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 Revision date / version: 13.06.2017 / 0017
 Replacing version dated / version: 11.04.2016 / 0016
 Valid from: 13.06.2017
 PDF print date: 13.06.2017
 Bio-Dieseladditiv 250 mL
 Art.: 3725

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

1.1 Product identifier

Bio-Dieseladditiv 250 mL
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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

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LIQUI MOLY GmbH, Jerg-Wieland-Str. 4, 89081 Ulm-Lehr, Germany
 Phone: (+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:

Telephone number of the company in case of emergencies:

+49 (0) 700 / 24 112 112 (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
Asp. Tox.	1	H304-May be fatal if swallowed and enters airways.
Aquatic Chronic	3	H412-Harmful to aquatic life with long lasting effects.

2.2 Label elements

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



Danger

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H304-May be fatal if swallowed and enters airways. H412-Harmful 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.
 P301+P310+P331-IF SWALLOWED: Immediately call a POISON CENTER / doctor. Do NOT induce vomiting.
 P405-Store locked up.
 P501-Dispose of contents / container to special waste collection point.

EUH044-Risk of explosion if heated under confinement.
 EUH066-Repeated exposure may cause skin dryness or cracking.

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

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 %).

When using: development of flammable vapour/air mixture possible.

SECTION 3: Composition/information on ingredients

3.1 Substance

n.a.

3.2 Mixture

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics	
Registration number (REACH)	01-2119457273-39-XXXX
Index	---
EINECS, ELINCS, NLP	918-481-9 (REACH-IT List-No.)
CAS	---
content %	60-80
Classification according to Regulation (EC) 1272/2008 (CLP)	Asp. Tox. 1, H304

2-Ethylhexylnitrate	
Registration number (REACH)	01-2119539586-27-XXXX
Index	---
EINECS, ELINCS, NLP	248-363-6
CAS	27247-96-7
content %	5-15
Classification according to Regulation (EC) 1272/2008 (CLP)	Acute Tox. 4, H302 Acute Tox. 4, H312 Acute Tox. 4, H332 Aquatic Chronic 2, H411

Reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate	
Registration number (REACH)	01-0000015551-76-XXXX
Index	607-530-00-7
EINECS, ELINCS, NLP	406-040-9
CAS	125643-61-0
content %	1-5
Classification according to Regulation (EC) 1272/2008 (CLP)	Aquatic Chronic 4, H413

2-Ethylhexanol	
Registration number (REACH)	01-2119487289-20-XXXX
Index	---
EINECS, ELINCS, NLP	203-234-3
CAS	104-76-7
content %	1-5

Substance for which an EU exposure limit value applies.

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

Skin Irrit. 2, H315
Eye Irrit. 2, H319
Acute Tox. 4, H332
STOT SE 3, H335

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 3.1/3.2 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.

SECTION 4: First aid measures**4.1 Description of first aid measures****Inhalation**

Remove person from danger area.
Supply person with fresh air and consult doctor according to symptoms.

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.

Eye 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 - give copious water to drink. Consult doctor immediately.
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
Product removes fat.
Dermatitis (skin inflammation)
Ingestion:

Oedema of the lungs
Lung damage

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

n.c.

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

CO2
Extinction powder
Foam
Cool container at risk with water.

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 pyrolysis products.
Explosive vapour/air mixture
Dangerous vapours heavier than air.

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5.3 Advice for firefighters

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

Remove possible causes of ignition - do not smoke.
Ensure sufficient supply of air.
Avoid inhalation, and contact with eyes or skin.
If applicable, caution - risk of slipping.

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.

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.
Keep away from sources of ignition - Do not smoke.
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.
Solvent resistant floor
Do not store with oxidizing agents.
Store in a well ventilated place.
Protect from direct sunlight and warming.
Store cool.

7.3 Specific end use(s)

No information available at present.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

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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	Content %:60-80
WEL-TWA: 800 mg/m ³	WEL-STEL: ---	---
Monitoring procedures:	<ul style="list-style-type: none"> - Draeger - Hydrocarbons 2/a (81 03 581) - Draeger - Hydrocarbons 0,1%/c (81 03 571) - Compur - KITA-187 S (551 174) 	
BMGV: ---	Other information: (WEL acc. to RCP-method, EH40)	

Chemical Name	2-Ethylhexanol	Content %:1-5
WEL-TWA: 1 ppm (5,4 mg/m ³) (EU)	WEL-STEL: ---	---
Monitoring procedures:	- Draeger - Alcohol 100/a (CH 29 701)	
BMGV: ---	Other information: ---	

Chemical Name	Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics	Content %:
WEL-TWA: 800 mg/m ³	WEL-STEL: ---	---
Monitoring procedures:	<ul style="list-style-type: none"> - Draeger - Hydrocarbons 2/a (81 03 581) - Draeger - Hydrocarbons 0,1%/c (81 03 571) - Compur - KITA-187 S (551 174) 	
BMGV: ---	Other information: (WEL acc. to RCP-method, EH40)	

Chemical Name	Oil mist, mineral	Content %:
WEL-TWA: 5 mg/m ³ (ACGIH)	WEL-STEL: 10 mg/m ³ (ACGIH)	---
Monitoring procedures:	<ul style="list-style-type: none"> - Draeger - Oil 10/a-P (67 28 371) - Draeger - Oil Mist 1/a (67 33 031) 	
BMGV: ---	Other information: ---	

WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period) EH40. AGW = "Arbeitsplatzgrenzwert" (workplace limit value, Germany).
 (8) = Inhalable fraction (2017/164/EU). (9) = Respirable fraction (2017/164/EU). | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period).
 (8) = Inhalable fraction (2017/164/EU). (9) = Respirable fraction (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. BGW = "Biologischer Grenzwert" (biological limit value, Germany) | Other information: Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage.
 ** = The exposure limit for this substance is repealed through the TRGS 900 (Germany) of January 2006 with the goal of revision.

2-Ethylhexylnitrate						
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 - sediment		PNEC	0,00074	mg/kg dw	
	Environment - soil		PNEC	0,00019	mg/kg dw	
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/m ³	
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/cm ²	
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/m ³	
Workers / employees	Human - dermal	Long term, local effects	DNEL	0,044	mg/cm ²	

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Reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate

Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - sewage treatment plant		PNEC	10	mg/l	
	Environment - sediment, freshwater		PNEC	233	mg/kg	
	Environment - sediment, marine		PNEC	23,3	mg/kg	
	Environment - soil		PNEC	189	mg/kg	
	Environment - freshwater		PNEC	0,0043	mg/kg	
	Environment - marine		PNEC	0,00043	mg/kg	
Consumer	Human - dermal	Long term, systemic effects	DNEL	0,25	mg/kg	
Consumer	Human - oral	Long term, local effects	DNEL	0,25	mg/kg	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	0,22	mg/kg	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	3,5	mg/m ³	
Workers / employees	Human - dermal	Short term, local effects	DNEL	1	mg/cm ²	
Workers / employees	Human - dermal	Long term, local effects	DNEL	0,006	mg/cm ²	
Workers / employees	Human - dermal	Short term, systemic effects	DNEL	20	mg/kg	

2-Ethylhexanol

Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	0,017	mg/l	
	Environment - marine		PNEC	0,0017	mg/l	
	Environment - sporadic (intermittent) release		PNEC	0,17	mg/l	
	Environment - sewage treatment plant		PNEC	10	mg/l	
	Environment - sediment, freshwater		DNEL	28	mg/kg	
	Environment - sediment, marine		PNEC	0,028	mg/kg dw	
	Environment - soil		PNEC	0,047	mg/kg dw	
	Environment - oral (animal feed)		PNEC	55	mg/kg feed	
Consumer	Human - oral	Long term, systemic effects	DNEL	1,1	mg/kg body weight/day	
Consumer	Human - inhalation	Short term, local effects	DNEL	53,2	mg/m ³	
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/m ³	
Consumer	Human - oral	Short term, systemic effects	DNEL	1,1	mg/kg bw/day	
Workers / employees	Human - inhalation	Short term, local effects	DNEL	106,4	mg/m ³	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	23	mg/kg bw/day	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	53,2	mg/m ³	

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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.
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 374).
If applicable
Protective nitrile gloves (EN 374)
Protective Viton® / fluoroelastomer gloves (EN 374)
Minimum layer thickness in mm:
0,4
Permeation time (penetration time) in minutes:
>480
The breakthrough times determined in accordance with EN 374 Part 3 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
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

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Colour:	Light brown, Clear
Odour:	Characteristic
Odour threshold:	Not determined
pH-value:	n.a.
Melting point/freezing point:	Not determined
Initial boiling point and boiling range:	Not determined
Flash point:	63 °C
Evaporation rate:	Not determined
Flammability (solid, gas):	Not determined
Lower explosive limit:	Not determined
Upper explosive limit:	Not determined
Vapour pressure:	Not determined
Vapour density (air = 1):	Vapours heavier than air.
Density:	0,826 g/ml (15°C)
Bulk density:	n.a.
Solubility(ies):	Not determined
Water solubility:	Insoluble
Partition coefficient (n-octanol/water):	Not determined
Auto-ignition temperature:	Not determined
Decomposition temperature:	Not determined
Viscosity:	<7 mm ² /s (40°C)
Explosive properties:	Not determined
Oxidising properties:	No

9.2 Other information

Miscibility:	Not determined
Fat solubility / solvent:	Not determined
Conductivity:	Not determined
Surface tension:	Not determined
Solvents content:	Not determined

SECTION 10: Stability and reactivity

10.1 Reactivity

The product has not been tested.

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.

10.6 Hazardous decomposition products

No decomposition when used as directed.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

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

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Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	ATE	>2000	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
Skin corrosion/irritation:						n.d.a.
Serious eye damage/irritation:						n.d.a.

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Respiratory or skin sensitisation:						n.d.a.
Germ cell mutagenicity:						n.d.a.
Carcinogenicity:						n.d.a.
Reproductive toxicity:						n.d.a.
Specific target organ toxicity - single exposure (STOT-SE):						n.d.a.
Specific target organ toxicity - repeated exposure (STOT-RE):						n.d.a.
Aspiration hazard:						n.d.a.
Symptoms:						n.d.a.

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>5000	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	>3160	mg/kg	Rabbit		
Acute toxicity, by inhalation:	LC50	>4951	mg/m3	Rat		Vapours
Aspiration hazard:						Yes
Other information:						Repeated exposure may cause skin dryness or cracking.

2-Ethylhexylnitrate						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>9640	mg/kg	Rat		
Acute toxicity, by dermal route:						Experiences on persons., Harmful
Acute toxicity, by dermal route:	LDLo	4820	mg/kg	Rabbit		
Acute toxicity, by inhalation:						Experiences on persons., Harmful
Acute toxicity, by inhalation:	LCLo	>4,6	mg/l/1h	Rat		Mist
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)	Mild irritant
Respiratory or skin sensitisation:					OECD 406 (Skin Sensitisation)	Not sensitising
Germ cell mutagenicity:				Salmonella typhimurium	OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)	Negative
Reproductive toxicity:	NOAEL	100	mg/kg		OECD 421 (Reproduction/Developmental Toxicity Screening Test)	
Reproductive toxicity:	NOAEL	20	mg/kg bw/d			Negative
Reproductive toxicity:	NOAEL	20	mg/kg bw/d		OECD 421 (Reproduction/Developmental Toxicity Screening Test)	

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Symptoms:						drying of the skin., may cause headaches and vertigo., nausea, drop in blood pressure, diarrhoea, unconsciousness
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Reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	> 2000	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by oral route:	LD50	>2000	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	> 2000	mg/kg	Rat	OECD 402 (Acute Dermal Toxicity)	
Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Rat	OECD 402 (Acute Dermal Toxicity)	
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Not irritant
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	Not sensitising
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	No (skin contact)
Germ cell mutagenicity:						Negative
Germ cell mutagenicity:				Mammalian	OECD 473 (In Vitro Mammalian Chromosome Aberration Test)	Negative
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative
Carcinogenicity:				Rat		Negative, Analogous conclusion
Reproductive toxicity:						Negative
Specific target organ toxicity - single exposure (STOT-SE):						Negative
Specific target organ toxicity - repeated exposure (STOT-RE):	NOAEL	5	mg/kg	Rat		
Aspiration hazard:						Negative

2-Ethylhexanol						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	3290	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
Skin corrosion/irritation:					OECD 404 (Acute Dermal Irritation/Corrosion)	Irritant
Serious eye damage/irritation:					OECD 405 (Acute Eye Irritation/Corrosion)	Irritant
Respiratory or skin sensitisation:				Guinea pig		No
Carcinogenicity:	NOAEL	750	mg/kg bw/d			

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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		
Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.:	NOAEC	0,6384	mg/l	Rat		

SECTION 12: Ecological information

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

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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 degradability:							n.d.a.
12.3. Bioaccumulative potential:							n.d.a.
12.4. Mobility in soil:							n.d.a.
12.5. Results of PBT and vPvB assessment							n.d.a.
12.6. Other adverse effects:							n.d.a.

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

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
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 algae:	EL50	72h	>1000	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
Other organisms:	EL50	48h	>1000	mg/l	Tetrahymen pyriformis		

2-Ethylhexylnitrate

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	1,88	mg/l	Brachydanio rerio		
12.1. Toxicity to daphnia:	EC50	48h	>12,6	mg/l	Daphnia magna		
12.1. Toxicity to algae:	EC50	72h	>12,6	mg/l			
12.2. Persistence and degradability:		28d	0	%			Not readily biodegradable

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12.2. Persistence and degradability:		15d					A notable biological accumulation potential has to be expected (LogPow > 3).
12.3. Bioaccumulative potential:	BCF		1332				
12.3. Bioaccumulative potential:	Log Pow		3,74-5,24				
12.3. Bioaccumulative potential:	Log Pow		3,74-5,24				A notable biological accumulation potential has to be expected (LogPow > 3).
12.4. Mobility in soil:	Log Koc		3,8				
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Other information:	AOX		0	%			No
Water solubility:							Slight

Reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	>75	mg/l	Brachydanio rerio	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	EC50	48h	>100	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to daphnia:	NOEC/NOEL	21d	>=1	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	EC50	72h	>3	mg/l	Scenedesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:						OECD 301 B (Ready Biodegradability - Co2 Evolution Test)	Not readily biodegradable
12.3. Bioaccumulative potential:	BCF	35d	260				
12.3. Bioaccumulative potential:	BCF	35d	260			OECD 305 (Bioconcentration - Flow-Through Fish Test)	Concentration in organisms possible.
12.3. Bioaccumulative potential:	Log Pow		9,2				Low
12.3. Bioaccumulative potential:	Log Pow		9,2				@20°C
Toxicity to bacteria:	IC50	3h	>100	mg/l	activated sludge		

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Toxicity to bacteria:	IC50	3h	>100	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	
Water solubility:			5	µg/l			@20°C
Water solubility:			0,5	µg/l			

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 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	11,5	mg/l	Scenedesmus subspicatus	Regulation (EC) 440/2008 C.3 (FRESHWATER ALGAE AND CYANOBACTERI A, GROWTH INHIBITION TEST)	
12.2. Persistence and degradability:	COD	14d	100	%			Readily biodegradable
12.2. Persistence and degradability:	DOC	5d	> 95	%		OECD 302 B (Inherent Biodegradability - Zahn- Wellens/EMPA Test)	Readily biodegradable
12.3. Bioaccumulative potential:	Log Pow		2,3-3,2				Low
12.4. Mobility in soil:							Not to be expected
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Toxicity to bacteria:	EC50	24h	>300	mg/l	activated sludge		

SECTION 13: Disposal considerations

13.1 Waste treatment methods

For the substance / mixture / residual amounts

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.

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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

14.1. UN number: n.a.

Transport by road/by rail (ADR/RID)

14.2. UN proper shipping name:
 14.3. Transport hazard class(es): n.a.
 14.4. Packing group: n.a.
 Classification code: n.a.
 LQ: n.a.
 14.5. Environmental hazards: Not applicable
 Tunnel restriction code:

Transport by sea (IMDG-code)

14.2. UN proper shipping name:
 14.3. Transport hazard class(es): n.a.
 14.4. Packing group: n.a.
 Marine Pollutant: n.a.
 14.5. Environmental hazards: Not applicable

Transport by air (IATA)

14.2. UN proper shipping name:
 14.3. Transport hazard class(es): n.a.
 14.4. Packing group: n.a.
 14.5. Environmental hazards: Not applicable

14.6. Special precautions for user

Unless specified otherwise, general measures for safe transport must be followed.

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

Non-dangerous material according to Transport Regulations.

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 2 - This product contains the substances listed below:

Entry Nr	Dangerous substances	Notes to Annex I	Qualifying quantity (tonnes) for the application of - Lower-tier requirements	Qualifying quantity (tonnes) for the application of - Upper-tier requirements
21	Propylene oxide		5	50

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): ~ 90,3 %
 Directive 2010/75/EU (VOC): 745,9 g/l

15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

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Revised sections: 8, 15
 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):

Classification in accordance with regulation (EC) No. 1272/2008 (CLP)	Evaluation method used
Asp. Tox. 1, H304	Classification according to calculation procedure.
Aquatic Chronic 3, H412	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 (specified in Section 2 and 3).

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.
 H411 Toxic to aquatic life with long lasting effects.
 H413 May cause long lasting harmful effects to aquatic life.

Asp. Tox. — Aspiration hazard
 Aquatic Chronic — Hazardous to the aquatic environment - chronic
 Acute Tox. — Acute toxicity - oral
 Acute Tox. — Acute toxicity - dermal
 Acute Tox. — Acute toxicity - inhalation
 Skin Irrit. — Skin irritation
 Eye Irrit. — Eye irritation
 STOT SE — Specific target organ toxicity - single exposure - respiratory tract irritation

Any abbreviations and acronyms used in this document:

AC Article Categories
 acc., acc. to according, according to
 ACGIH American Conference of Governmental Industrial Hygienists
 ADR Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)
 AOEL Acceptable Operator Exposure Level
 AOX Adsorbable organic halogen compounds
 approx. approximately
 Art., Art. no. Article number
 ATE Acute Toxicity Estimate according to Regulation (EC) 1272/2008 (CLP)
 BAM Bundesanstalt für Materialforschung und -prüfung (Federal Institute for Materials Research and Testing, Germany)
 BAuA Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (= Federal Institute for Occupational Health and Safety, Germany)
 BCF Bioconcentration factor
 BGV Berufsgenossenschaftliche Vorschrift (= Accident Prevention Regulation)
 BHT Butylhydroxytoluol (= 2,6-Di-t-butyl-4-methyl-phenol)
 BMGV Biological monitoring guidance value (EH40, UK)
 BOD Biochemical oxygen demand
 BSEF Bromine Science and Environmental Forum
 bw body weight
 CAS Chemical Abstracts Service
 CEC Coordinating European Council for the Development of Performance Tests for Fuels, Lubricants and Other Fluids
 CESIO Comité Européen des Agents de Surface et de leurs Intermédiaires Organiques
 CIPAC Collaborative International Pesticides Analytical Council

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CLP Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)
 CMR carcinogenic, mutagenic, reproductive toxic
 COD Chemical oxygen demand
 CTFA Cosmetic, Toilet, and Fragrance Association
 DMEL Derived Minimum Effect Level
 DNEL Derived No Effect Level
 DOC Dissolved organic carbon
 DT50 Dwell Time - 50% reduction of start concentration
 DVS Deutscher Verband für Schweißen und verwandte Verfahren e.V. (= German Association for Welding and Allied Processes)
 dw dry weight
 e.g. for example (abbreviation of Latin 'exempli gratia'), for instance
 EC European Community
 ECHA European Chemicals Agency
 EEA European Economic Area
 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)
 ERC Environmental Release Categories
 ES Exposure scenario
 etc. et cetera
 EU European Union
 EWC European Waste Catalogue
 Fax. Fax number
 gen. general
 GHS Globally Harmonized System of Classification and Labelling of Chemicals
 GWP Global warming potential
 HET-CAM Hen's Egg Test - Chorionallantoic Membrane
 HGWP Halocarbon Global Warming Potential
 IARC International Agency for Research on Cancer
 IATA International Air Transport Association
 IBC Intermediate Bulk Container
 IBC (Code) International Bulk Chemical (Code)
 IC Inhibitory concentration
 IMDG-code International Maritime Code for Dangerous Goods
 incl. including, inclusive
 IUCLID International Uniform Chemical Information Database
 LC lethal concentration
 LC50 lethal concentration 50 percent kill
 LCLo lowest published lethal concentration
 LD Lethal Dose of a chemical
 LD50 Lethal Dose, 50% kill
 LDLo Lethal Dose Low
 LOAEL Lowest Observed Adverse Effect Level
 LOEC Lowest Observed Effect Concentration
 LOEL Lowest Observed Effect Level
 LQ Limited Quantities
 MARPOL International Convention for the Prevention of Marine Pollution from Ships
 n.a. not applicable
 n.av. not available
 n.c. not checked
 n.d.a. no data available
 NIOSH National Institute of Occupational Safety and Health (United States of America)
 NOAEC No Observed Adverse Effective Concentration
 NOAEL No Observed Adverse Effect Level
 NOEC No Observed Effect Concentration
 NOEL No Observed Effect Level
 ODP Ozone Depletion Potential
 OECD Organisation for Economic Co-operation and Development
 org. organic
 PAH polycyclic aromatic hydrocarbon

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PBT persistent, bioaccumulative and toxic
PC Chemical product category
PE Polyethylene
PNEC Predicted No Effect Concentration
POCP Photochemical ozone creation potential
ppm parts per million
PROC Process category
PTFE Polytetrafluorethylene
REACH Registration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals)
REACH-IT List-No. 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-IT.
RID Règlement concernant le transport International ferroviaire de marchandises Dangereuses (= Regulation concerning the International Carriage of Dangerous Goods by Rail)
SADT Self-Accelerating Decomposition Temperature
SAR Structure Activity Relationship
SU Sector of use
SVHC Substances of Very High Concern
Tel. Telephone
ThOD Theoretical oxygen demand
TOC Total organic carbon
TRGS Technische Regeln für Gefahrstoffe (=Technical Regulations for Hazardous Substances)
UN RTDG United Nations Recommendations on the Transport of Dangerous Goods
VbF Verordnung über brennbare Flüssigkeiten (= Regulation for flammable liquids (Austria))
VOC Volatile organic compounds
vPvB very persistent and very bioaccumulative
WEL-TWA, WEL-STEL WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period), WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period) (EH40, UK).
WHO World Health Organization
wwt wet weight

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:

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