell Gene	Analogous
					Mutation Test)	conclusion
Carcinogenicity:				Mouse	OECD 451	Negative,
,					(Carcinogenicity Studies)	Analogous
					, , ,	conclusion78
						weeks, dermal
Reproductive toxicity:				Rat	OECD 421	Negative,
					(Reproduction/Developm	Analogous
					ental Toxicity Screening	conclusionoral
					Test)	
Reproductive toxicity				Rat	OECD 414 (Prenatal	Negative,
(Developmental toxicity):					Developmental Toxicity	Analogous
					Study)	conclusionderma



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Specific target organ toxicity - repeated exposure (STOT-RE), dermal:	NOAEL	~1000	mg/kg bw/d	Rabbit	OECD 410 (Repeated Dose Dermal Toxicity - 90-Day)	Analogous conclusion
Specific target organ toxicity - repeated exposure (STOT-RE), dermal:	NOAEL	<30	mg/kg	Rat	OECD 411 (Subchronic Dermal Toxicity - 90-day Study)	Analogous conclusion
Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.:  Symptoms:	NOEC	~220	mg/m3	Rat	OECD 412 (Subacute Inhalation Toxicity - 28- Day Study)	Analogous conclusion, Aerosol coughing,
						respiratory distress, nausea and vomiting., diarrhoea
Specific target organ toxicity - repeated exposure (STOT-RE), oral:	LOAEL	125	mg/kg	Rat	OECD 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)	Analogous conclusion

#### 11.2. Information on other hazards

Marine Super Diesel Additive								
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes		
Endocrine disrupting properties:						Does not apply		
						to mixtures.		
Other information:						No other		
						relevant		
						information		
						available on		
						adverse effects		
						on health.		

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics									
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes			
Other information:						Repeated			
						exposure may			
						cause skin			
						dryness or			
						cracking.			

## **SECTION 12: Ecological information**

Possibly more information on environmental effects, see Section 2.1 (classification).

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:							n.d.a.
12.1. Toxicity to daphnia:							n.d.a.
12.1. Toxicity to algae:							n.d.a.
12.2. Persistence and							n.d.a.
degradability:							
12.3. Bioaccumulative							n.d.a.
potential:							
12.4. Mobility in soil:							n.d.a.
12.5. Results of PBT							n.d.a.
and vPvB assessment							
12.6. Endocrine							Does not apply
disrupting properties:							to mixtures.
12.7. Other adverse							No information
effects:							available on
							other adverse
							effects on the
							environment.



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Other information:				According to the
				recipe, contains
				no AOX.

Hydrocarbons, C10-C13, Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	NOELR	28d	0,101	mg/l	Oncorhynchus mykiss		
12.1. Toxicity to fish:	LL50	96h	>1000	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	EL50	48h	>1000	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to daphnia:	NOELR	21d	0,176	mg/l	Daphnia magna	,	
12.1. Toxicity to algae:	EL50	72h	>1000	mg/l	Pseudokirchneriell a subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:		28d	80	%	activated sludge	OECD 301 F (Ready Biodegradability - Manometric Respirometry Test)	Readily biodegradable
12.3. Bioaccumulative potential:	BCF		10-2500			,	High
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Other organisms:	EL50	48h	>1000	mg/l	Tetrahymen pyriformis		
Water solubility:							Product floats on the water surface.

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	2	mg/l	Brachydanio rerio	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	EC50	48h	0,83	mg/l	Daphnia magna	,	
12.1. Toxicity to algae:	EC50	72h	>2,53	mg/l	Pseudokirchneriell a subcapitata		
12.2. Persistence and degradability:	DOC	28d	0	%	activated sludge	OECD 310 (Ready Biodegradability - CO2 in sealed vessels (Headspace Test))	Not biodegradable
12.3. Bioaccumulative potential:	Log Pow		5,24			OECD 117 (Partition Coefficient (n- octanol/water) - HPLC method)	High
12.3. Bioaccumulative potential:	BCF		1332				
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance



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Toxicity to bacteria:	EC50	3h	>1000	mg/l	activated sludge	OECD 209
						(Activated Sludge,
						Respiration
						Inhibition Test
						(Carbon and
						Àmmonium
						Oxidation))

2-Ethylhexanol Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	17,1	mg/l	Leuciscus idus	Regulation (EC) 440/2008 C.1 (ACUTE TOXICITY FOR FISH)	
12.1. Toxicity to fish:	LC50	96h	28,2	mg/l	Pimephales promelas	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	EC50	48h	39	mg/l	Daphnia magna	Regulation (EC) 440/2008 C.2 (DAPHNIA SP. ACUTE IMMOBILISATION TEST)	
12.1. Toxicity to algae:	EC50	72h	16,6	mg/l	Desmodesmus subspicatus	Regulation (EC) 440/2008 C.3 (FRESHWATER ALGAE AND CYANOBACTERI A, GROWTH INHIBITION TEST)	
12.1. Toxicity to algae:	NOEC/NOEL	72h	5,3	mg/l	Desmodesmus subspicatus	Regulation (EC) 440/2008 C.3 (FRESHWATER ALGAE AND CYANOBACTERI A, GROWTH INHIBITION TEST)	
12.2. Persistence and degradability:	COD	14d	100	%	activated sludge	OECD 301 C (Ready Biodegradability - Modified MITI Test (I))	Readily biodegradable
12.3. Bioaccumulative potential:	Log Pow		2,9			OECD 117 (Partition Coefficient (n- octanol/water) - HPLC method)	Low
12.3. Bioaccumulative potential:	BCF		25,33				calculated value Low
12.4. Mobility in soil:			1,42				Not to be expected
12.4. Mobility in soil: 12.5. Results of PBT and vPvB assessment	Koc		800				No PBT substance, No vPvB substance
Toxicity to bacteria:	EC50	24h	>300	mg/l	activated sludge		
Toxicity to bacteria:	EC50	3h	540	mg/l	Pseudomonas putida		

Distillates (petroleum), hydrotreated heavy paraffinic							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LL50	96h	>100	mg/l			



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12.1. Toxicity to fish:	NOEC/NOEL	14d	1000	mg/l	Oncorhynchus mykiss	QSAR	
12.1. Toxicity to daphnia:	EL50	48h	10000	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	Analogous conclusion
12.1. Toxicity to daphnia:	LL50	96h	>100	mg/l			
12.1. Toxicity to daphnia:	NOEC/NOEL	21d	10	mg/l	Daphnia magna	OECD 211 (Daphnia magna Reproduction Test)	Analogous conclusion
12.1. Toxicity to algae:	LL50	72h	>100	mg/l			
12.2. Persistence and degradability:		28d	31	%		OECD 301 F (Ready Biodegradability - Manometric Respirometry Test)	Not readily biodegradable, Analogous conclusion
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Water solubility:							Insoluble

#### **SECTION 13: Disposal considerations**

#### 13.1 Waste treatment methods

#### For the substance / mixture / residual amounts

Soaked polluted cloths, paper or other organic materials represent a fire hazard and should be controlled, collected and disposed of. EC disposal code no.:

The waste codes are recommendations based on the scheduled use of this product.

Owing to the user's specific conditions for use and disposal, other waste codes may be

allocated under certain circumstances. (2014/955/EU)

13 07 03 other fuels (including mixtures)

Recommendation:

Sewage disposal shall be discouraged.

Pay attention to local and national official regulations.

Implement substance recycling.

E.g. suitable incineration plant.

#### For contaminated packing material

Pay attention to local and national official regulations.

Empty container completely.

Uncontaminated packaging can be recycled.

Dispose of packaging that cannot be cleaned in the same manner as the substance.

#### **SECTION 14: Transport information**

#### **General statements**

#### Transport by road/by rail (ADR/RID)

14.1. UN number or ID number: 3082

14.2. UN proper shipping name:

UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2-ETHYLHEXYL NITRATE)

14.3. Transport hazard class(es):
9
14.4. Packing group:
III

14.5. Environmental hazards: environmentally hazardous

Tunnel restriction code:

Classification code:

LQ:

Transport category:

6 env

M6

LQ:

5 L

Transport category:

Transport by sea (IMDG-code)

14.1. UN number or ID number: 3082

14.2. UN proper shipping name:





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UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2-ETHYLHEXYL NITRATE)

14.3. Transport hazard class(es):
9
14.4. Packing group:
III

14.5. Environmental hazards: environmentally hazardous

Marine Pollutant: Yes EmS: F-A, S-F

Transport by air (IATA)

14.1. UN number or ID number: 3082

14.2. UN proper shipping name:

UN 3082 Environmentally hazardous substance, liquid, n.o.s. (2-ETHYLHEXYL NITRATE)

14.3. Transport hazard class(es):
9
14.4. Packing group:
III

14.5. Environmental hazards: environmentally hazardous



Persons employed in transporting dangerous goods must be trained.

All persons involved in transporting must observe safety regulations.

Precautions must be taken to prevent damage.

#### 14.7. Maritime transport in bulk according to IMO instruments

Freighted as packaged goods rather than in bulk, therefore not applicable.

Minimum amount regulations have not been taken into account.

Danger code and packing code on request.

Comply with special provisions.

## **SECTION 15: Regulatory information**

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

Observe restrictions:

Comply with trade association/occupational health regulations.

Directive 2012/18/EU ("Seveso III"), Annex I, Part 1 - The following categories apply to this product (others may also need to be considered

according to storage, handling etc.):

according to clorage, narialing clory	/ <del>-</del>		
Hazard categories	Notes to Annex I	Qualifying quantity (tonnes) of	Qualifying quantity (tonnes) of
		dangerous substances as	dangerous substances as
		referred to in Article 3(10) for the	referred to in Article 3(10) for the
		application of - Lower-tier	application of - Upper-tier
		requirements	requirements
E1		100	200

The Notes to Annex 1 of Directive 2012/18/EU, in particular those named in the tables here and notes 1-6, must be taken into account when assigning categories and qualifying quantities.

Directive 2010/75/EU (VOC):

National requirements/regulations on safety and health protection must be applied when using work equipment.

#### 15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

#### **SECTION 16: Other information**

Revised sections:

15

92.8 %

Employee training in handling dangerous goods is required.

These details refer to the product as it is delivered.

Employee instruction/training in handling hazardous materials is required.

Classification and processes used to derive the classification of the mixture in accordance with the ordinance (EG) 1272/2008 (CLP):







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Classification in accordance with regulation (EC) No. 1272/2008 (CLP)	Evaluation method used
Acute Tox. 4, H332	Classification according to calculation procedure.
Acute Tox. 4, H302	Classification according to calculation procedure.
Asp. Tox. 1, H304	Classification according to calculation procedure.
Aquatic Acute 1, H400	Classification according to calculation procedure.
Aquatic Chronic 1, H410	Classification according to calculation procedure.

The following phrases represent the posted Hazard Class and Risk Category Code (GHS/CLP) of the product and the constituents.

H302 Harmful if swallowed.

H304 May be fatal if swallowed and enters airways.

H312 Harmful in contact with skin.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

EUH066 Repeated exposure may cause skin dryness or cracking.

EUH044 Risk of explosion if heated under confinement.

Acute Tox. — Acute toxicity - inhalation

Acute Tox. — Acute toxicity - oral Asp. Tox. — Aspiration hazard

Aguatic Acute - Hazardous to the aguatic environment - acute

Aquatic Chronic — Hazardous to the aquatic environment - chronic

Acute Tox. — Acute toxicity - dermal

Skin Irrit. — Skin irritation

Eye Irrit. — Eye irritation

STOT SE — Specific target organ toxicity - single exposure - respiratory tract irritation

#### **Key literature references and sources for data:**

Regulation (EC) No 1907/2006 (REACH) and Regulation (EC) No 1272/2008 (CLP) as amended.

Guidelines for the preparation of safety data sheets as amended (ECHA).

Guidelines on labelling and packaging according to the Regulation (EG) Nr. 1272/2008 (CLP) as amended (ECHA).

Safety data sheets for the constituent substances.

ECHA Homepage - Information about chemicals.

GESTIS Substance Database (Germany).

German Environment Agency "Rigoletto" information site on substances that are hazardous to water (Germany).

EU Occupation Exposure Limits Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU, (EU) 2017/164, (EU) 2019/1831, each as amended.

National Lists of Occupational Exposure Limits for each country as amended.

Regulations on the transport of hazardous goods by road, rail, sea and air (ADR, RID, IMDG, IATA) as amended.

#### Any abbreviations and acronyms used in this document:

according, according to acc., acc. to

Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)

AOX Adsorbable organic halogen compounds

approx. approximately

Article number Art., Art. no.

ASTM ASTM International (American Society for Testing and Materials)

ATE Acute Toxicity Estimate

Bundesanstalt für Materialforschung und -prüfung (= Federal Institute for Materials Research and Testing, Germany) BAM BAuA Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (= Federal Institute for Occupational Health and Safety, Germany)

BCF Bioconcentration factor

BSEF The International Bromine Council



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CAS Chemical Abstracts Service

CLP Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances

and mixtures)

CMR carcinogenic, mutagenic, reproductive toxic

DMEL Derived Minimum Effect Level
DNEL Derived No Effect Level
DOC Dissolved organic carbon

e.g. for example (abbreviation of Latin 'exempli gratia'), for instance

EbCx, EyCx, EbLx (x = 10, 50) Effect Concentration/Level of x % on reduction of the biomass (algae, plants)

EC European Community
ECHA European Chemicals Agency
ECX ELX (X = 0.3, 5, 10, 20, 50, 80,

ECx, ELx (x = 0, 3, 5, 10, 20, 50, 80, 100) Effect Concentration/Level for x % effect

EEC European Economic Community

EINECS European Inventory of Existing Commercial Chemical Substances

ELINCS European List of Notified Chemical Substances

EN European Norms

EPA United States Environmental Protection Agency (United States of America)

ErCx, EµCx, ErLx (x = 10, 50) Effect Concentration/Level of x % on inhibition of the growth rate (algae, plants)

etc. et cetera EU European Union

EVAL Ethylene-vinyl alcohol copolymer

Fax. Fax number gen. general

GHS Globally Harmonized System of Classification and Labelling of Chemicals

GWP Global warming potential

Koc Adsorption coefficient of organic carbon in the soil

Kow octanol-water partition coefficient IARC International Agency for Research

IARC International Agency for Research on Cancer IATA International Air Transport Association IBC (Code) International Bulk Chemical (Code)

IMDG-code International Maritime Code for Dangerous Goods

ncl. including, inclusive

IUCLID International Uniform Chemical Information Database IUPAC International Union for Pure Applied Chemistry LC50 Lethal Concentration to 50 % of a test population

LD50 Lethal Dose to 50% of a test population (Median Lethal Dose)

Log Koc Logarithm of adsorption coefficient of organic carbon in the soil Log Kow, Log Pow Logarithm of octanol-water partition coefficient

LQ Limited Quantities

MARPOL International Convention for the Prevention of Marine Pollution from Ships

mg/kg bw mg/kg body weight

mg/kg bw/d, mg/kg bw/day mg/kg body weight/day

mg/kg dw mg/kg dry weight mg/kg wwt mg/kg wet weight

n.a. not applicablen.av. not availablen.c. not checkedn.d.a. no data available

NIOSH National Institute for Occupational Safety and Health (USA)

NLP No-longer-Polymer

NOEC, NOEL No Observed Effect Concentration/Level

OECD Organisation for Economic Co-operation and Development

org. organic

OSHA Occupational Safety and Health Administration (USA)

PBT persistent, bioaccumulative and toxic

PE Polyethylene

PNEC Predicted No Effect Concentration

ppm parts per million

PVC Polyvinylchloride

REACHRegistration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals)

Evaluation, Authorisation and Restriction of Chemicals)

REACH-IT List-No. 6/7/8/9xx-xxx-x No. is automatically assigned, e.g. to pre-registrations without a CAS No. or other numerical identifier. List Numbers do not have any legal significance, rather they are purely technical identifiers for processing a submission via REACH-



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Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

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Règlement concernant le transport International ferroviaire de marchandises Dangereuses (= Regulation concerning the International

Carriage of Dangerous Goods by Rail) SVHC Substances of Very High Concern

Tel. Telephone

TOC Total organic carbon

UN RTDG United Nations Recommendations on the Transport of Dangerous Goods

VOC Volatile organic compounds

vPvB very persistent and very bioaccumulative

The statements made here should describe the product with regard to the necessary safety precautions - they are not meant to guarantee definite characteristics - but they are based on our present up-to-date knowledge. No responsibility.

## These statements were made by: Chemical Check Platz 1-7, D-32839 Steinheim, Tel.: +49 5233 94 17 0, Fax: +49 5233 94 17 90

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