



SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

SDS # : 086745

**EVOLUTION FULL-TECH VSX
0W-20**

Date of the previous version: 2016-12-05

Revision Date: 2017-09-13

Version 1.01

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

1.1. Product identifier

Product name	EVOLUTION FULL-TECH VSX 0W-20
Number	FMI
Substance/mixture	Mixture***

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

Identified uses	Engine oil.***
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1.3. Details of the supplier of the safety data sheet

Supplier	TOTAL LUBRIFIANTS 562 Avenue du Parc de L'île 92029 Nanterre Cedex FRANCE Tél: +33 (0)1 41 35 40 00 Fax: +33 (0)1 41 35 84 71***
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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 - Poison centers:
 ANGERS : 02 41 48 21 21
 BORDEAUX : 05 56 96 40 80
 LILLE : 08 00 59 59 59
 LYON : 04 72 11 69 11
 MARSEILLE : 04 91 75 25 25
 NANCY : 03 83 22 50 50
 PARIS : 01 40 05 48 48
 STRASBOURG : 03 88 37 37 37
 TOULOUSE : 05 61 77 74 47***

Section 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

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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 not classified as dangerous according to Regulation (EC) No. 1272/2008***

2.2. Label elements**Labelled according to**

REGULATION (EC) No 1272/2008***

Signal word

None***

Hazard Statements ***

None***

Precautionary Statements

None***

Supplemental Hazard Statements

EUH210 - Safety data sheet available on request***

EUH208 - Contains C14-16-18 Alkyl phenol. May produce an allergic reaction***

2.3. Other hazards**Physical-Chemical Properties**

Contaminated surfaces will be extremely slippery.***

Environmental properties

The product may form an oil film on the water surface that may stop the oxygen exchange.***

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixture*****Chemical nature**

The product is made from synthetic base oils.***

Hazardous ingredients

Chemical Name	EC-No	REACH registration No	CAS-No	Weight %	Classification (Reg. 1272/2008)
Dec-1-ene, trimers, hydrogenated***	-	01-2119493949-12	157707-86-3	70-<80	Asp. Tox. 1 (H304)
Distillates (petroleum), hydrotreated heavy paraffinic***	265-157-1***	01-2119484627-25	64742-54-7	3-<5	Asp. Tox. 1 (H304)
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based***	276-738-4***	01-2119474889-13	72623-87-1	3-<5	Asp. Tox. 1 (H304)

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Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based***	276-737-9***	01-2119474878-16	72623-86-0	3-<5	Asp. Tox. 1 (H304)
bis(nonylphenyl)amine***	253-249-4***	01-2119488911-28	36878-20-3	1-<2.5	Aquatic Chronic 4 (H413)
C14-16-18 Alkyl phenol***	-	01-2119498288-19	^	0.1-<0.3	STOT RE 2 (H373) Skin Sens. 1B (H317)***

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	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing.***
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before reuse.***
Inhalation	remove casualty to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration.***
Ingestion	Clean mouth with water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or Poison Control Center immediately.***
Protection of First-aiders	First aider needs to protect himself. See Section 8 for more detail. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.***

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

Eye contact	Not classified based on available data.***
Skin contact	Not classified based on available data. May produce an allergic reaction.***
Inhalation	Not classified based on available data. Inhalation of vapors in high concentration may cause irritation of respiratory system.***
Ingestion	Not classified based on available data. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.***

4.3. Indication of any immediate medical attention and special treatment needed

Notes to physician Treat symptomatically.***

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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

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. Phosphorous oxides. Nitrogen oxides (NOx). Zinc oxides.***

5.3. Advice for fire-fighters

Special protective equipment for fire-fighters Wear self-contained breathing apparatus and protective suit.

Other 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

General Information 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. Prevent entry into waterways, sewers, basements or confined areas. Local authorities should be advised if significant spillages cannot be contained.***

6.3. Methods and material for containment and cleaning up

Methods for containment Dike to collect large liquid spills. If necessary dike the product with dry earth, sand or similar non-combustible materials.***

Methods for cleaning up Dispose of contents/container in accordance with local regulation. In case of soil contamination, remove contaminated soil for remediation or disposal, in accordance with local regulations.***

6.4. Reference to other sections

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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 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.***

Hygiene measures Ensure the application of strict rules of hygiene by the personnel exposed to the risk of contact with the product. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product. Regular cleaning of equipment, work area and clothing is recommended. 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

Technical measures/Storage conditions Keep away from food, drink and animal feedingstuffs. Keep in a banded area. Keep container tightly closed. 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). Design the installations in order to avoid accidental emissions of product (due to seal breakage, for example) onto hot casings or electrical contacts. Store at room temperature. Protect from moisture.***

Materials to Avoid Strong oxidizing agents.***

7.3. Specific end uses

Specific use(s) Please refer to Technical Data Sheet for further information.***

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

Derived No Effect Level (DNEL) ***

DNEL Worker (Industrial/Professional)***

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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/m ³ /8h (aerosol - inhalation)
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based*** 72623-87-1				5.4 mg/m ³ /8h (aerosol - inhalation)
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based*** 72623-86-0				5.4 mg/m ³ /8h (aerosol - inhalation)
bis(nonylphenyl)amine*** 36878-20-3			0.62 mg/kg bw/day Dermal 4.37 mg/m ³ Inhalation	
C14-16-18 Alkyl phenol*** ^			1.17 mg/m ³ (inhalation) 0.30 mg/kg bw/day (dermal)	

DNEL Consumer***

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/m ³ /24h (aerosol - inhalation)
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based*** 72623-87-1				1.2 mg/m ³ /24h (aerosol - inhalation)
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based*** 72623-86-0				1.2 mg/m ³ /24h (inhalation -aerosol)
bis(nonylphenyl)amine*** 36878-20-3			0.31 mg/kg bw/day Dermal 1.09 mg/m ³ Inhalation 0.31 mg/kg bw/day Oral	

Predicted No Effect Concentration (PNEC) ***

Chemical Name	Water	Sediment	Soil	Air	STP	Oral
Lubricating oils (petroleum), C20-50,						9.33 mg/kg food

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hydrotreated neutral oil-based*** 72623-87-1						
bis(nonylphenyl)amine*** 36878-20-3	0.1 mg/l fw 0.01 mg/l mw 1 mg/l or	132000 mg/kg dw fw 13200 mg/kg dw mw	263000 mg/kg dw		1 mg/l	
C14-16-18 Alkyl phenol*** ^	0.100 mg/l (fw) 0.010 mg/l (mw) 1 mg/ (or)	4266.16 mg/kg sediment dw (fw) 426.62 mg/kg sediment dw (mw)	852.58 mg/kg soil dw		100 mg/l	

8.2. Exposure controls

Occupational Exposure Controls

Engineering Measures

Apply technical measures to comply with the occupational exposure limits. Ensure adequate ventilation, especially in confined areas. 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

Protective engineering solutions should be implemented and in use before personal protective equipment is considered. The personal protective equipment (PPE) recommendations apply to the product ITSELF. In case of mixtures or formulations, it is suggested that you contact the relevant PPE suppliers.***

Respiratory protection

None under normal use conditions. 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. Warning ! filters have a limited use duration. 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. EN 166.***

Skin and body protection

Wear suitable protective clothing. Protective shoes or boots. Long sleeved clothing. Type 4/6.***

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. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.***

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Environmental exposure controls

General Information

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

Appearance		limpid***	
Color		green***	
Physical State @20°C		liquid***	
Odor		Characteristic***	
Odor Threshold		No information available	
<u>Property</u>	<u>Values</u>	<u>Remarks</u>	<u>Method</u>
pH		Not applicable***	
Melting point/range		No information available	
Boiling point/boiling range		No information available***	
Flash point ***	230*** °C*** 446*** °F***		Cleveland Open Cup (COC)*** Cleveland Open Cup (COC)***
Evaporation rate		No information available***	
Flammability Limits in Air		***	
upper ***	***	No information available***	***
Lower ***	***	No information available***	***
Vapor Pressure		No information available***	
Vapor density		No information available***	
Relative density ***	*** 0.836***	@ 15 °C ***	ISO 12185 ***
Density	836*** kg/m ³ ***	@ 15 °C***	ISO 12185***
Water solubility		Insoluble***	
Solubility in other solvents		No information available***	
logPow		No information available***	
Autoignition temperature		No information available***	
Decomposition temperature		No information available	
Viscosity, kinematic ***	*** 38*** mm ² /s***	@ 40 °C***	ASTM D445***
Explosive properties	Not explosive***		
Oxidizing Properties	Not applicable***		
Possibility of hazardous reactions	None under normal processing***		

9.2. Other information

Freezing Point

No information available

Section 10: STABILITY AND REACTIVITY

10.1. Reactivity

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General Information None under normal processing.***

10.2. Chemical stability

Stability Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

Hazardous Reactions No dangerous reaction known under conditions of normal use.***

10.4. Conditions to avoid

Conditions to avoid Keep away from open flames, hot surfaces and sources of ignition. Keep away from heat and sparks.***

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. Phosphorous oxides. Nitrogen oxides (NOx). Zinc oxides.***

Section 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity Local effects Product Information

Skin contact . Not classified based on available data. May produce an allergic reaction.***

Eye contact . Not classified based on available data.***

Inhalation . Not classified based on available data. Inhalation of vapors in high concentration may cause irritation of respiratory system.***

Ingestion . Not classified based on available data. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.***

ATEmix (inhalation-dust/mist) 5.80*** mg/l***

Acute toxicity - Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Dec-1-ene, trimers, hydrogenated***	LD50 > 5000 mg/kg (rat - OECD 401)	LD50 > 3000 mg/kg (rat - OECD 402)	LC50 (4h) 1.17 mg/l (rat - vapour - OECD 403) LC50 (4h) 0.9 mg/l (rat - vapour -

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			OECD 403 LC50 (4h) 1.4 mg/l (rat - vapour - OECD 403)
Distillates (petroleum), hydrotreated heavy paraffinic***	LD50 > 5000 mg/kg bw (rat - OECD 420)	LD50 > 5000 mg/kg bw (rabbit - OECD 402)	LC50 (4h) > 5 mg/l (aerosol) (rat - OECD 403)
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based***	LD50 > 5000 mg/kg bw (rat - OECD 401)	LD50 > 5000 mg/kg bw (rabbit - OECD 402)	LC50 (4h) > 5 mg/l (aerosol) (rat - OECD 403)
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based***	LD50 > 5000 mg/kg bw (Rat - OECD TG 401)	LD50 > 2000 mg/kg (Rabbit - OECD 402)	LD50 (4h) > 5.53 mg/l (Rat - OECD 403)
bis(nonylphenyl)amine***	LD50 > 5000 mg/kg (Rat - OECD 401)	LD50 > 2000 mg/kg (Rat - OECD 402)	
C14-16-18 Alkyl phenol***	LD50 2000 mg/kg bw (rat)	LD50 2000 mg/kg bw (rat)	

Sensitization

Sensitization

Not classified based on available data. Contains sensitizer(s). May produce an allergic reaction.***

Specific effects

Carcinogenicity

Not classified based on available data. 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

Germ Cell Mutagenicity

Not classified based on available data.***

Reproductive toxicity

Not classified based on available data.***

Repeated Dose Toxicity

Target Organ Effects (STOT)

Target Organ Effects (STOT)

Not classified based on available data.***

Specific target organ systemic toxicity (single exposure)

Not classified based on available data.***

Specific target organ systemic toxicity (repeated exposure)

Not classified based on available data.***

Aspiration toxicity

Not classified based on available data.***

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



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Not classified based on available data.***

Acute aquatic toxicity - Product Information***

No information available.***

Acute aquatic toxicity - Component Information

Chemical Name	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates	Toxicity to fish	Toxicity to microorganisms
Dec-1-ene, trimers, hydrogenated*** 157707-86-3	EL50 (72h) > 1000 mg/l (Scenedesmus capricornutum - OECD 201) NOELR (72h) 1000 mg/l (Scenedesmus capricornutum - OECD 201)	EL50 (48h) > 150 mg/l (Daphnia magna) LL50 (96h) > 5002 ppm (Americamysis bahia - OECD 202)	LL50 (96h) > 1000 mg/l (Oncorhynchus mykiss)	
Distillates (petroleum), hydrotreated heavy paraffinic*** 64742-54-7	EL50 (48h) > 100 mg/l (Pseudokirchnerella subcapitata - OECD 201)	EL50 (48h) > 10000 mg/l (Daphnia magna - OECD 202)	LL50 (96h) > 100 mg/l (Oncorhynchus mykiss - OECD 203)	
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based*** 72623-87-1	EL50 (48h) > 100 mg (Pseudokirchnerella subcapitata - OECD 201)	EL50 (48h) > 10000 mg/l (Daphnia magna - OECD 202) LL50 (24h) > 10000 mg/l (Gammarus pulex - OECD 202) LL50 (48h) > 10000 mg/l (Gammarus pulex - OECD 202) LL50 (72h) > 10000 mg/l (Gammarus pulex - OECD 202) LL50 (96h) > 10000 mg/l (Gammarus pulex - OECD 202)	LL50 (96h) > 100 mg/l (Oncorhynchus mykiss - OECD 203)	
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based*** 72623-86-0		EL50(48h) > 1000 mg/l (OECD TG 202)***	LL50 (96h) > 100 mg/l (OECD TG 203)	
bis(nonylphenyl)amine*** 36878-20-3	EC50 (72h) > 100 mg/l (Desmodesmus subspicatus - OECD 201)	EC50 (48h) > 100 mg/l (Daphnia magna - OECD 202)	LC50 (96h) > 100 mg/l (Brachyanio rerio - OECD 203)	
C14-16-18 Alkyl phenol*** ^		EC50(48h) > 100 mg/l (Daphnia magna - static - OECD202)		

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
Dec-1-ene, trimers,	NOELR (72h) 1000 mg/l	NOELR (21d) 125 mg/l	NOELR (96h) 1000 mg/l	

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hydrogenated*** 157707-86-3	(Scenedesmus capricornutum - OECD 201)	(Daphnia magna - OECD 211) NOELR (96h) 5002 ppm (Americamysis bahia - OECD 202)	(Oncorhynchus mykiss)	
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)	
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based*** 72623-87-1	NOEL (72h) >= 100 mg/l (Pseudokirchnerella subcapitata - OECD 201)	NOEL (21d) 10 mg/l (Daphnia magna - OECD 211)	NOEL (14/28d) > 1000 mg/l (Oncorhynchus mykiss - QSAR Petrotox) NOEL (96h) > 100 mg/l (Pimephales promelas - OECD 203)	
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based*** 72623-86-0		NOEL (21d) = 10 mg/l (OECD TG 202)	NOELR (14d) > 1000 mg/l (QSAR modelled data)	

Effects on terrestrial organisms

No information available.***

12.2. Persistence and degradability

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	-
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based*** - 72623-87-1	4.1
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based*** - 72623-86-0	6.1
bis(nonylphenyl)amine*** - 36878-20-3	7.7

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

The product is insoluble and floats on water.***

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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.***

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

EWC Waste Disposal No. 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. The following Waste Codes are only suggestions: 13 02 06.***

Other information Refer to section 8 for safety and protective measures for disposal personnel.***

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

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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

H304 - May be fatal if swallowed and enters airways

H317 - May cause an allergic skin reaction

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

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

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+	Sensitizer	*	Skin designation
**	Hazard Designation	C:	Carcinogen
M:	Mutagen	R:	Toxic to reproduction

Revision Date: 2017-09-13

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