

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

Motorsystemreiniger Benzin

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

Relevant identified uses of the substance or mixture:

Additive

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) 0731-1420-88

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-IF SWALLOWED: Immediately call a POISON CENTER / doctor. P331-Do NOT induce vomiting.
 P405-Store locked up.
 P501-Dispose of contents / container to an approved waste disposal facility.

EUH066-Repeated exposure may cause skin dryness or cracking.

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics
 Hydrocarbons, C10, aromatics, >1% naphthalene

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 %).

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	(64742-48-9)
content %	75-<95
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Asp. Tox. 1, H304

2-Ethylhexanol		Substance for which an EU exposure limit value applies.
Registration number (REACH)	---	
Index	---	
EINECS, ELINCS, NLP, REACH-IT List-No.	203-234-3	
CAS	104-76-7	
content %	1-2,5	
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Acute Tox. 4, H332 STOT SE 3, H335	

Hydrocarbons, C10, aromatics, >1% naphthalene	
Registration number (REACH)	---
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	919-284-0
CAS	(64742-94-5)
content %	1-2,5
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Asp. Tox. 1, H304 STOT SE 3, H336 Aquatic Chronic 2, H411

Reaction mass of 2,6-di-tert-butylphenol and 2,4,6-tri-tert-butylphenol	
Registration number (REACH)	01-2119538013-51-XXXX
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	907-745-9
CAS	---
content %	0,25-<1

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Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Aquatic Chronic 1, H410 (M=1) Aquatic Acute 1, H400 (M=1) Eye Dam. 1, H318
Naphthalene	Substance for which an EU exposure limit value applies.
Registration number (REACH)	---
Index	601-052-00-2
EINECS, ELINCS, NLP, REACH-IT List-No.	202-049-5
CAS	91-20-3
content %	0,01-<0,25
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Carc. 2, H351 Acute Tox. 4, H302 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)

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.

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.

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. 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.

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

Headaches

Dizziness

Mental confusion

Coordination disorders

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)

4.3 Indication of any immediate medical attention and special treatment needed

Gastric lavage (stomach washing) only under endotracheal intubation.

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Subsequent observation for pneumonia and pulmonary oedema.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water jet spray / alcohol resistant foam / CO₂ / dry extinguisher.

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

Toxic gases

Flammable vapour/air mixtures

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

Keep unprotected persons away.

Ensure sufficient supply of air.

Remove possible causes of ignition - do not smoke.

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

Prevent from entering drainage system.

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.

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.

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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 flammable or self-igniting materials.
 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.

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	Content %:75- <95
WEL-TWA: 800 mg/m ³	WEL-STEL: ---	---
Monitoring procedures:	- Draeger - Hydrocarbons 0,1%/c (81 03 571) - Draeger - Hydrocarbons 2/a (81 03 581) - Compur - KITA-187 S (551 174)	
BMGV: ---	Other information: (OEL acc. to RCP-method, paragraphs 84-87, EH40)	

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

Chemical Name	Hydrocarbons, C10, aromatics, >1% naphthalene	Content %:1-2,5
WEL-TWA: 500 mg/m ³ (Aromatics)	WEL-STEL: ---	---
Monitoring procedures:	- Draeger - Hydrocarbons 0,1%/c (81 03 571) - Draeger - Hydrocarbons 2/a (81 03 581)	
BMGV: ---	Other information: ---	

Chemical Name	Naphthalene	Content %:0,01- <0,25
WEL-TWA: 500 mg/m ³ (Aromatics) (WEL), 10 ppm (50 mg/m ³) (EU)	WEL-STEL: ---	---
Monitoring procedures:	- Compur - KITA-153 U(C) (551 182) - NIOSH 5506 (POLYNUCLEAR AROMATIC HYDROCARBONS by HPLC) - 1998 - NIOSH 5515 (POLYNUCLEAR AROMATIC HYDROCARBONS by GC) - 1994 - OSHA 35 (Naphthalene) - 1982	
BMGV: ---	Other information: ---	

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		PNEC	0,28	mg/kg dw	

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	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	
Consumer	Human - inhalation	Long term, local effects	DNEL	26,6	mg/m ³	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	12,8	mg/m ³	
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/m ³	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	53,2	mg/m ³	
Workers / employees	Human - oral	Long term, systemic effects	DNEL	12,8	mg/m ³	

Hydrocarbons, C10, aromatics, >1% naphthalene						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
Consumer	Human - dermal	Long term, systemic effects	DNEL	7,5	mg/kg bw/d	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	32	mg/m ³	
Consumer	Human - oral	Long term, systemic effects	DNEL	7,5	mg/kg bw/d	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	151	mg/m ³	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	12,5	mg/kg bw/d	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	151	mg/m ³	

Reaction mass of 2,6-di-tert-butylphenol and 2,4,6-tri-tert-butylphenol						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	3,5	mg/m ³	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	0,5	mg/kg bw/day	

Naphthalene						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	2,4	µg/l	
	Environment - marine		PNEC	0,24	µg/l	
	Environment - sewage treatment plant		PNEC	2,9	mg/l	

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	Environment - sediment, freshwater		PNEC	0,0672	mg/kg dry weight	
	Environment - sediment, marine		PNEC	0,0672	mg/kg dry weight	
	Environment - soil		PNEC	0,0533	mg/kg dry weight	
	Environment - sporadic (intermittent) release		PNEC	0,02	mg/l	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	3,57	mg/kg bw/day	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	25	mg/m ³	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	25	mg/m ³	

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 (Directive 2017/164/EU, Directive 2004/37/CE). (9) = Respirable fraction (Directive 2017/164/EU, Directive 2004/37/CE). (11) = Inhalable fraction (Directive 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 (Directive 2004/37/CE). | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period).
 (8) = Inhalable fraction (2017/164/EU, 2017/2398/EU). (9) = Respirable fraction (2017/164/EU, 2017/2398/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.
 (13) = The substance can cause sensitisation of the skin and of the respiratory tract (Directive 2004/37/CE), (14) = The substance can cause sensitisation of the skin (Directive 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.
 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:
 Chemical resistant protective gloves (EN 374).
 If applicable
 Protective Neoprene® / polychloroprene gloves (EN 374).
 Protective nitrile gloves (EN 374).
 Protective gloves made of polyvinyl alcohol (EN 374).
 Protective Viton® / fluoroelastomer gloves (EN 374).
 Minimum layer thickness in mm:
 0,5
 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.

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Skin protection - Other:
 Normally not necessary.

Respiratory protection:
 If OES or MEL is exceeded.
 Filter A P2 (EN 14387), code colour brown, white
 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:	Yellow, Clear
Odour:	Not determined
Odour threshold:	Not determined
pH-value:	Not determined
Melting point/freezing point:	Not determined
Initial boiling point and boiling range:	Not determined
Flash point:	>63-<100 °C
Evaporation rate:	Not determined
Flammability (solid, gas):	n.a.
Lower explosive limit:	Not determined
Upper explosive limit:	Not determined
Vapour pressure:	Not determined
Vapour density (air = 1):	Not determined
Density:	0,8028 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:	<20,5 mm ² /s (40°C)
Explosive properties:	Product is not explosive.
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

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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:						n.d.a.
Acute toxicity, by dermal route:						n.d.a.
Acute toxicity, by inhalation:	ATE	>20	mg/l/4h			calculated value, Vapours
Acute toxicity, by inhalation:	ATE	>5	mg/l/4h			calculated value, Aerosol, Mist
Skin corrosion/irritation:						Repeated exposure may cause skin dryness or cracking.
Serious eye damage/irritation:						n.d.a.
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	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Rat	OECD 402 (Acute Dermal Toxicity)	
Acute toxicity, by inhalation:	LC50	>5000	mg/m ³ /8h	Rat	OECD 403 (Acute Inhalation Toxicity)	
Skin corrosion/irritation:						Repeated exposure may cause skin dryness or cracking.
Serious eye damage/irritation:					OECD 405 (Acute Eye Irritation/Corrosion)	Not irritant
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	No (skin contact)
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative, Analogous conclusion

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Carcinogenicity:					OECD 453 (Combined Chronic Toxicity/Carcinogenicity Studies)	Negative, Analogous conclusion
Reproductive toxicity:					OECD 414 (Prenatal Developmental Toxicity Study)	Negative, Analogous conclusion
Reproductive toxicity:					OECD 421 (Reproduction/Developmental Toxicity Screening Test)	Negative, Analogous conclusion
Specific target organ toxicity - single exposure (STOT-SE):						No indications of such an effect.
Specific target organ toxicity - repeated exposure (STOT-RE):					OECD 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)	No indications of such an effect., Analogous conclusion
Aspiration hazard:						Yes
Symptoms:						unconsciousness, headaches, dizziness

2-Ethylhexanol						
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
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		No (skin contact) literature
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative
Germ cell mutagenicity:				Mammalian	OECD 473 (In Vitro Mammalian Chromosome Aberration Test)	Negative
Germ cell mutagenicity:					OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)	Negative
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)	Negative
Specific target organ toxicity - single exposure (STOT-SE):						Irritation of the respiratory tract, STOT SE 3, H335

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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), oral:	NOAEL	125	mg/kg bw/d	Rat	OECD 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)	
Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.:	NOAEC	0,6384	mg/l	Rat	OECD 413 (Subchronic Inhalation Toxicity - 90-Day Study)	Vapours

Hydrocarbons, C10, aromatics, >1% naphthalene

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Rabbit		
Acute toxicity, by inhalation:	LC50	>590	mg/m3	Rat		Vapours
Aspiration hazard:						Yes

Reaction mass of 2,6-di-tert-butylphenol and 2,4,6-tri-tert-butylphenol

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	2976	mg/kg	Rat	OECD 401 (Acute Oral 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:					OECD 405 (Acute Eye Irritation/Corrosion)	Risk of serious damage to eyes.
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	Not sensitising

Naphthalene

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	490	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	>2500	mg/kg	Rat		
Acute toxicity, by inhalation:	LC50	>110	mg/l/4h	Rat		Vapours
Symptoms:						lack of appetite, ataxia, breathing difficulties, unconsciousness, diarrhoea, cornea opacity, headaches, cramps, gastrointestinal disturbances, mucous membrane irritation, dizziness, nausea and vomiting.

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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:	LC50	96h	>1000	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to fish:	NOELR	28d	0,1	mg/l	Oncorhynchus mykiss		
12.1. Toxicity to daphnia:	EC50	48h	>1000	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to daphnia:	NOELR	21d	0,18	mg/l	Daphnia magna		
12.1. Toxicity to algae:	ErL50	72h	>1000	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.1. Toxicity to algae:	NOELR	72h	1000	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:		28d	80	%		OECD 301 F (Ready Biodegradability - Manometric Respirometry Test)	
12.3. Bioaccumulative potential:	Log Pow		5,5-7,2				
12.4. Mobility in soil:	Log Koc		>3				
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
12.6. Other adverse effects:							Product floats on the water surface.
Water solubility:			~10	mg/l			Slight

2-Ethylhexanol							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.4. Mobility in soil:	Koc		800				
12.1. Toxicity to fish:	LC50	96h	28,2	mg/l	Pimephales promelas	OECD 203 (Fish, Acute Toxicity Test)	

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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 CYANOBACTERIA, 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				Low
12.3. Bioaccumulative potential:	BCF		25,33				calculated value
12.4. Mobility in soil:			-1,42				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		
Toxicity to bacteria:	EC50	3h	540	mg/l	Pseudomonas putida		
Toxicity to bacteria:	EC50	12h	> 100	mg/l	activated sludge		

Hydrocarbons, C10, aromatics, >1% naphthalene							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.3. Bioaccumulative potential:	Log Pow		3,3				
12.1. Toxicity to fish:	LC50	96h	2-5	mg/l	Pimephales promelas		
12.1. Toxicity to daphnia:	EC50	48h	3-10	mg/l	Daphnia magna		
12.1. Toxicity to algae:	EC50	72h	1 - 3	mg/l	Pseudokirchneriella subcapitata		
12.2. Persistence and degradability:		28d	58	%		OECD 301 F (Ready Biodegradability - Manometric Respirometry Test)	Inherent
12.3. Bioaccumulative potential:	BCF		<100				Low

Reaction mass of 2,6-di-tert-butylphenol and 2,4,6-tri-tert-butylphenol							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	0,3	mg/l	Oncorhynchus mykiss		
12.1. Toxicity to daphnia:	EC50	48h	0,4	mg/l	Daphnia magna		
12.1. Toxicity to algae:	EC50	72h	4,9	mg/l		OECD 201 (Alga, Growth Inhibition Test)	

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Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to daphnia:	NOEC/NOEL	>60d	0,6	mg/l	Daphnia pulex		
12.1. Toxicity to fish:	LC50	96h	1,99	mg/l	Pimephales promelas		Does not conform with EU classification.
12.1. Toxicity to fish:	LC50	96h	0,51	mg/l			
12.1. Toxicity to daphnia:	EC50	48h	2,19	mg/l	Daphnia magna		
12.2. Persistence and degradability:		28d	2	%			Not readily biodegradable
12.3. Bioaccumulative potential:	BCF		>100				Low
12.1. Toxicity to algae:	LC50	4h	2,96	mg/l	Selenastrum capricornutum		
Other information:	BOD5		0	%			
Other information:	COD		22	%			
Other information:	Log Pow		3,3				

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.

E.g. suitable incineration plant.

E.g. dispose at suitable refuse site.

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

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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 national regulations/laws governing maternity protection (national implementation of the Directive 92/85/EEC)!
 Comply with trade association/occupational health regulations.

Directive 2010/75/EU (VOC): 97,03 %

15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

SECTION 16: Other information

Revised sections: 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.
 H315 Causes skin irritation.
 H318 Causes serious eye damage.
 H319 Causes serious eye irritation.
 H332 Harmful if inhaled.
 H335 May cause respiratory irritation.
 H336 May cause drowsiness or dizziness.
 H351 Suspected of causing cancer.
 H400 Very toxic to aquatic life.
 H410 Very toxic to aquatic life with long lasting effects.
 H411 Toxic to aquatic life with long lasting effects.

Asp. Tox. — Aspiration hazard
 Aquatic Chronic — Hazardous to the aquatic environment - chronic
 Skin Irrit. — Skin irritation
 Eye Irrit. — Eye irritation
 Acute Tox. — Acute toxicity - inhalation
 STOT SE — Specific target organ toxicity - single exposure - respiratory tract irritation
 STOT SE — Specific target organ toxicity - single exposure - narcotic effects
 Aquatic Acute — Hazardous to the aquatic environment - acute
 Eye Dam. — Serious eye damage
 Carc. — Carcinogenicity
 Acute Tox. — Acute toxicity - oral

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Any abbreviations and acronyms used in this document:

acc., acc. to according, according to
 ADR 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
 Art., Art. no. Article number
 ASTM ASTM International (American Society for Testing and Materials)
 ATE Acute Toxicity Estimate
 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)
 BSEF The International Bromine Council
 bw body weight
 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
 dw dry weight
 e.g. for example (abbreviation of Latin 'exempli gratia'), for instance
 EC European Community
 ECHA European Chemicals Agency
 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)
 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
 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
 incl. 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)
 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
 OECD Organisation for Economic Co-operation and Development
 org. organic
 PBT persistent, bioaccumulative and toxic
 PE Polyethylene
 PNEC Predicted No Effect Concentration
 ppm parts per million
 PVC Polyvinylchloride
 REACH Registration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals)

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RID 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

UN RTDG United Nations Recommendations on the Transport of Dangerous Goods

VOC Volatile organic compounds

vPvB very persistent and very bioaccumulative

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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