

Page 1 of 11

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

Revision date / version: 05.04.2016 / 0001

Replacing version dated / version: 05.04.2016 / 0001

Valid from: 05.04.2016 PDF print date: 06.04.2016 Multis EP2 Total (088907128)

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

Multis EP2 Total (088907128)

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

Lubricating grease

Uses advised against:

No information available at present.

1.3 Details of the supplier of the safety data sheet

(GB)

elumatec AG, Pinacher Straße 61, 75417 Mühlacker, Germany Phone: +49 (0) 7041 / 14 - 0, Fax: +49 (0) 7041 / 14 - 280 www.elumatec.de

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:

(GB)

Emergency poisoning centre D-79106 Freiburg Tel.: +49 761 19240 (24 hour)

Telephone number of the company in case of emergencies:

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

Eye Irrit. 2 H319-Causes serious eye irritation.

Aguatic Chronic 3 H412-Harmful to aquatic life with long lasting effects.

2.2 Label elements

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





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Page 2 of 11

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

Revision date / version: 05.04.2016 / 0001

Replacing version dated / version: 05.04.2016 / 0001

Valid from: 05.04.2016 PDF print date: 06.04.2016 Multis EP2 Total (088907128)

H319-Causes serious eye irritation. H412-Harmful to aquatic life with long lasting effects.

P280-Wear eye protection/face protection.

P337+P313-If eye irritation persists: Get medical advice/attention.

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

Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu)	
esters, zinc salts	
Registration number (REACH)	
Index	
EINECS, ELINCS, NLP	270-478-5
CAS	68442-22-8
content %	<1,5
Classification according to Regulation (EC) 1272/2008 (CLP)	Eye Irrit. 2, H319
	Aquatic Chronic 2, H411

Fatty acids, vegetable-oil, Me esters, sulfurized	
Registration number (REACH)	
Index	
EINECS, ELINCS, NLP	276-337-4
CAS	72102-30-8
content %	<1,5
Classification according to Regulation (EC) 1272/2008 (CLP)	Aquatic Chronic 2, H411

Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters,	
zinc salts	
Registration number (REACH)	01-2119493628-22-XXXX
Index	
EINECS, ELINCS, NLP	270-608-0
CAS	68457-79-4
content %	<1,5
Classification according to Regulation (EC) 1272/2008 (CLP)	Skin Irrit. 2, H315
	Eye Dam. 1, H318
	Aguatic Chronic 2, H411

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



Page 3 of 11

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

Revision date / version: 05.04.2016 / 0001

Replacing version dated / version: 05.04.2016 / 0001

Valid from: 05.04.2016 PDF print date: 06.04.2016 Multis EP2 Total (088907128)

Inhalation

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.

In case of skin injury by high pressure, a risk of penetration of lubricant into the skin exists.

Consult doctor immediately - keep Data Sheet available.

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

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.

Irritation of the eyes

Sensitive individuals:

Allergic reaction possible.

Ingestion:

Irritation of the stomach

Nausea

Vomiting

diarrhoea

4.3 Indication of any immediate medical attention and special treatment needed

Symptomatic treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water jet spray/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

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

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.



. (B)

Page 4 of 11

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

Revision date / version: 05.04.2016 / 0001

Replacing version dated / version: 05.04.2016 / 0001

Valid from: 05.04.2016 PDF print date: 06.04.2016 Multis EP2 Total (088907128)

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

Pick up mechanically and dispose of according to Section 13.

Fill the absorbed material into lockable containers.

6.4 Reference to other sections

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

SECTION 7: Handling and storage

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

7.1 Precautions for safe handling

7.1.1 General recommendations

Ensure good ventilation.

Avoid contact with eyes.

Avoid long lasting or intensive contact with skin.

Do not carry cleaning cloths soaked in product in trouser pockets.

Take precautions against electrostatic charges.

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.

Not to be stored in gangways or stair wells.

Store product closed and only in original packing.

Under all circumstances prevent penetration into the soil.

Protect from direct sunlight and warming.

Store in a dry place.

7.3 Specific end use(s)

No information available at present.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

© 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.

8.2 Exposure controls

8.2.1 Appropriate engineering controls



(GB)

Page 5 of 11

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

Revision date / version: 05.04.2016 / 0001

Replacing version dated / version: 05.04.2016 / 0001

Valid from: 05.04.2016 PDF print date: 06.04.2016 Multis EP2 Total (088907128)

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:

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

Skin protection - Hand protection:

Protective gloves, oil resistant (EN 374)

Recommended

Protective nitrile gloves (EN 374)

Safety gloves made of fluorocarbon rubber (EN 374).

Minimum layer thickness in mm:

0.5

Permeation time (penetration time) in minutes:

480

Protective hand cream recommended.

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.

Skin protection - Other:

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

Respiratory protection:

Normally not necessary.

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: Solid Colour: Solid Brown

Odour: Characteristic
Odour threshold: Not determined
pH-value: Not determined

Melting point/freezing point: >185 °C (ISO 2176, Drop point)

Initial boiling point and boiling range:

Flash point:

Evaporation rate:

Not determined

>200 °C

Not determined

Flammability (solid, gas):

Not determined



Page 6 of 11

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

Revision date / version: 05.04.2016 / 0001

Replacing version dated / version: 05.04.2016 / 0001

Valid from: 05.04.2016 PDF print date: 06.04.2016 Multis EP2 Total (088907128)

Lower explosive limit: Not determined Upper explosive limit: Not determined Vapour pressure: Not determined Vapour density (air = 1): Not determined Density: 870 kg/m3 (20°C) Bulk density: Not determined Solubility(ies): Not determined Water solubility: Insoluble Partition coefficient (n-octanol/water):

Partition coefficient (n-octanol/water):

Auto-ignition temperature:

Not determined

Not determined

Not determined

Viscosity: n.

Explosive properties: Product is not explosive.

Oxidising properties:

9.2 Other information

Miscibility:

Fat solubility / solvent:

Conductivity:

Surface tension:

Solvents content:

Not determined
Not determined
Not determined
Not determined

SECTION 10: Stability and reactivity

Nο

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

Strong heat

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).

Multis EP2 Total (088907128)						
Toxicity / effect	Endpoi nt	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:						n.d.a.
Acute toxicity, by dermal						n.d.a.
route:						
Acute toxicity, by inhalation:						n.d.a.
Skin corrosion/irritation:						n.d.a.
Serious eye						n.d.a.
damage/irritation:						
Respiratory or skin						n.d.a.
sensitisation:						
Germ cell mutagenicity:						n.d.a.
Carcinogenicity:						n.d.a.
Reproductive toxicity:						n.d.a.
Specific target organ toxicity -						n.d.a.
single exposure (STOT-SE):						



Page 7 of 11

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

Revision date / version: 05.04.2016 / 0001

Replacing version dated / version: 05.04.2016 / 0001

Valid from: 05.04.2016 PDF print date: 06.04.2016 Multis EP2 Total (088907128)

Specific target organ toxicity - repeated exposure (STOT-RE):		n.d.a.
Aspiration hazard:		n.d.a.
Symptoms:		n.d.a.

Toxicity / effect	Endpoi	Value	Unit	Organism	Test method	Notes
-	nt					
Acute toxicity, by oral route:	LD50	>2000- 5000	mg/kg	Rat		
Skin corrosion/irritation:						Mild irritant
Serious eye damage/irritation:						Irritant

Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts						
Toxicity / effect	Endpoi	Value	Unit	Organism	Test method	Notes
	nt					
Acute toxicity, by oral route:	LD50	3600	mg/kg	Rat	OECD 401 (Acute	
					Oral Toxicity)	
Acute toxicity, by dermal	LD50	>20000	mg/kg	Rabbit	OECD 402 (Acute	
route:					Dermal Toxicity)	
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute	Irritant
					Dermal	
					Irritation/Corrosion)	
Serious eye				Rabbit	OECD 405 (Acute	Risk of serious damage
damage/irritation:					Eye	to eyes.
					Irritation/Corrosion)	
Respiratory or skin				Guinea pig	OECD 406 (Skin	Not sensitizising
sensitisation:					Sensitisation)	(Analogous conclusion)

SECTION 12: Ecological information

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

Multis EP2 Total (088907128)							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:							n.d.a.
12.1. Toxicity to							n.d.a.
daphnia:							
12.1. Toxicity to algae:							n.d.a.
12.2. Persistence and							n.d.a.
degradability:							
12.3. Bioaccumulative							n.d.a.
potential:							
12.4. Mobility in soil:							n.d.a.
12.5. Results of PBT							n.d.a.
and vPvB assessment							
12.6. Other adverse							n.d.a.
effects:							

Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	4,5	mg/l	Cyprinodon	OECD 203	Analogous conclusion
					variegatus	(Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	EL50	48h	23	mg/l	Daphnia magna	OECD 202 (Daphnia sp.	Analogous conclusion
						Acute Immobilisation	
						Test)	



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Page 8 of 11

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

Revision date / version: 05.04.2016 / 0001

Replacing version dated / version: 05.04.2016 / 0001

Valid from: 05.04.2016 PDF print date: 06.04.2016 Multis EP2 Total (088907128)

12.1. Toxicity to algae:	EC50	72h	21	mg/l			Analogous conclusion
12.2. Persistence and		28d	1,5	%	activated sludge	OECD 301 B	Not readily
degradability:						(Ready	biodegradable
						Biodegradability	
						- Co2	
						Evolution Test)	
12.3. Bioaccumulative	Log Pow		0,69			OECD 107	
potential:						(Partition	
						Coefficient (n-	
						octanol/water) -	
						Shake Flask	
						Method)	
Toxicity to bacteria:	EC50		>1000	mg/l			

SECTION 13: Disposal considerations

13.1 Waste treatment methods

For the substance / mixture / residual amounts

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

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

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

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

12 01 12 spent waxes and fats

Recommendation:

Sewage disposal shall be discouraged.

Pay attention to local and national official regulations.

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

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 (ADR 2015):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):
14.4. Packing group:
n.a.

14.5. Environmental hazards: Not applicable

14.6. Special precautions for user



Page 9 of 11

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

Revision date / version: 05.04.2016 / 0001

Replacing version dated / version: 05.04.2016 / 0001

Valid from: 05.04.2016 PDF print date: 06.04.2016 Multis EP2 Total (088907128)

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

National rules/regulation for the compliance with maximum quantities with regard to phosphates and or phosphorous compounds must be observed and complied with.

For classification and labelling see Section 2.

Observe restrictions:

Comply with trade association/occupational health regulations.

Observe youth employment law (German regulation).

15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

SECTION 16: Other information

Revised sections:

n a

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	Evaluation method used
(EC) No. 1272/2008 (CLP)	
Eye Irrit. 2, H319	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).

H315 Causes skin irritation.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

H411 Toxic to aquatic life with long lasting effects.

Eye Irrit. — Eye irritation

Aquatic Chronic — Hazardous to the aquatic environment - chronic

Skin Irrit. — Skin irritation

Eye Dam. — Serious eye damage

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)



Page 10 of 11

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

Revision date / version: 05.04.2016 / 0001

Replacing version dated / version: 05.04.2016 / 0001

Valid from: 05.04.2016 PDF print date: 06.04.2016 Multis EP2 Total (088907128)

BCF Bioconcentration factor

Berufsgenossenschaftliche Vorschrift (= Accident Prevention Regulation) BGV

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

body weight bw

Chemical Abstracts Service CAS

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

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

ΕČ **European Community** ECHA European Chemicals Agency

European Economic Area EEA EEC **European Economic Community**

EINECS European Inventory of Existing Commercial Chemical Substances

ELINCS European List of Notified Chemical Substances

European Norms ΕN

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.

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

International Bulk Chemical (Code) IBC (Code)

IC Inhibitory concentration

IMDG-code International Maritime Code for Dangerous Goods incl. including, inclusive

IUCLIDInternational 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

LOAELLowest 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

not applicable n.a.



Page 11 of 11

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

Revision date / version: 05.04.2016 / 0001

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n.av. not available n.c. not checked n.d.a. no data available

NIOSHNational 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

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:

Chemical Check GmbH, Chemical Check Platz 1-7, D-32839 Steinheim, Tel.: +49 5233 94 17 0, Fax: +49 5233 94 17 90

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