

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

SDS # : 33194

TRANSELF UNIVERSAL FE 80W-90

Date of the previous version: 207	16-05-02 Revisio	on Date: 2016-12-29	Version 4.01	
Section 1: IDENTIFICATIO COMPANY/UNDERTAKING		MIXTURE AND OF THE		
1.1. Product identifier				
Product name Number Substance/mixture	TRANSELF UNIVERSAL FE HGH Mixture	80W-90		
1.2. Relevant identified uses of the substance or mixture and uses advised against				
Identified uses	Transmission fluid.			
1.3. Details of the supplie	er of the safety data she	et_		
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 - 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



TRANSELF UNIVERSAL FE 80W-90

Revision Date: 2016-12-29

Version 4.01

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

Hazard Statements None

Precautionary Statements None

Supplemental Hazard Statements EUH210 - Safety data sheet available on request

EUH208 - Contains Polysulfides, di-tert-Bu, Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14- tert-alkyl May produce an allergic reaction

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

Hazardous ingredients

Chemical Name	EC-No	REACH registration No	CAS-No	Weight %	Classification (Reg. 1272/2008)
Polysulfides, di-tert-Bu	273-103-3***	01-2119540515-43	68937-96-2	3-<5	Skin Sens. 1 (H317) Aquatic Chronic 3 (H412)
Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14- tert-alkyl***	931-384-6***	01-2119493620-38	٨	1-<2.5	Acute Tox. 4 (H302) Aquatic Chronic 2 (H411) Eye Dam. 1 (H318) Skin Sens. 1 (H317)
Distillates (petroleum), hydrotreated heavy paraffinic***	265-157-1***	01-2119484627-25	64742-54-7	1-<3	Asp. Tox. 1 (H304)
Lubricating oils (petroleum),	276-737-9***	01-2119474878-16	72623-86-0	1-<2	Asp. Tox. 1 (H304)



TRANSELF UNIVERSAL FE 80W-90

Revision Date: 2016-12-29

Version 4.01

C15-30, hydrotreated neutral oil-based					
O,O,O-triphenyl	209-909-9***	no data available	597-82-0	0.3-<1	Repr. 2 (H361)
phosphorothioate***					Aquatic Chronic 4 (H413)

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 skin with soap and water. Wash contaminated clothing before reuse. High pressure jets may cause skin damage. In this case, the casualty should be sent immediately to hospital.			
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 sympt	oms and effects, both acute and delayed			
Eye contact	Not classified. The supplier of some components contained within this formulation has indicated that the classification as irritant is not required.			
Skin contact	Not classified. May produce an allergic reaction.			
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 any immediate medical attention and special treatment needed				

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.



TRANSELF UNIVERSAL FE 80W-90

	Revision Date: 2016-12-29	Version 4.01
Unsuitable Extinguishing Media	Do not use a solid water stream as it may scatter and spread fire.	
5.2. Special hazards arisi	ng from the substance or mixture	
Special Hazard	Incomplete combustion and thermolysis may produce gases of varyin carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes a be highly dangerous if inhaled in confined spaces or at high concentrations.	ind soot. These may
5.3. Advice for fire-fighter	<u>S</u>	
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 contamina water must be disposed of in accordance with local regulations.	ated fire extinguishing
Section 6: ACCIDENTAL RE	ELEASE MEASURES	
6.1. Personal precautions	, protective equipment and emergency procedures	
General Information	Do not touch or walk through spilled material. Contaminated surfaces slippery. Use personal protective equipment. Ensure adequate ventila sources of ignition.	
6.2. Environmental precau	utions	
General Information	Do not allow material to contaminate ground water system. Try to pre entering drains or water courses. Local authorities should be advised cannot be contained.	
6.3. Methods and materia	I for containment and cleaning up	
Methods for cleaning up	Dam up. Contain spillage, and then collect with non-combustible absorband, earth, diatomaceous earth, vermiculite) and place in container f to local / national regulations (see section 13). Keep in suitable, close disposal.	or disposal according
6.4. Reference to other se	ections	
Personal Protective Equipment	See Section 8 for more detail.	
Waste treatment	See section 13.	
Section 7: HANDLING AND	STORAGE	
7.1. Precautions for safe I	nandling	
Advice on safe handling	When using, do not eat, drink or smoke. For personal protection see	section 8. Use only in



TRANSELF UNIVERSAL FE 80W-90

	Revision Date: 2016-12-29	Version 4.01
	well-ventilated areas. Do not breathe vapors or spray mist. Avoid contact and clothing.	with skin, eyes
Prevention of fire and explosion	Take precautionary measures against static discharges. Ground/bond co and transfer/receiving equipment.	ntainers, tanks
Hygiene measures	Ensure the application of strict rules of hygiene by the personnel expose contact with the product. Regular cleaning of equipment, work area and or recommended. Wash hands before breaks and immediately after handlir not use abrasives, solvents or fuels. Do not dry hands with rags that have contaminated with product. Do not put product contaminated rags into we	clothing is ig the product. Do e been
7.2. Conditions for safe st	orage, including any incompatibilities	
Technical measures/Storage conditions	Keep away from food, drink and animal feedingstuffs. Keep in a bunded container tightly closed. Keep preferably in the original container. Otherw indication of the regulation label on the new container. Do not remove the the containers (even if they are empty). Design the installations in order t emissions of product (due to seal breakage, for example) onto hot casing contacts. Protect from frost, heat and sunlight. Protect from moisture.	vise reproduce all e hazard labels of o avoid accidental
Materials to Avoid	Strong oxidizing agents.	
7.3. Specific end uses		
Specific use(s)	No information available.	
Section 8: EXPOSURE CON	TROLS/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
Polysulfides, di-tert-Bu 68937-96-2			14.5 mg/m ³ Inhalation 3.33 mg/kg bw/day	
00007 00 2			Dermal	
Reaction products of			12.5 mg/kg/8h (dermal)	
4-methyl-2-pentanol and			8.56 mg/m ³ /8h	
diphosphorus			(inhalation)	
pentasulfide,			(ECHA CHEM)	
propoxylated, esterified				



TRANSELF UNIVERSAL FE 80W-90

Revision Date: 2016-12-29

Version 4.01

			5.4 mg/m ³ /8h (aerosol -
			inhalation)
			initialationy
			5.4 mg/m ³ /8h (aerosol -
			inhalation)
• •	Short term, local effects		Long term, local effects
effects			
		6.25 mg/kg/24h (dermal)	
		2.2 mg/m³/24h	
		(inhalation)	
		0.25 mg/kg/24h (oral)	
		(ECHA CHEM)	
			1.2 mg/m ³ /24h (aerosol -
			inhalation)
			1.2 mg/m ³ /24h (inhalation
			-aerosol)
	Short term, systemic effects		effects effects 2.6 mg/m³ Inhalation 1.66 mg/kg bw/day Dermal 6.25 mg/kg/24h (dermal) 2.2 mg/m³/24h (inhalation) 0.25 mg/kg/24h (oral) 0.25 mg/kg/24h (oral)

Predicted No Effect Concentration

(PNEC)

Chemical Name	Water	Sediment	Soil	Air	STP	Oral
Polysulfides,	0.00024 mg/l fw	0.94 mg/kg dw fw	1513 mg/kg dw		4.51 mg/l	6.66 mg/kg
di-tert-Bu	0.000024 mg/l	0.094 mg/kg dw			-	
68937-96-2	mw	mw				
	0.0024 mg/l or					
Reaction products	0.0012 mg/l fw	3.13 mg/kg fw	2.54 mg/kg soil		24.33 mg/l	10 mg/kg food
of	0.00012 mg/l mw	0.313 mg/kg mw	dw		-	
4-methyl-2-pentanol	0.064 mg/ or					
and diphosphorus	_					



TRANSELF UNIVERSAL FE 80W-90

Revision Date: 2016-12-29

Version 4.01

pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14- tert-alkyl*** ^					
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.				
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

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 Color Physical State @20°C Odor limpid No information available liquid Characteristic

Version EU



TRANSELF UNIVERSAL FE 80W-90

Revision Date: 2016-12-29

Version 4.01

Odor Threshold		No information available		
<u>Property</u> pH Melting point/range	Values_	<u>Remarks</u> Not applicable No information available	<u>Method</u>	
Boiling point/boiling range		No information available		
Flash point		Not applicable		
Evaporation rate Flammability Limits in Air		No information available No information available		
upper Lower Vapor Pressure Vapor density Relative density Density Water solubility Solubility in other solvents logPow Autoignition temperature Decomposition temperature Viscosity, kinematic Explosive properties Oxidizing Properties Possibility of hazardous reactions 9.2. Other information	0.876 - 0.886 876 - 886 kg/m ³ 120.6 - 129.4 mm2/s 14 - 18 mm2/s Not explosive Not applicable No information available	No information available No information available No information available @ 15 °C @ 15 °C Insoluble No information available No information available No information available No information available @ 40 °C @ 100 °C	ISO 12185 ISO 12185 ISO 3104 ISO 3104	
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 recommend	ded storage conditions.		
10.3. Possibility of hazardous reactions				
Hazardous Reactions	None under normal proc	essing.		
10.4. Conditions to Avoid				



TRANSELF UNIVERSAL FE 80W-90

 Revision Date:
 2016-12-29
 Version
 4.01

 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
 None under normal use. 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 Eye contact	 Not classified. May produce an allergic reaction. Not classified. The supplier of some components contained within this formulation has indicated that the classification as irritant is not required.
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)	72,998.00 mg/kg
ATEmix (dermal)	60,096.00 mg/kg
ATEmix (inhalation-dust/mist) ATEmix (inhalation-vapor)	121.30 mg/l 1,182.40 mg/l

Acute toxicity - Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide,	LD50 2000 mg/kg bw (Rat - OECD TG 401)		-
propoxylated, esterified with diphosphorus			
pentaoxide, and salted by amines, C12-14- tert-alkyl***			
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), 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)

Sensitization

Sensitization

Not classified as a sensitizer. Contains sensitizer(s). May produce an allergic reaction. The supplier of one of the components contained within this formulation has indicated that they have data, which confirms that at the concentration used, no sensitisation classification is required .



TRANSELF UNIVERSAL FE 80W-90

	Revision Date	2016-12-29	Version	4.01
Specific effects				
Carcinogenicity Mutagenicity	This product is not classifie	0		
Reproductive toxicity	This product is not classified as mutagenic. This product does not present any known or suspected reproductive hazards.			
Chemical Na		European Union		
O,O,O-triphenyl phospl 597-82-0	yl phosphorothioate*** Repr. 2 (H361) 597-82-0			
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 I	NFORMATION			

12.1. Toxicity

Not classified.

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
Polysulfides, di-tert-Bu 68937-96-2	EC50 (72h) > 100 mg/l (Alga)	EC50 (48h) 63 mg/l (Daphnia magna)		
Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14- tert-alkyl*** ^	EL50 (96h) > 15 mg (Selenastrum capricornutum - OECD 201)	EL50 (48h) ca. 91.4 mg/l (Daphnia magna - OECD 202)	LL50 (96h) ca. 24 mg/l (Oncorhynchus mykiss - OECD 203)	



TRANSELF UNIVERSAL FE 80W-90

Revision Date: 2016-12-29

Version 4.01

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				
Lubricating oils (petroleum),		EL50 (48h) > 10000 mg/l	LL50 (96h) > 100 mg/l	
C15-30, hydrotreated neutral		(OECD TG 202)	(OECD TG 203)	
oil-based				
72623-86-0				

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
Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14- tert-alkyl***	NOEC (96h) 1.7 mg/l (Pseudokirchnerella subcapitata - OECD 201) par NOEC (96h) 3.3 mg/l (Pseudokirchnerella subcapitata - OECD 201)	EL50 (21d) 0.91 mg/l (Daphnia magna - OECD 211) NOEL (21d) 0.12 mg/l (Daphnia magna - OECD 211) EL50 (21d) 0.66 mg/l (Daphnia magna - OECD 211)	-	EC50 (3h) ca. 2433 mg/L (Activated Sludge, domestic - OECD TG 209) (ECHA CHEM)
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), 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
Polysulfides, di-tert-Bu - 68937-96-2	6
Reaction products of 4-methyl-2-pentanol and diphosphorus	< 0.30 to >7.10 (OECD TG 117) (ECHA CHEM)
pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and	



TRANSELF UNIVERSAL FE 80W-90

Revision Date: 2016-12-29

Version 4.01

salted by amines, C12-14-	tert-alkvl*** - ^		
Distillates (petroleum), hydrotreated hea	avy paraffinic*** - 64742-54-7	-	
Lubricating oils (petroleum), C15-30, hy 72623-86-0	drotreated neutral oil-based -	6.1	
12.4. Mobility in soil			
Soil	Given its physical and chemical characteristics, the product generally shows low soil mobility.		
Air	Loss by evaporation is lim	ited.	
Water	Insoluble. The product spreads on the surface of the water.		
12.5. Results of PBT and v	PvB assessment		
PBT and vPvB assessment	No information available.		
12.6. Other adverse effect	S		
General Information	No information available.		
Section 13: DISPOSAL CON	SIDERATIONS		
13.1. Waste treatment me	thods		
Waste from Residues / Unused Products	Should not be released into the environment. 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.		
EWC Waste Disposal No.	The following Waste Codes are only suggestions:. 13 02 05. 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



TRANSELF UNIVERSAL FE 80W-90

Revision Date: 2016-12-29

Version 4.01

ADN

Not regulated

Section 15: REGULATORY INFORMATION

<u>15.1.</u> 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

H302 - Harmful if swallowed

- H304 May be fatal if swallowed and enters airways
- H317 May cause an allergic skin reaction
- H318 Causes serious eye damage

H361 - Suspected of damaging fertility or the unborn child if inhaled

H411 - Toxic to aquatic life with long lasting effects

H412 - Harmful to aquatic life with long lasting effects

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



TRANSELF UNIVERSAL FE 80W-90

Revision Date: 2016-12-29

Version 4.01

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 weightfw = 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 R٠ Toxic to reproduction

 Revision Date:
 2016-12-29

 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