

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

SDS #: 081150 QUARTZ INEO EFFICIENCY 0W-30

Date of the previous version: 2015-03-31 Revision Date: 2016-08-10 Version 2.01

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE

COMPANY/UNDERTAKING

1.1. Product identifier

Product name QUARTZ INEO EFFICIENCY 0W-30

Number 8LB Substance/mixture Mixture

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

Identified uses Motor oil.

1.3. Details of the supplier of the safety data sheet

Supplier TOTAL LUBRIFIANTS

562 Avenue du Parc de L'ile

92029 Nanterre Cedex

FRANCE

Tél: +33 (0)1 41 35 40 00 Fax: +33 (0)1 41 35 84 71

For further information, please contact:

Contact Point HSE

E-mail Address rm.msds-lubs@total.com

1.4. Emergency telephone number

Emergency telephone: +44 1235 239670

France - ORFILA (INRS) Tél: +33 (0)1 45 42 59 59

In France: - PARIS: Hopital Fernand Widal 200, rue du Faubourg Saint-Denis 75475 Paris Cédex 10, Tel: 01.40.05.48.48. - MARSEILLE: Hopital Salvator, 249 bd Ste Marguerite 13274 Marseille cedex 5, Tel: 04.91.75.25.25. - LYON: Hopital Edouard Herriot, 5 place d'Arsonvol, 69437 Lyon cedex 3, Tel: 04.72.11.69.11. - NANCY: Hopital central, 29 Av du Mal De Lattre de

Tassigny, 54000 Nancy, Tel: 03.83.32.36.36 ou le SAMU: Tel (15)

Section 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

REGULATION (EC) No 1272/2008 ***

For the full text of the H-Statements mentioned in this Section, see Section 2.2.***

Classification

The product is classified as dangerous in accordance with Regulation (EC) No. 1272/2008***



QUARTZ INEO EFFICIENCY 0W-30

Revision Date: 2016-08-10 Version 2.01

Chronic aquatic toxicity - Category 4*** - (H413)***

2.2. Label elements

Labelled according to REGULATION (EC) No 1272/2008

Hazard Statements ***

H413 - May cause long lasting harmful effects to aquatic life***

Precautionary Statements

P501 - Dispose of contents/ container to an approved incineration plant***

2.3. Other hazards

Physical-Chemical Properties Contaminated surfaces will be extremely slippery.

Environmental properties Should not be released into the environment.

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixture

Chemical nature The product is made from refined mineral base oils and synthetic oils .

Chemical Name	EC-No	REACH registration No	CAS-No	Weight %	Classification (Reg. 1272/2008)
1-dodecene, trimer, hydrogenated***	417-070-7***	01-0000016388-62	151006-62-1	40-<50	Aquatic Chronic 4 (H413)
Distillates (petroleum), hydrotreated heavy paraffinic***	265-157-1***	01-2119484627-25	64742-54-7	20-<30	Asp. Tox. 1 (H304)
1-dodecene, homopolymer, hydrogenated***	-	01-0000016388-62	151006-63-2	5-<10	Aquatic Chronic 4 (H413)
bis(nonylphenyl)amine***	253-249-4***	01-2119488911-28	36878-20-3	1-<2.5	Aquatic Chronic 4 (H413)
2,6-di-tert-butylphenol***	204-884-0***	01-2119490822-33	128-39-2	0.1-<0.25	Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) Skin Irrit. 2 (H315) Acute M factor = 1
Phenol, dodecyl-, branched***	310-154-3***	01-2119513207-49	121158-58-5	0.1-<0.25	Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) Eye Irrit. 2 (H319) Repr. 2 (H361f) Skin Irrit. 2 (H315) Acute M factor = 10 Chronic M factor = 10
Diphenylamine***	204-539-4***	no data available	122-39-4	0.1-<0.25	Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 3 (H331) STOT RE 2 (H373) Aquatic Acute 1 (H400)



QUARTZ INEO EFFICIENCY 0W-30

Revision Date: 2016-08-10 Version 2.01

		Aquatic Chronic 1 (H410)
		Eye Irrit. 2 (H319)***

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

For the full text of the H-Statements mentioned in this Section, see Section 16.

Section 4: FIRST AID MEASURES

4.1. Description of first-aid measures

General advice IN CASE OF SERIOUS OR PERSISTENT CONDITIONS, CALL A DOCTOR OR

EMERGENCY MEDICAL CARE.***

Eye contact Rinse thoroughly with plenty of water, also under the eyelids.***

Skin contact Remove contaminated clothing and shoes. Wash off with soap and water. Wash

contaminated clothing before reuse.***

Inhalation Move to fresh air.

Ingestion Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a

physician or Poison Control Center immediately.***

4.2. Most important symptoms and effects, both acute and delayed

Eye contact Not classified.

Skin contact Not classified.

Inhalation Not classified. Inhalation of vapors in high concentration may cause irritation of respiratory

system.

Ingestion Not classified. Ingestion may cause gastrointestinal irritation, nausea, vomiting and

diarrhea.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician Treat symptomatically.

Section 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media Carbon dioxide (CO₂). ABC powder. Foam. Water spray or fog.***

Unsuitable Extinguishing Media Do not use a solid water stream as it may scatter and spread fire.

5.2. Special hazards arising from the substance or mixture



QUARTZ INEO EFFICIENCY 0W-30

Revision Date: 2016-08-10 **Version** 2.01

Special Hazard

Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot. These may be highly dangerous if inhaled in confined spaces or at high concentration.

5.3. Advice for fire-fighters

Special protective equipment for

fire-fighters

Wear self-contained breathing apparatus and protective suit.

Other information

General Information

Cool containers / tanks with water spray. Fire residues and contaminated fire extinguishing

water must be disposed of in accordance with local regulations.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Do not touch or walk through spilled material. Contaminated surfaces will be extremely slippery. Use personal protective equipment. Ensure adequate ventilation. Remove all

sources of ignition.***

6.2. Environmental precautions

General Information Do not allow material to contaminate ground water system. Try to prevent the material from

entering drains or water courses. Local authorities should be advised if significant spillages

cannot be contained. See Section 12 for additional Ecological Information.***

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Dam up. Contain spillage, and then collect with non-combustible absorbent material, (e.g.

sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Keep in suitable, closed containers for

disposal.***

6.4. Reference to other sections

Personal Protective Equipment See Section 8 for more detail.

Waste treatment See section 13.

Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling When using, do not eat, drink or smoke. For personal protection see section 8. Use only in

well-ventilated areas. Do not breathe vapors or spray mist. Avoid contact with skin, eyes

and clothing.***

Prevention of fire and explosion Take precautionary measures against static discharges: Ground/bond containers, tanks



QUARTZ INEO EFFICIENCY 0W-30

Revision Date: 2016-08-10 Version 2.01

and transfer/receiving equipment.***

Hygiene measures

Ensure the application of strict rules of hygiene by the personnel exposed to the risk of contact with the product. Regular cleaning of equipment, work area and clothing is recommended. Wash hands and face before breaks and immediately after handling the product. Do not use abrasives, solvents or fuels. Do not dry hands with rags that have been contaminated with product. Do not put product contaminated rags into workwear pockets.***

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions Keep away from food, drink and animal feedingstuffs. Keep in a bunded area. Keep

preferably in the original container. Otherwise reproduce all indication of the regulation label on the new container. Do not remove the hazard labels of the containers (even if they are

empty).

Incompatible materials Oxidizing agents. Strong acids.

7.3. Specific end uses

Specific use(s) No information available.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure limits Mineral oil mist:

USA: OSHA (PEL) TWA 5 mg/m3, NIOSH (REL) TWA 5 mg/m3, STEL 10 mg/m3, ACGIH

(TLV) TWA 5 mg/m³ (highly refined)

Legend See section 16

DNEL Worker (Industrial/Professional)

Chemical Name	Short term, systemic effects	Short term, local effects	Long term, systemic effects	Long term, local effects
Distillates (petroleum), hydrotreated heavy paraffinic*** 64742-54-7				5.4 mg/m³/8h (aerosol - inhalation)
bis(nonylphenyl)amine*** 36878-20-3			0.62 mg/kg bw/day Dermal 4.37 mg/m³ Inhalation	
2,6-di-tert-butylphenol*** 128-39-2			2.77 mg/kg bw/day Dermal 19.6 mg/m³ Inhalation	
Phenol, dodecyl-, branched*** 121158-58-5	166 mg/kg bw/day Dermal 44.18 mg/m³ Inhalation		0.25 mg/kg bw/day Dermal 1.7621 mg/m³ Inhalation	

DNEL Consumer



QUARTZ INEO EFFICIENCY 0W-30

Revision Date: 2016-08-10 Version 2.01

Chemical Name	Short term, systemic effects	Short term, local effects	Long term, systemic effects	Long term, local effects
Distillates (petroleum), hydrotreated heavy paraffinic*** 64742-54-7				1.2 mg/m³/24h (aerosol - inhalation)
bis(nonylphenyl)amine*** 36878-20-3			0.31 mg/kg bw/day Dermal 1.09 mg/m³ Inhalation 0.31 mg/kg bw/day Oral	
2,6-di-tert-butylphenol*** 128-39-2			1.67 mg/kg bw/day Oral 5.8 mg/m³ Inhalation	
Phenol, dodecyl-, branched*** 121158-58-5	50 mg/kg bw/day Dermal 13.26 mg/m³ Inhalation 1.26 mg/kg bw/day Oral		0.075 mg/kg bw/day Dermal 0.79 mg/m³ Inhalation 0.075 mg/kg bw/day Oral	

Predicted No Effect Concentration (PNEC)

Chemical Name	Water	Sediment	Soil	Air	STP	Oral
bis(nonylphenyl)ami	0.1 mg/l fw	132000 mg/kg dw	263000 mg/kg dw		1 mg/l	
ne***	0.01 mg/l mw	fw				
36878-20-3	1 mg/l or	13200 mg/kg dw				
		mw				
2,6-di-tert-butylphen	0.00045 mg/l fw	0.196 mg/kg dw	0.0389 mg/kg dw		10 mg/l	
ol***	0.000045 mg/l	fw				
128-39-2	mw	0.0196 mg/kg dw				
	0.0045 mg//l or	mw				
Phenol, dodecyl-,	0.000074 mg/l fw	0.226 mg/kg fw	0.118 mg/kg dw		100 mg/l	4 mg/kg food
branched***	0.0000074 mg/l	dw				
121158-58-5	mw	0.0266 mg/kg mw				
	0.00037 mg/l or	dw				

8.2. Exposure controls

Occupational Exposure Controls

Engineering Measures Apply technical measures to comply with the occupational exposure limits. When working in

confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for

breathing and wear the recommended equipment.

Personal Protective Equipment

General Information If the product is used in mixtures, it is recommended that you contact the appropriate

protective equipment suppliers. These recommendations apply to the product as supplied.

Respiratory protection When workers are facing concentrations above the exposure limit they must use

appropriate certified respirators. Respirator with combination filter for vapour/particulate (EN

14387). Type A/P1. The use of breathing apparatus must comply strictly with the manufacturer's instructions and the regulations governing their choices and uses.***

Eye Protection If splashes are likely to occur, wear:. Safety glasses with side-shields.



QUARTZ INEO EFFICIENCY 0W-30

Revision Date: 2016-08-10 Version 2.01

Skin and body protection

Wear suitable protective clothing. Protective shoes or boots. Long sleeved clothing.

Hand Protection

Hydrocarbon-proof gloves: Fluorinated rubber, Nitrile rubber. In case of prolonged contact with the product, it is recommended to wear gloves complying with EN 420 and EN 374 standards, protecting at least for 480 minutes and having a thickness of 0,38 mm at least. These values are indicative only. The level of protection is provided by the material of the glove, its technical characteristics, its resistance to the chemicals to be handled, the appropriateness of its use and its replacement frequency.***

Environmental exposure controls

General Information

Melting point/range

Oxidizing Properties

The product should not be allowed to enter drains, water courses or the soil.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

limpid*** **Appearance** Color vellow Physical State @20°C liquid

Characteristic Odor

No information available **Odor Threshold**

Property Values Remarks Method Not applicable pН Not applicable***

No information available*** Boiling point/boiling range

Flash point > 200 °C

> 392 °F No information available **Evaporation rate** Flammability Limits in Air No information available

upper *** No information available***

Lower *** *** No information available*** **Vapor Pressure** No information available

Vapor density No information available Relative density 0.85*** @ 15 °C**

Density 850 kg/m3 @ 15 °C Water solubility Insoluble No information available Solubility in other solvents

No information available*** **logPow** No information available **Autoignition temperature Decomposition temperature** No information available

Not applicable

@ 40 °C 64 mm2/s ISO 3104 Viscosity, kinematic Not explosive **Explosive properties**



QUARTZ INEO EFFICIENCY 0W-30

Revision Date: 2016-08-10 Version 2.01

Possibility of hazardous reactions No information available***

9.2. Other information

Freezing Point No information available

Section 10: STABILITY AND REACTIVITY

10.1. Reactivity

General Information No information available.***

10.2. Chemical stability

Stability Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

Hazardous Reactions None under normal processing.

10.4. Conditions to Avoid

Conditions to Avoid Heat (temperatures above flash point), sparks, ignition points, flames, static electricity.***

10.5. Incompatible Materials

Materials to Avoid Strong oxidizing agents.***

10.6. Hazardous Decomposition Products

Hazardous Decomposition Products Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot.***

Section 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity Local effects Product Information

Skin contact . Not classified. Eye contact . Not classified.

Inhalation . Not classified. Inhalation of vapors in high concentration may cause irritation of

respiratory system.

Ingestion . Not classified. Ingestion may cause gastrointestinal irritation, nausea, vomiting and

diarrhea.

ATEmix (oral) 5,632.00*** mg/kg***



QUARTZ INEO EFFICIENCY 0W-30

Revision Date: 2016-08-10 Version 2.01

ATEmix (dermal) 5,013.00*** mg/kg***

ATEmix (inhalation-dust/mist) 6.00*** mg/l***

ATEmix (inhalation-vapor) 25.47*** mg/l***

Acute toxicity - Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Distillates (petroleum), hydrotreated heavy	LD50 > 5000 mg/kg bw (rat -	LD50 > 5000 mg/kg bw (rabbit -	LC50 (4h) > 5 mg/l (aerosol) (rat -
paraffinic***	OECD 420)	OECD 402)	OECD 403)
1-dodecene, homopolymer,	LD50 > 5000 mg/kg (Rat)	LD50 > 2000 mg/kg (Rat)	LC50 (4h) > 5.06 mg/l (Rat -
hydrogenated***			aerosol)
bis(nonylphenyl)amine***	LD50 > 5000 mg/kg (Rat - OECD	LD50 > 2000 mg/kg (Rat - OECD	
	401)	402)	
2,6-di-tert-butylphenol***	> 5000 mg/kg (Rat)	LD50 > 2000 mg/kg (Rabbit)	
Phenol, dodecyl-, branched***	LD50 2700 mg/kg (Rat)	LD50 > 3160 mg/kg (Rat)	
Diphenylamine***	LD50 600 mg/kg (Rat - male) ***	ATE (Cat 3)***	ATE (Cat 3)***

Sensitization

Sensitization Not classified as a sensitizer.

Specific effects

Carcinogenicity This product is not classified carcinogenic. During use in engines, contamination of oil with

low levels of combustion products occurs. Used motor oils have been shown to cause skin cancer in mice following repeated application and continuous exposure. Brief or intermittent skin contact with used motor oil is not expected to have serious effects in humans if the oil

is thoroughly removed by washing with soap and water.

Mutagenicity This product is not classified as mutagenic.

Reproductive toxicity

This product does not present any known or suspected reproductive hazards. Contains a

known or suspected reproductive toxin.***

Chemical Name	European Union
Phenol, dodecyl-, branched***	Repr. 2 (H361f)
121158-58-5	

Repeated Dose Toxicity

Subchronic toxicity No information available.

Target Organ Effects (STOT)

Target Organ Effects (STOT) No information available.

Other information

Other adverse effects Characteristic skin lesions (pimples) may develop following prolonged and repeated

exposures (contact with contaminated clothing).

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.



QUARTZ INEO EFFICIENCY 0W-30

Revision Date: 2016-08-10 Version 2.01

Acute aquatic toxicity - Product Information

No experimental data available.

Acute aquatic toxicity - Component Information

Chemical Name	Toxicity to algae	Toxicity to daphnia and	Toxicity to fish	Toxicity to
		other aquatic invertebrates		microorganisms
Distillates (petroleum),	EL50 (48h) > 100 mg/l	EL50 (48h) > 10000 mg/l	LL50 (96h) > 100 mg/l	
hydrotreated heavy	(Pseudokirchnerella	(Daphnia magna - OECD	(Oncorhynchus mykiss -	
paraffinic***	subcapitata - OECD 201)	202)	OECD 203)	
64742-54-7		·	•	
1-dodecene, homopolymer,	EL50 (72h) > 1000 mg/l	EL50(48h) >1000 mg/l	LC50(96h) > 1000 mg/l	
hydrogenated***	(Scenedesmus	(Daphnia magna)	(Oncorhynchus mykiss)	
151006-63-2	capricornutum)		, , ,	
bis(nonylphenyl)amine***	EC50 (72h) > 100 mg/l	EC50 (48h) > 100 mg/l	LC50 (96h) > 100 mg/l	
36878-20-3	(Desmodesmus subspicatus	(Daphnia magna - OECD	(Brachyanio rerio - OECD	
	- OECD 201)	202)	203)	
2,6-di-tert-butylphenol***	EC50 (72h) 1.2 mg/l	EC50 (48h) = 0.45 mg/L	LC50(96h) 1 mg/l (fish)	
128-39-2		Daphnia magna		
Phenol, dodecyl-,	EbC50 (72h) 0.15 mg/l	EC50(48h) 0.037 mg/l	EL50(96h) 40 mg/l	
branched***	(Scenedesmus subspicatus -	(Daphnia magna - static -	Pimephales promelas	
121158-58-5	OECD 201)	OECD 202)	semi-static (OECD 203)	
Diphenylamine***	EC50 (72h) = 1.51 mg/l	EC50 (48h) 0.31 mg/l	LC50 (48h) 2.2 mg/l***	EC50 = 4.77 mg/L 30 min
122-39-4	(Algae)***	(Cladocère)***		EC50 = 2.81 mg/L 5 min
	, ,	,		EC50 = 3.46 mg/L 15 min

Chronic aquatic toxicity - Product Information

No information available.

Chronic aquatic toxicity - Component Information

Chemical Name	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates	Toxicity to fish	Toxicity to microorganisms
Distillates (petroleum), hydrotreated heavy paraffinic*** 64742-54-7		NOEL (21d) 10 mg/l (Daphnia magna - QSAR Petrotox)	NOEL (14/28d) > 1000 mg/l (Oncorhynchus mykiss - QSAR Petrotox)	
1-dodecene, homopolymer, hydrogenated*** 151006-63-2		NOELR(21d) 125 mg/l (Daphnia magna)		
2,6-di-tert-butylphenol*** 128-39-2			NOEC (28d) 0.3 mg/l (fish)	
Phenol, dodecyl-, branched*** 121158-58-5		NOEC(21d) 0.0037 mg/l (Daphnia magna - semi-static - OECD 211)		

Effects on terrestrial organisms

No information available.**

12.2. Persistence and degradability



QUARTZ INEO EFFICIENCY 0W-30

Revision Date: 2016-08-10 Version 2.01

General Information

No information available.

12.3. Bioaccumulative potential

Product Information No information available.

logPow No information available***

Component Information

Chemical Name	log Pow
Distillates (petroleum), hydrotreated heavy paraffinic*** - 64742-54-7	•
1-dodecene, homopolymer, hydrogenated*** - 151006-63-2	6.6
bis(nonylphenyl)amine*** - 36878-20-3	7.7
2,6-di-tert-butylphenol*** - 128-39-2	4.48
Phenol, dodecyl-, branched*** - 121158-58-5	7.14
Diphenylamine*** - 122-39-4	3.4

12.4. Mobility in soil

Soil Given its physical and chemical characteristics, the product generally shows low soil

mobility.***

Air Loss by evaporation is limited.***

Water Insoluble. The product spreads on the surface of the water.***

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment No information available.

12.6. Other adverse effects

General Information No information available.***

Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from Residues / Unused Products

Should not be released into the environment. Do not empty into drains. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations. Where possible recycling is preferred to disposal or incineration. After use, this oil must be sent to a licensed waste oil facility. Incorrect disposal of used oil poses a risk to the environment. Mixture with other waste types such as

solvents, brake- and cooling liquids is forbidden.

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or

disposal.***



QUARTZ INEO EFFICIENCY 0W-30

Revision Date: 2016-08-10 Version 2.01

EWC Waste Disposal No.

The following Waste Codes are only suggestions:. 13 02 06. According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used.

Section 14: TRANSPORT INFORMATION

ADR/RID Not regulated

IMDG/IMO Not regulated

ICAO/IATA Not regulated

ADN Not regulated

Section 15: REGULATORY INFORMATION

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

European Union

Further information

No information available

15.2. Chemical Safety Assessment

Chemical Safety Assessment No information available

Section 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3

H400 - Very toxic to aquatic life

H410 - Very toxic to aquatic life with long lasting effects

H319 - Causes serious eye irritation

H361f - Suspected of damaging fertility

H315 - Causes skin irritation

H301 - Toxic if swallowed

H311 - Toxic in contact with skin

H331 - Toxic if inhaled

H373 - May cause damage to the kidneys/ liver/ eyes/ brain/ digestive system/ central nervous system through prolonged or repeated exposure if swallowed



QUARTZ INEO EFFICIENCY 0W-30

Revision Date: 2016-08-10 Version 2.01

H413 - May cause long lasting harmful effects to aquatic life***

Abbreviations, acronyms

ACGIH = American Conference of Governmental Industrial Hygienists

bw = body weight

bw/day = body weight/day

EC x = Effect Concentration associated with x% response

GLP = Good Laboratory Practice

IARC = International Agency for Research of Cancer

LC50 = 50% Lethal concentration - Concentration of a chemical in air or a chemical in water which causes the death of 50% (one half) of a group of test animals

LD50 = 50% Lethal Dose - Chemical amount, given at once, which causes the death of 50% (one half) of a group of test animals

LL = Lethal Loading

NIOSH = National Institute of Occupational Safety and Health

NOAEL = No Observed Adverse Effect Level

NOEC = No Observed Effect Concentration

NOEL = No Observed Effect Level

OECD = Organization for Economic Co-operation and Development

OSHA = Occupational Safety and Health Administration

UVCB = Substance of unknown or Variable composition, Complex reaction products or Biological material

DNEL = Derived No Effect Level

PNEC = Predicted No Effect Concentration

dw = dry weight

fw = fresh water

mw = marine water

or = occasional release

Legend Section 8

TWA: Time Weight Average STEL: Short Time Exposure Limit PEL: Permissible exposure limit REL: Recommended exposure limit

TLV: Threshold Limit Values

+ Sensitizer * Skin designation

* Hazard Designation C: Carcinogen

M: Mutagen R: Toxic to reproduction

Revision Date: 2016-08-10

Revision Note *** Indicates updated section.

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

This safety data sheet serves to complete but not to replace the technical product sheets. The information contained herein is given in good faith and is accurate to the best of knowledge at the date indicated above. It is understood by the user that any use of the product for purposes other than those for which it was designed entails potential risk. The information given herein in no way dispenses the user from knowing and applying all provisions regulating his activity. The user bears sole liability for the precautions required when using the product. The regulatory texts indicated herein are intended to aid the user to fulfil his obligations. This list is not to be considered complete and exhaustive. It is the user's responsibility to ensure that he is subject to no other obligations than those mentioned.

End of the Safety Data Sheet