SAFETY DATA SHEET ACCORDING TO REGULATION (EC) 1907/2006

Product name: MAPETROL PREMIUM LL IV 0W-20

Creation date: 21.09.2022, Revision: 07.12.2023, version: 1.2

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product name

MAPETROL PREMIUM LL IV 0W-20

Product code

MAP0345, MAP0083, MAP0084, MAP0085, MAP0086, MAP00

https://my.chemius.net/p/p8UExy/en/pd/en

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

Relevant identified uses

Lubricants and lubricant additives. Industrial use. Professional use. Consumer use.

Uses advised against

No information.

1.3 Details of the supplier of the safety data sheet

Supplier

Mapetrol d.o.o.
Linhartova ulica 17a
2000 Maribor, Slovenia
+38622302880
lab@mapetrol.si

1.4 Emergency Telephone Number

Emergency

112

Supplier

+38622302880

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

Skin Sens. 1; H317 May cause an allergic skin reaction.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 [CLP]



Signal word: WARNING

H317 May cause an allergic skin reaction.
P102 Keep out of reach of children.
P280 Wear protective gloves/protective clothing.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
P501 Dispose of contents/container in accordance with national regulation.

Contains:
benzoic acid, 2-hydroxy-, mono-C14-18-alkyl derivs., calcium salts (2:1)
alkyl (C18-C28) toluenesulfonic acid, calcium salts, borated

2.3 Other hazards

PBT/vPvB
No information.

Endocrine disrupting properties
The product does not contain substances with the potential for endocrine disorders.

Additional information
No information.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

For mixtures see 3.2.

3.2 Mixtures

Name	CAS EC Index Reach	%	Classification according to Regulation (EC) No 1272/2008 (CLP)	Specific Concentration Limits	Notes for substances
1-Dodecene, homopolymer, hydrogenated	151006-63-2 604-769-9 - 01-2119493071-43	10 – 20	/	/	/
dec-1-ene, homopolymer, hydrogenated Dec-1-ene, oligomers, hydrogenated	68037-01-4 500-183-1 - 01-2119486452-34	1 – 9.99	Asp. Tox. 1; H304	/	/
reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate	125643-61-0 406-040-9 607-530-00-7 01-0000015551-76	1 – 9.99	Aquatic Chronic 4; H413	/	/
benzoic acid, 2-hydroxy-, mono-C14-18-alkyl derivs., calcium salts (2:1)	114959-46-5 601-337-1 -	1 – 9.99	Skin Sens. 1; H317	/	/
phosphorodithioic acid, mixed O,O-bis(sec-Bu and 1,3-dimethylbutyl) esters, zinc salts	68784-31-6 272-238-5 - 01-2119657973-23	0.1 – 0.99	Eye Dam. 1; H318 Aquatic Chronic 2; H411	/	/
alkyl (C18-C28) toluenesulfonic acid, calcium salts, borated	- 953-650-0 -	0.1 – 0.99	Skin Sens. 1B; H317 Repr. 2; H361d	Repr. 2; H361d; C ≥ 17.15%	/

Product description
Product containing mineral oil with less than 3 % DMSO extract as measured by IP 346.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General notes
When in doubt or if feeling unwell seek medical assistance. Show the safety data sheet and label to the physician.

Following inhalation
Under normal conditions of use, no need for first aid measures is anticipated.

Following skin contact
Areas of the body that have come into contact with the product must be rinsed with water and soap.

Following eye contact
Immediately flush eyes with running water, keeping eyelids apart.

Following ingestion
Do not induce vomiting! Rinse mouth thoroughly with water. Immediately consult a doctor.

4.2 Most important symptoms and effects, both acute and delayed

Following inhalation
No harmful effects are expected in normal use. Excessive exposure to spray mist, fog, or vapours may cause respiratory irritation.

Following skin contact
May cause sensitisation by skin contact (itching, redness, rashes).

Following eye contact
Not expected to present a significant hazard under anticipated conditions of normal use. Repeated or prolonged skin contact may cause redness, tearing, itching.

Following ingestion
At normal use, no harmful effects are expected. May cause nausea/vomiting and diarrhea. May cause abdominal discomfort.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media
Carbon dioxide. Dry chemical powder. Water spray. Alcohol resistant foam.

Unsuitable extinguishing media
Full water jet.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products
In case of a fire toxic gases can be generated; do not inhale gases/smoke.

5.3 Advice for firefighters

Protective actions
In case of fire or heating do not breathe fumes/vapours. Use standard procedure for chemical fires. Cool the endangered containers with water spray.

Special protective equipment for fire-fighters
Firefighters should wear appropriate protective clothing for firefighters (including helmets, protective boots and gloves) (BS EN 469) and self-contained breathing apparatus (SCBA) with a full face-piece (BS EN 137).

Additional information

No information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Protective equipment

Use personal protective equipment (Section 8).

Precautionary measures

Ensure adequate ventilation.

Emergency procedures

No action shall be taken involving any personal risk or without suitable training. Evacuate the danger zone. Avoid contact with skin, eyes and clothing.

For emergency responders

Use personal protective equipment.

6.2 Environmental precautions

Do not allow product to reach water/drains/sewage systems or permeable soil. In case of release into the environment, inform the relevant authorities.

6.3 Methods and material for containment and cleaning up

For containment

Stem the spill if this does not pose risks.

For cleaning up

May be dangerously slippery if spilled. Absorb product (with inert material), collect it in special container and dispose it to a licensed hazardous-waste disposal contractor. Clean contaminated area with water and detergent.

Other information

No information.

6.4 Reference to other sections

See also sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Protective measures

Measures to prevent fire

Ensure adequate ventilation. Handling temperature : < 40 °C.

Measures to prevent aerosol and dust generation

Use general or local exhaust ventilation to prevent inhaling vapours and aerosols.

Measures to protect the environment

No information.

Other measures

No information.

Advice on general occupational hygiene

Avoid all unnecessary exposure. Before eating, drinking or smoking leave the work area and wash your hands and any other exposed areas with mild soap and water. Do not eat, drink or smoke while working. Do not breathe vapours/mist.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions
Keep in a cool, dry and well ventilated place. Store at: ≤ 40°C.

Packaging materials
Store only in original container.

Requirements for storage rooms and vessels
Close opened containers after use. Put the containers upright to prevent from leaking. Do not store in unlabelled containers.

Storage class
No information.

Further information on storage conditions
No information.

7.3 Specific end use(s)

Recommendations
No information.

Industrial sector specific solutions
No information.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure limit values
No information.

Information on monitoring procedures
BS EN 14042:2003 Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents. BS EN 689:2018 Workplace exposure. Measurement of exposure by inhalation to chemical agents. Strategy for testing compliance with occupational exposure limit values. BS EN 482:2021 Workplace exposure. Procedures for the determination of the concentration of chemical agents. Basic performance requirements.

DNEL/DMEL values

For product
No information.

For components
No information.

PNEC values

For product
No information.

For components
No information.

8.2 Exposure controls

Appropriate engineering control

Substance/mixture related measures to prevent exposure during identified uses
Use good personal hygiene practices – wash hands at breaks and when done working with material. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothes. Do not eat, drink or smoke while working.

Structural measures to prevent exposure
No information.

Organisational measures to prevent exposure
No information.

Technical measures to prevent exposure

Provide good ventilation and local exhaust in areas with increased concentration. Keep away from food, drink and animal feeding stuffs.

Personal protective equipment

Eye and face protection

Safety glasses with side protection (EN ISO 16321-1:2022).

Hand protection

Protective gloves (EN ISO 374-1:2016). Observe the manufacturer's instructions regarding the use, storage, maintenance and replacement of gloves. In case of damage or at the first signs of wear and tear, change the gloves immediately. The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. The penetration time is determined by the protective glove manufacturer and must be observed.

Appropriate materials

Material	Thickness	Penetration Time	Remark
Nitril rubber (NBR)	> 0.35 mm	> 480 min	Long term use.

Skin protection

Cotton protective clothing and shoes that cover the entire foot (BS EN ISO 20345:2022). At high risk of skin exposure chemical suits (EN ISO 6530:2005) and boots may be required (EN ISO 20345:2022). Choose body protection according to the activity and possible exposure.

Respiratory protection

Not needed under normal use and adequate ventilation. In case of insufficient ventilation wear suitable respiratory protection. Wear suitable protective breathing mask (BS EN 136) with filter A2-P2 (BS EN 14387).

Thermal hazards

No information.

Environmental exposure controls

Substance/mixture related measures to prevent exposure

No information.

Instruction measures to prevent exposure

No information.

Organisational measures to prevent exposure

No information.

Technical measures to prevent exposure

Do not allow product to reach drains, sewage systems or ground water.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state

liquid - oily

Colour

green

Odour

characteristic

Important health, safety and environmental information

Odour threshold	No information.
Melting point/Freezing point	No information.
Boiling point or initial boiling point and boiling range	No information.
Flammability	No information.
Lower and upper explosion limit	No information.
Flash point	235 °C (ASTM D 92)
Auto-ignition temperature	No information.
Decomposition temperature	No information.
pH	No information.
Viscosity	kinematic: 40.2 mm^2/s at 40 °C

Solubility	Water: (slightly soluble)
Partition coefficient	No information.
Vapour pressure	No information.
Density and/or relative density	Density: 843 kg/m^3 at 15 °C
Relative vapour density	No information.
Particle characteristics	No information.

9.2 Other information

Explosive properties	No information.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

Stable under normal conditions.

10.2 Chemical stability

Product is stable under normal conditions of use, recommended handling and storage conditions.

10.3 Possibility of hazardous reactions

No dangerous reactions occur under normal conditions of storage and use.

10.4 Conditions to avoid

No information.

10.5 Incompatible materials

Strong oxidising agents.
Acids.
Bases.

10.6 Hazardous decomposition products

Under normal use conditions no hazardous decomposition products are expected. In case of fire/explosion vapours/gases that pose a health hazard are released.

SECTION 11: TOXICOLOGICAL INFORMATION

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

(a) Acute toxicity

For components

Name	Exposure route	Type	Species	Time	value	Method	Remark
dec-1-ene, homopolymer, hydrogenated Dec-1-ene, oligomers, hydrogenated	oral	LD_{50}	rat	/	> 5000 mg/kg	/	/

dec-1-ene, homopolymer, hydrogenated Dec-1-ene, oligomers, hydrogenated	dermal	LD_{50}	rat	/	> 2000 mg/kg	/	/
dec-1-ene, homopolymer, hydrogenated Dec-1-ene, oligomers, hydrogenated	inhalation	LC_{50}	rat	4 h	5.2 mg/l	/	/
reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate	oral	LD_{50}	rat	/	> 2000 mg/kg	OECD 401	/
reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate	dermal	LD_{50}	rat	/	> 2000 mg/kg	OECD 402	/
1-Dodecene, homopolymer, hydrogenated	oral	LD_{50}	rat	/	> 5000 mg/kg	/	/
1-Dodecene, homopolymer, hydrogenated	dermal	LD_{50}	rat	/	> 2000 mg/kg	/	/
1-Dodecene, homopolymer, hydrogenated	inhalation (dusts/mists)	LC_{50}	rat	4 h	> 5.06 mg/l	/	/

Additional information

The product is not classified as acutely toxic.

(b) Skin corrosion/irritation

No information.

Additional information

The product is not classified as irritating to the skin.

(c) Serious eye damage/irritation

No information.

Additional information

The product is not classified as an irritant to the eyes.

(d) Respiratory or skin sensitisation

No information.

Additional information

May cause an allergic skin reaction.

(e) (Germ cell) mutagenicity

No information.

(f) Carcinogenicity

No information.

(g) Reproductive toxicity

No information.

Summary of evaluation of the CMR properties

The product is not classified as carcinogenic, mutagenic or toxic for reproduction.

(h) STOT-single exposure

No information.

Additional information

STOT SE (single exposure): Not classified.

(i) STOT-repeated exposure

For components

Name	Exposure route	Type	Species	Time	Exposure	organ	value	result	Method	Remark
1-Dodecene, homopolymer, hydrogenated	oral	NOAEL	rat (male)	28 days	sub-acute	/	1000 mg/kg bw	/	/	/

Additional information

STOT RE (repeated exposure): Not classified.

(j) Aspiration hazard

No information.

Additional information

Aspiration hazard: Not classified.

Symptoms related to the physical, chemical and toxicological characteristics

No information.

Interactive effects

No information.

11.2 Information on other hazards

Endocrine disrupting properties

The product does not contain substances with the potential for endocrine disorders.

Other information

No information.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Acute (short-term) toxicity

For components

Name	Type	value	Exposure time	Species	organism	Method	Remark
dec-1-ene, homopolymer, hydrogenated Dec-1-ene, oligomers, hydrogenated	LC_{50}	> 1000 mg/L	/	fish	/	/	/
dec-1-ene, homopolymer, hydrogenated Dec-1-ene, oligomers, hydrogenated	LC_{50}	> 1000 mg/L	3 h	other aquatic organisms	*Scenedesmus quadricauda*	/	/
dec-1-ene, homopolymer, hydrogenated Dec-1-ene, oligomers, hydrogenated	EC_{50}	> 1000 mg/L	72 h	other aquatic organisms	water flea	/	/
dec-1-ene, homopolymer, hydrogenated Dec-1-ene, oligomers, hydrogenated	EC_{50}	> 125 mg/L	72 h	algae	water flea	/	/

dec-1-ene, homopolymer, hydrogenated Dec-1-ene, oligomers, hydrogenated	NOEC	125 mg/L	/	/	water flea	/	/
reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate	LC_{50}	> 74 mg/L	96 h	fish	*Danio rerio*	OECD 203	/
reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate	EC50	> 100 mg/L	24 h	crustacea	*Daphnia magna*	OECD 202	/
reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate	EC_{50}	0 mg/L	/	Aquatic organisms	/	/	/
reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate	EC_{50}	> 3 mg/L	72 h	algae	*Desmodesmus subspicatus*	OECD 201	/
alkyl (C18-C28) toluenesulfonic acid, calcium salts, borated	EC_{50}	1.2 mg/L	/	other aquatic organisms	/	/	/
1-Dodecene, homopolymer, hydrogenated	LC_{50}	> 1000 mg/L	/	fish	/	/	/
1-Dodecene, homopolymer, hydrogenated	EC_{50}	> 1000 mg/L	/	crustacea	/	/	/
1-Dodecene, homopolymer, hydrogenated	EC_{50}	> 1000 mg/L	72 h	algae	/	/	/

Chronic (long-term) toxicity

No information.

12.2 Persistence and degradability

Abiotic degradation, physical- and photo-chemical elimination

No information.

Biodegradation

For components

Name	Type	Rate	Time	Evaluation	Method	Remark
dec-1-ene, homopolymer, hydrogenated Dec-1-ene, oligomers, hydrogenated	biodegradation	2 %	28 days	/	OECD 301D	/
reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate	/	/	/	Not readily biodegradable.	/	/

Additional information

The product is not water soluble and therefore minimally biodegradable.

12.3 Bioaccumulative potential

Partition coefficient

For components

Name	Media	value	Temperature °C	pH	Concentration	Method
dec-1-ene, homopolymer, hydrogenated Dec-1-ene, oligomers, hydrogenated	log Kow	> 6.5	/	/	/	/
reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate	Log Pow	9.2	/	/	/	/

Bioconcentration factor (BCF)

For components

Name	Species	organism	value	Duration	Evaluation	Method	Remark
reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate	BCF	*Oncorhynchus mykiss*	260	35 days	/	OECD 305	/

12.4 Mobility in soil

Known or predicted distribution to environmental compartments

No information.

Surface tension

No information.

Adsorption/Desorption

For components

Name	Type	Criterion	value	Evaluation	Method	Remark
reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate	Soil	/	/	Absorbed into the ground.	/	/

12.5 Results of PBT and vPvB assessment

No evaluation.

12.6 Endocrine disrupting properties

The product does not contain substances with the potential for endocrine disorders.

12.7 Other adverse effects

No information.

12.8 Additional information

For product

Product is not classified as dangerous for environment. Do not allow to reach ground water, water courses or sewage system. Water hazard class 1 (self-assessment): slightly hazardous for water.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product / Packaging disposal

Waste chemical

Dispose of in accordance with applicable waste disposal regulation. Do not allow product to reach drains/sewage systems. Dispose the product to an authorised collector/remover of waste/company performing waste recovery. Waste should be handled in accordance with local or national regulations.

Waste codes / waste designations according to LoW

No information.

Packaging

Dispose of in accordance with applicable waste disposal regulation. Deliver completely emptied containers to approved waste disposal authorities.

Waste codes / waste designations according to LoW

No information.

Waste treatment-relevant information

No information.

Sewage disposal-relevant information

No information.

Other disposal recommendations

No information.

SECTION 14: TRANSPORT INFORMATION

ADR/RID	IMDG	IATA	ADN
14.1 UN number or ID number			
Not dangerous according to transport regulations.	Not dangerous according to transport regulations.	Not dangerous according to transport regulations.	Not dangerous according to transport regulations.
14.2 UN proper shipping name			
Not given/not applicable	Not given/not applicable	Not given/not applicable	Not given/not applicable
14.3 Transport hazard class(es)			
Not given/not applicable	Not given/not applicable	Not given/not applicable	Not given/not applicable
14.4 Packing group			
Not given/not applicable	Not given/not applicable	Not given/not applicable	Not given/not applicable
14.5 Environmental hazards			
NO	NO	NO	NO
14.6 Special precautions for user			
Limited quantities Not given/not applicable	Limited quantities Not given/not applicable		Limited quantities Not given/not applicable
14.7 Maritime transport in bulk according to IMO instruments			
	Not given/not applicable		

SECTION 15: REGULATORY INFORMATION

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

- Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (including last amendment Commission Regulation (EU) 2020/878)

- Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures

Information according 2004/42/EC about limitation of emissions of volatile organic compounds (VOC-guideline)
not applicable

Ingredients according to Regulation (EC) No 648/2004 on detergents
No information.

Special instructions
Water hazard class 1 (self-assessment): slightly hazardous for water.
It does not contain substances that are subjected to the REACH Annex XVII restrictions.
SVHC (substance of very high concern) Candidate list: The product does not contain substances on the SVHC candidate list.
List of substances subject to authorisation (REACH, Annex XIV): none.
Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals: none listed.
Regulation (EU) 2019/1021 of the European Parliament and of the Council of 20 June 2019: Does not contain substances, which are persistent organic pollutants.
The product contains a restricted explosive precursor whose acquisition, introduction, possession or use by the general public is restricted by Regulation (EU) 2019/1148.

15.2 Chemical Safety Assessment

A Chemical Safety Assessment has not been carried out.

SECTION 16: OTHER INFORMATION

Indication of changes
2.2 Label elements 2.3 Other hazards 6.2 Environmental precautions 6.3 Methods and material for containment and cleaning up 7.2 Conditions for safe storage, including any incompatibilities 9.1 Information on basic physical and chemical properties 9.2 Other information 10.5 Incompatible materials 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008 11.2 Information on other hazards 12.1 Toxicity 12.6 Endocrine disrupting properties 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Key literature references and sources for data
No information.

Abbreviations and acronyms
ATE - Acute Toxicity Estimate
ADR - Agreement concerning the International Carriage of Dangerous Goods by Road
ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
CEN - European Committee for Standardisation
C&L - Classification and Labelling
CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
CAS# - Chemical Abstracts Service number
CMR - Carcinogen, Mutagen, or Reproductive Toxicant
CSA - Chemical Safety Assessment
CSR - Chemical Safety Report
DMEL - Derived Minimal Effect Level
DNEL - Derived No Effect Level
DPD - Dangerous Preparations Directive 1999/45/EC
DSD - Dangerous Substances Directive 67/548/EEC
DU - Downstream User
EC - European Community
ECHA - European Chemicals Agency
EC-Number - EINECS and ELINCS Number (see also EINECS and ELINCS)
EEA - European Economic Area (EU + Iceland, Liechtenstein and Norway)
EEC - European Economic Community
EINECS - European Inventory of Existing Commercial Substances
ELINCS - European List of notified Chemical Substances

EN - European Standard
EQS - Environmental Quality Standard
EU - European Union
Euphrac - European Phrase Catalogue
EWC - European Waste Catalogue (replaced by LoW – see below)
GES - Generic Exposure Scenario
GHS - Globally Harmonized System
IATA - International Air Transport Association
ICAO-TI - Technical Instructions for the Safe Transport of Dangerous Goods by Air
IMDG - International Maritime Dangerous Goods
IMSBC - International Maritime Solid Bulk Cargoes
IT - Information Technology
IUCLID - International Uniform Chemical Information Database
IUPAC - International Union for Pure Applied Chemistry
JRC - Joint Research Centre
Kow - octanol-water partition coefficient
LC50 - Lethal Concentration to 50 % of a test population
LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose)
LE - Legal Entity
LoW - List of Wastes (see http://ec.europa.eu/environment/waste/framework/list.htm)
LR - Lead Registrant
M/I - Manufacturer / Importer
MS - Member States
MSDS - Material Safety Data Sheet
OC - Operational Conditions
OECD - Organization for Economic Co-operation and Development
OEL - Occupational Exposure Limit
OJ - Official Journal
OR - Only Representative
OSHA - European Agency for Safety and Health at work
PBT - Persistent, Bioaccumulative and Toxic substance
PEC - Predicted Effect Concentration
PNEC(s) - Predicted No Effect Concentration(s)
PPE - Personal Protection Equipment
(Q)SAR - Qualitative Structure Activity Relationship
REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID - Regulations concerning the International Carriage of Dangerous Goods by Rail
RIP - REACH Implementation Project
RMM - Risk Management Measure
SCBA - Self-Contained Breathing Apparatus
SDS - Safety data sheet
SIEF - Substance Information Exchange Forum
SME - Small and Medium sized Enterprises
STOT - Specific Target Organ Toxicity
(STOT) RE - Repeated Exposure
(STOT) SE - Single Exposure
SVHC - Substances of Very High Concern
UN - United Nations
vPvB - Very Persistent and Very Bioaccumulative

List of relevant H phrases

H304 May be fatal if swallowed and enters airways.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H361d Suspected of damaging the unborn child.
H411 Toxic to aquatic life with long lasting effects.
H413 May cause long lasting harmful effects to aquatic life.



- ☑ Provided correct labelling of the product
- ☑ Compliance with the local legislation
- ☑ Provided correct classification of the product
- ☑ Provided adequate transport data

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The information of this SDS is based on the present state of our knowledge and meets the requirements of EU and national laws. The user's working conditions however, are beyond our knowledge and control. The product is not to be used for purposes other than those specified under section 1 without a written permission. It remains the responsibility of the user to ensure that the necessary steps are taken to meet the laws and regulations. Handling of the product may only be done by people above 18 years of age, who are satisfactorily informed of how to do the work, the hazardous properties and necessary safety precautions. The information given in this SDS is to describe the product only in terms of health and safety requirements and should not, therefore, be construed as guaranteeing specific properties.