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Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
Revised on / Version: 24.07.2015 / 0006
Replaces revision of / Version: 16.12.2014 / 0005
Valid from: 24.07.2015
PDF print date: 24.07.2015
Kupfer-Paste 250 g
Art.: 3081

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

Kupfer-Paste 250 g
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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:

Lubricant

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
Aquatic Acute	1	H400-Very toxic to aquatic life.
Aquatic Chronic	3	H412-Harmful to aquatic life with long lasting effects.

2.2 Label elements

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



Warning

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

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P273-Avoid release to the environment.
 P501-Dispose of contents/container to special waste collection point.

EUH208-Contains Di-iso-octyl amino methyl tolutriazole. May produce an allergic reaction.

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.

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

SECTION 3: Composition/information on ingredients

3.1 Substance

n.a.

3.2 Mixture

Coated Copper Flakes	
Registration number (REACH)	--
Index	---
EINECS, ELINCS, NLP	231-159-6
CAS	7440-50-8
content %	5-15
Classification according to Regulation (EC) 1272/2008 (CLP)	Flam. Sol. 1, H228 Acute Tox. 4, H302 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 2, H411
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics	
Registration number (REACH)	--
Index	---
EINECS, ELINCS, NLP	919-857-5 (REACH-IT List-No.)
CAS	---
content %	1-2,5
Classification according to Regulation (EC) 1272/2008 (CLP)	Flam. Liq. 3, H226 Asp. Tox. 1, H304 STOT SE 3, H336
2,6-Di-t-butyl-4-methyl-phenol	
Registration number (REACH)	--
Index	---
EINECS, ELINCS, NLP	204-881-4
CAS	128-37-0
content %	1-<2,5
Classification according to Regulation (EC) 1272/2008 (CLP)	Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)
Di-iso-octyl amino methyl tolutriazole	
Registration number (REACH)	--
Index	---
EINECS, ELINCS, NLP	939-700-4 (REACH-IT List-No.)
CAS	(80584-90-3 + 80595-74-0)
content %	0,1-<1
Classification according to Regulation (EC) 1272/2008 (CLP)	Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 2, H411

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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

Normally not necessary.
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.

4.2 Most important symptoms and effects, both acute and delayed

Drying of the skin.
With long-term contact:
Irritation of the skin.
Sensitive individuals:
Allergic reaction possible.
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

Foam
Dry extinguisher
Sand

Unsuitable extinguishing media

Water
CO₂

5.2 Special hazards arising from the substance or mixture

In case of fire the following can develop:
Oxides of carbon
Oxides of nitrogen
Oxides of phosphorus
Toxic gases

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes.
Protective respirator with independent air supply.
Dispose of contaminated extinction water according to official regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure sufficient supply of air.
Avoid inhalation, and contact with eyes or skin.
If applicable, caution - risk of slipping

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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.

6.3 Methods and material for containment and cleaning up

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

Or:

Pick up mechanically 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

Keep away from sources of ignition - Do not smoke.
 Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.
 Do not carry cleaning cloths soaked in product in trouser pockets.
 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.
 Not to be stored in gangways or stair wells.
 Store product closed and only in original packing.
 Protect against moisture and store closed.
 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

(GB) Chemical Name	Coated Copper Flakes	Content %:5-15
WEL-TWA: 1 mg/m ³ (dusts and mists, as Cu)	WEL-STEL: 2 mg/m ³ (dusts and mists, as Cu)	---
Monitoring procedures:	ISO 15202 (Workplace air - Determination of metals and metalloids in airborne particulate matter by Inductively Coupled Plasma Atomic Emission Spectrometry), Part 1-3 - 2000(Part 1), 2001(Part 2), 2004 (Part 3) - EU project BC/CEN/ENTR/000/2002-16 card 84-1 (2004) - MDHS 91 (Metals and metalloids in workplace air by X-ray fluorescence spectrometry) - 1998 - EU project BC/CEN/ENTR/000/2002-16 card 84-2 (2004) - NIOSH 7029 (Copper (dust and fume)) - 1994 - NIOSH 7300 (Elements by ICP (nitric/perchloric ashing)) - 2003 - NIOSH 7301 (Elements by ICP (aqua regia ashing)) - 2003 - NIOSH 7303 (Elements by ICP (Hot block HCl/HNO ₃ digestion)) - 2003 - OSHA ID-121 (Metal and metalloid particulates in workplace atmospheres (Atomic absorption)) - 2002 - EU project BC/CEN/ENTR/000/2002-16 card 84-10 (2004)	

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	OSHA ID-125G (Metal and metalloid particulates in workplace atmospheres (ICP)) - 2002
	OSHA ID-206 (ICP analysis of metal/metalloid particulates from solder operations) - 1991
BMGV: ---	Other information: ---

Chemical Name	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics	Content %:1-2,5
WEL-TWA: 800 mg/m3	WEL-STEL: ---	---
Monitoring procedures:	- 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	2,6-Di-t-butyl-4-methyl-phenol	Content %:1-<2,5
WEL-TWA: 10 mg/m3	WEL-STEL: ---	---
Monitoring procedures:	---	
BMGV: ---	Other information: ---	

Chemical Name	Oil mist, mineral	Content %:
WEL-TWA: 5 mg/m3 (ACGIH)	WEL-STEL: 10 mg/m3 (ACGIH)	---
Monitoring procedures:	- 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). | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period). | 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.

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	300	mg/kg bw/day	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	1500	mg/m3	
Consumer	Human - oral	Long term, systemic effects	DNEL	300	mg/kg bw/day	
Consumer	Human - dermal	Long term, systemic effects	DNEL	300	mg/kg bw/day	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	900	mg/m3	

2,6-Di-t-butyl-4-methyl-phenol						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	5,8	mg/m3	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	1,74	mg/m3	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	8,3	mg/kg bw/day	
Consumer	Human - dermal	Long term, systemic effects	DNEL	5	mg/kg bw/d	
	Environment - soil		PNEC	1,04	mg/kg wwt	
	Environment - sewage treatment plant		PNEC	100	mg/l	
	Environment - sediment		PNEC	1,29	mg/kg wwt	

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	Environment - marine		PNEC	0,4	µg/l	
	Environment - periodic release		PNEC	4	µg/l	
	Environment - freshwater		PNEC	4	µg/l	
	Environment - oral (animal feed)		PNEC	16,7	mg/kg	
	Environment - soil		PNEC	1,23	mg/kg	

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.

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

Skin protection - Hand protection:
 Recommended
 Protective nitrile gloves (EN 374)
 Minimum layer thickness in mm:
 0,3
 Permeation time (penetration time) in minutes:
 > 120
 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:
 Normally not necessary.
 If OES or MEL is exceeded.
 Filter A2 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

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Physical state:	Liquid
Colour:	Black
Odour:	Slightly, Characteristic
Odour threshold:	Not determined
pH-value:	Not determined
Melting point/freezing point:	Not determined
Initial boiling point and boiling range:	Not determined
Flash point:	>150 °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:	~1 g/cm ³ (20°C)
Bulk density:	n.a.
Solubility(ies):	Not determined
Water solubility:	Not miscible
Partition coefficient (n-octanol/water):	Not determined
Auto-ignition temperature:	>300 °C (Ignition temperature)
Auto-ignition temperature:	No
Decomposition temperature:	Not determined
Viscosity:	2000 mPas (23°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

Stable with proper storage and handling.

10.3 Possibility of hazardous reactions

No decomposition if used as intended.

10.4 Conditions to avoid

Protect from humidity.

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

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	10,02	mg/l/4h			calculated value, Vapours
Skin corrosion/irritation:						n.d.a.
Serious eye damage/irritation:						n.d.a.
Respiratory or skin sensitisation:						n.d.a.

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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.

Coated Copper Flakes						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>300	mg/kg	Rat		
Acute toxicity, by inhalation:	LC50	1-5	mg/m ³ /4 h	Rat		

Hydrocarbons, C9-C11, 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 oral route:	LD50	>5000	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	>5000	mg/kg	Rabbit		
Acute toxicity, by dermal route:	LD50	>5000	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	
Acute toxicity, by inhalation:	LC50	>5	mg/l/4h	Rat		
Acute toxicity, by inhalation:	LC50	>5000	mg/m ³ /8 h	Rat	OECD 403 (Acute Inhalation Toxicity)	
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:					OECD 471 (Bacterial Reverse Mutation Test)	Negative, Analogous conclusion
Carcinogenicity:					OECD 453 (Combined Chronic Toxicity/Carcinogenicity Studies)	Negative, Analogous conclusion
Reproductive toxicity:					OECD 414 (Prenatal Developmental Toxicity Study)	Negative, Analogous conclusion
Specific target organ toxicity - single exposure (STOT-SE):						May cause drowsiness or dizziness.
Aspiration hazard:						Yes
Symptoms:						unconsciousness, headaches, dizziness, reddening of the skin
Specific target organ toxicity - repeated exposure (STOT-RE), oral:					OECD 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)	Not to be expected

2,6-Di- <i>t</i> -butyl-4-methyl-phenol						
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	>5000	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	
Skin corrosion/irritation:						Slightly irritant

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Serious eye damage/irritation:				Rabbit	(Draize-Test)	Slightly irritant
Respiratory or skin sensitisation:				Human being		Not sensitising
Germ cell mutagenicity:					(Ames-Test)	Negative
Germ cell mutagenicity:				Mammalian		Negative
Reproductive toxicity:	NOAEL	100	mg/kg	Rat		
Specific target organ toxicity - repeated exposure (STOT-RE):	NOEL	25	mg/kg	Rat		(28d)
Symptoms:						mucous membrane irritation

Di-iso-octyl amino methyl toluotriazole						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	3313	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)	Irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Not irritant
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	Yes (skin contact)
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative
Reproductive toxicity:						Negative

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
Toxicity to fish:							n.d.a.
Toxicity to daphnia:							n.d.a.
Toxicity to algae:							n.d.a.
Persistence and degradability:							n.d.a.
Bioaccumulative potential:							n.d.a.
Mobility in soil:							n.d.a.
Results of PBT and vPvB assessment							n.d.a.
Other adverse effects:							n.d.a.

Coated Copper Flakes							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Toxicity to fish:	LC50		0,0068 -0,015 6	mg/l	Pimephales promelas		
Toxicity to daphnia:	EC50	48h	0,03	mg/l	Daphnia magna		
Toxicity to daphnia:	NOEC/NOEL	24h	0,004	mg/l	Daphnia magna		
Toxicity to algae:	EC50	72h	0,0426 -0,053 5	mg/l	Pseudokirchneriella subcapitata		

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes

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Toxicity to fish:	LC50	96h	>1000	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	
Toxicity to fish:	LL50	96h	>1000	mg/l	Oncorhynchus mykiss		
Toxicity to fish:	NOELR	28d	0,13	mg/l	Oncorhynchus mykiss	QSAR	
Toxicity to daphnia:	EC50	48h	>1000	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
Toxicity to daphnia:	NOELR	21d	0,23	mg/l	Daphnia magna	QSAR	
Toxicity to algae:	ErC50	72h	>1000	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
Toxicity to algae:	EbC50	72h	>1000	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
Toxicity to algae:	EL50	72h	>1000	mg/l	Pseudokirchneriella subcapitata		
Toxicity to algae:	NOELR	72h	100	mg/l	Raphidocelis subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
Toxicity to algae:	NOELR	72h	100	mg/l	Raphidocelis subcapitata	OECD 201 (Alga, Growth Inhibition Test)	groth rate
Toxicity to algae:	NOELR	72h	100	mg/l	Pseudokirchneriella subcapitata		
Toxicity to algae:	NOELR	72h	3	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
Persistence and degradability:		28d	80	%		OECD 301 F (Ready Biodegradability - Manometric Respirometry Test)	
Persistence and degradability:		28d	80	%		OECD 301 F (Ready Biodegradability - Manometric Respirometry Test)	Readily biodegradable
Results of PBT and vPvB assessment							No PBT substance, No vPvB substance

2,6-Di-t-butyl-4-methyl-phenol

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Toxicity to fish:	LC0	96h	>=0,57	mg/l	Brachydanio rerio	Regulation (EC) 440/2008 C.1 (ACUTE TOXICITY FOR FISH)	
Toxicity to fish:	LC50	96h	>=0,57	mg/l	Brachydanio rerio		
Toxicity to daphnia:	EC50	48h	0,61	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	

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Toxicity to daphnia:	NOEC/NO EL	21d	0,316	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
Toxicity to algae:	EC50	72h	>0,42	mg/l	Scenedesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	
Toxicity to algae:	IC50	72h	>0,4	mg/l	Desmodesmus subspicatus	84/449/EEC C.3	
Persistence and degradability:		28d	4,5	%		OECD 301 C (Ready Biodegradability - Modified MITI Test (I))	
Persistence and degradability:		28d	4,5	%		OECD 301 C (Ready Biodegradability - Modified MITI Test (I))	Not readily biodegradable
Bioaccumulative potential:			230-2500		Cyprinus caprio	OECD 305 (Bioconcentration - Flow-Through Fish Test)	56d
Bioaccumulative potential:	Log Pow		5,1				
Results of PBT and vPvB assessment							No PBT substance
Toxicity to bacteria:	EC50	3h	>10000	mg/l	activated sludge		
Other information:							Does not contain any organically bound halogens which can contribute to the AOX value in waste water.
Water solubility:			0,00076	g/l			

Di-iso-octyl amino methyl tolutriazole

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Toxicity to fish:	LC50	96h	1,3	mg/l	Brachydanio rerio	OECD 203 (Fish, Acute Toxicity Test)	
Toxicity to daphnia:	EC50	48h	2,05	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
Toxicity to algae:	EC50	72h	0,976	mg/l	Desmodesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	
Persistence and degradability:		28d	60	%		OECD 301 B (Ready Biodegradability - Co2 Evolution Test)	
Bioaccumulative potential:	BCF		1676				
Results of PBT and vPvB assessment							No PBT substance, No vPvB substance

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Toxicity to bacteria:	IC50	3h	69	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	
Toxicity to bacteria:	EC20	3h	15	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	
Other information:							The surfactant(s) contained in this mixture complies(comply) with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents., Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.
Water solubility:			<0,01	%			

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)

07 06 99 wastes not otherwise specified

20 01 26 oil and fat other than those mentioned in 20 01 25

Recommendation:

Sewage disposal shall be discouraged.

Pay attention to local and national official regulations.

E.g. dispose at suitable refuse site.

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

UN number:

3077

Transport by road/by rail (ADR/RID)

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UN proper shipping name:
 UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (COATED COPPER FLAKES,2,6-TERT-BUTYLPHENOL)
 Transport hazard class(es): 9
 Packing group: III
 Classification code: M7
 LQ (ADR 2015): 5 kg
 Environmental hazards: environmentally hazardous
 Tunnel restriction code: E



Transport by sea (IMDG-code)

UN proper shipping name:
 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (COATED COPPER FLAKES,2,6-TERT-BUTYLPHENOL)
 Transport hazard class(es): 9
 Packing group: III
 EmS: F-A, S-F
 Marine Pollutant: Yes
 Environmental hazards: environmentally hazardous



Transport by air (IATA)

UN proper shipping name:
 Environmentally hazardous substance, solid, n.o.s. (COATED COPPER FLAKES,2,6-TERT-BUTYLPHENOL)
 Transport hazard class(es): 9
 Packing group: III
 Environmental hazards: environmentally hazardous



Special precautions for user

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.

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

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

For classification and labelling see Section 2.
 Observe restrictions:
 Comply with trade association/occupational health regulations.
 Directive 2010/75/EU (VOC): 1,88 %
 Directive 2010/75/EU (VOC): 26,3 g/l

15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

SECTION 16: Other information

Revised sections: 1 - 16
 These details refer to the product as it is delivered.
 Employee instruction/training in handling hazardous materials is required.
 Employee training in handling dangerous goods 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
Aquatic Acute 1, H400	Classification according to calculation procedure.
Aquatic Chronic 3, H412	Classification according to calculation procedure.

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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).

H226 Flammable liquid and vapour.
H228 Flammable solid.
H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H336 May cause drowsiness or dizziness.
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.

Aquatic Acute — Hazardous to the aquatic environment - acute
Aquatic Chronic — Hazardous to the aquatic environment - chronic
Flam. Sol. — Flammable solid
Acute Tox. — Acute toxicity - oral
Flam. Liq. — Flammable liquid
Asp. Tox. — Aspiration hazard
STOT SE — Specific target organ toxicity - single exposure - narcotic effects
Skin Irrit. — Skin irritation
Skin Sens. — Skin sensitization

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
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, Toiletry, 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

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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
 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

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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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