

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

SDS #: 31202 HBF 4

Date of the previous version: 2018-04-23 Revision Date: 2018-05-18 Version 6.04

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

COMPANY/UNDERTAKING

# 1.1. Product identifier

Product name HBF 4
Number 467
Substance/mixture Mixture\*\*\*

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

Identified uses Brake fluid.\*\*\*

1.3. Details of the supplier of the safety data sheet

Supplier A - TOTAL UK LIMITED

183 Eversholt St, Kings Cross

London, NW1 1BU
UNITED KINGDOM
Tel: +44 (0)20 7339 8000

Tel: +44 (0)20 7339 8000 Fax: +44 (0)20 7339 8033

B - 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 A - HSE

B - HSE\*\*\*

E-mail Address A - rm.gb-msds@total.co.uk

B - rm.msds-lubs@total.com\*\*\*

## 1.4. Emergency telephone number

Emergency telephone: +44 1235 239670

UK: National Poisons Information Service (NPIS): NHS on 111 or a doctor

# 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\*\*\*

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 components \*

Chemical Name	EC-No	REACH Registration Number	CAS-No	Weight %	Classification (Reg. 1272/2008)
Triethylene glycol, monobutyl ether***	205-592-6	no data available	143-22-6	10-<20	Eye Dam. 1 (H318)
2,2'-oxydiethanol***	203-872-2	01-2119457857-21	111-46-6	5-<10	Acute Tox. 4 (H302) STOT RE 2 (H373)
Diethylene glycol monomethyl ether***	203-906-6	01-2119475100-52**	111-77-3	1-<3	Repr. 2 (H361d)
-(2-butoxyethoxy)ethanol***	203-961-6	01-2119475104-44	112-34-5	1-<3	Eye Irrit. 2 (H319)

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



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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. High pressure jets may

cause skin damage. Take victim immediately to hospital.\*\*\*

**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 centre 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. The supplier of one or more of the components

contained within this formulation has indicated that he has data on the components and/or similar mixtures, which confirms that at the concentration used, eye damage classification is not required. The supplier of some components contained within this formulation has

indicated that the classification as irritant is not required.\*\*\*

**Skin contact**Not classified based on available data. High pressure injection of the products under the

skin may have very serious consequences even though no symptom or injury may be

apparent.\*\*\*

Inhalation Not classified based on available data. Inhalation of vapours in high concentration may

cause irritation of respiratory system.\*\*\*

Ingestion Not classified based on available data. Ingestion may cause gastrointestinal irritation,

nausea, vomiting and diarrhoea.\*\*\*

# 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



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Suitable extinguishing media Alcohol-resistant foam. Dry powder. Carbon dioxide (CO<sub>2</sub>). 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.\*\*\*

5.3. Precautions 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. See Section 12 for additional Ecological Information.\*\*\*

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

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



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Advice on safe handling

For personal protection see section 8. Use only in well-ventilated areas. Do not breathe

vapours 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. Provide regular cleaning of equipment, work area and clothing. 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 bunded area. Keep container tightly closed. Preferably keep in the original container. Otherwise, reproduce all the statutory information from the labels onto 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 oxidising agents.\*\*\*

7.3. Specific use(s)

Specific use(s)

Please refer to Technical Data Sheet for further information.\*\*\*

# Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

## 8.1. Control parametres

## **Exposure limits**

Components with workplace control parametres

Chemical Name	European Union	The United Kingdom	Ireland
2,2'-oxydiethanol***		STEL 69 ppm	TWA 23 ppm
111-46-6		STEL 303 mg/m <sup>3</sup>	TWA 100 mg/m <sup>3</sup>
		TWA 23 ppm	STEL 69 ppm
		TWA 101 mg/m <sup>3</sup>	STEL 300 mg/m <sup>3</sup>
Diethylene glycol monomethyl	TWA 10 ppm	STEL 30 ppm	TWA 10 ppm
ether***	TWA 50.1 mg/m <sup>3</sup>	STEL 150.3 mg/m <sup>3</sup>	TWA 50.1 mg/m <sup>3</sup>
111-77-3	S*	TWA 10 ppm	STEL 30 ppm
		TWA 50.1 mg/m <sup>3</sup>	STEL 150.3 mg/m <sup>3</sup>
		S*	Skin
2-(2-butoxyethoxy)ethanol***	TWA 10 ppm	STEL 15 ppm	TWA 10 ppm
112-34-5	TWA 67.5 mg/m <sup>3</sup>	STEL 101.2 mg/m <sup>3</sup>	TWA 67.5 mg/m <sup>3</sup>
	STEL 15 ppm	TWA 10 ppm	STEL 15 ppm
	STEL 101.2 mg/m <sup>3</sup>	TWA 67.5 mg/m <sup>3</sup>	STEL 101.2 mg/m <sup>3</sup>

Legend See section 16

Derived No Effect Level (DNEL) \*\*\*



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DNEL Worker (Industrial/Professional)\*\*\*

Chemical Name	Short term, systemic effects	Short term, local effects	Long term, systemic effects	Long term, local effects
2,2'-oxydiethanol*** 111-46-6			60 mg/m³ (inhalation) 106 mg/kg bw/day (dermal)	60 mg/m³ (inhalation)
2-(2-butoxyethoxy)ethano  *** 112-34-5		101.2 mg/m³ Inhalation	20 mg/kg bw/day Dermal 67.5 mg/m³ Inhalation	67.5 mg/m³ Inhalation

#### **DNEL Consumer\*\*\***

Chemical Name	Short term, systemic effects	Short term, local effects	Long term, systemic effects	Long term, local effects
2,2'-oxydiethanol***			12 mg/m³ (inhalation)	12 mg/m³ (inhalation)
111-46-6			53 mg/kg bw/day	
			(dermal)	
2-(2-butoxyethoxy)ethano		50.6 mg/m3 Inhalation	10 mg/kg bw/day Dermal	34 mg/m³ Inhalation
l***		_	34 mg/m³ Inhalation	_
112-34-5			1.25 mg/kg bw/day Oral	

Predicted No Effect Concentration (PNEC)

Chemical Name	Water	Sediment	Soil	Air	STP	Oral
2-(2-butoxyethoxy)e	1 mg/l fw	4 mg/kg fw dw	0.4 mg/kg dw		200 mg/l	56 mg/kg food
thanol***	0.1 mg/ mw	0.4 mg/kg mw dw				
112-34-5	3.9 mg/l or					

## 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 AS DELIVERED. 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/P2. 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:. Tightly fitting safety goggles. or. Face-shield. EN

166.\*\*\*

Skin and body protection Wear suitable protective clothing. Protective shoes or boots. Long sleeved clothing. Type

4/6.\*\*\*



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#### Hand protection

Butyl rubber. Nitrile rubber. Polyvinylchloride. 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.\*\*\*

#### **Environmental exposure controls**

**General Information** 

**Appearance** 

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

Clear\*\*\*

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

# 9.1. Information on basic physical and chemical properties

Colour Physical state @20°C		colourless to amber*** liquid***	
Odour		slight***	
Odour Threshold		No information available***	
Property	<u>Values</u>	Remarks	<u>Method</u>
рН	7.0*** -*** 11.50***	***	SAE J 1703***
Melting point/range	<*** -50*** °C***	***	SAE J 1703***
	<*** -58*** °F***		SAE J 1703***
Boiling point/boiling range	>*** 260*** °C***	***	SAE J 1703***
	>*** 500*** °F***		SAE J 1703***
Flash point	>*** 120*** °C***	***	IP 35***
	>*** 248*** °F***		IP 35***
Evapouration rate		No information available***	
Flammability Limits in Air		***	
		No Cofessor Comments of the Nation	***
Upper ***		No information available***	***
Lower ***	*** 0.0*** 1.0- 0.00	No information available***	
Vapour pressure	<*** 0.2*** kPa @ 20 °C***		Reid***
Vapour density		No information available***	
Relative density	0.103*** -*** 0.109***	@ 20 °C***	DIN 51757***
Density	1.030*** - *** 1.090*** kg/m <sup>3***</sup>	@ 20 °C***	DIN 51757***
Water solubility		soluble***	
Solubility in other solvents		No information available***	
logPow	<*** 2.0***	***	OECD 117***
Autoignition temperature	>*** 300*** °C***	***	ASTM D 286***
***	>*** 572*** °F***	***	ASTM D 286***
Decomposition temperature	>*** 300*** °C***	***	***
Viscosity, kinematic	5*** -*** 10***	@ 20 °C***	



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mm2/s\*\*\* ASTM D 445\*\*\*

Explosive properties
Oxidising properties
Not explosive\*\*\*
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

General Information None under normal processing.\*\*\*

10.2. Chemical stability

Stability Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions May form explosive peroxides.\*\*\*

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 oxidising agents.\*\*\*

10.6. Hazardous Decomposition Products

Hazardous Decomposition Products None known based on information supplied. 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 based on available data. High pressure injection of the products under the

skin may have very serious consequences even though no symptom or injury may be

apparent.\*\*\*



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Eye contact

. Not classified based on available data. The supplier of one or more of the components contained within this formulation has indicated that he has data on the components and/or similar mixtures, which confirms that at the concentration used, eye damage classification is not required. The supplier of some components contained within this formulation has indicated that the classification as irritant is not required.\*\*\*

Inhalation

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

Ingestion

. Not classified based on available data. Ingestion may cause gastrointestinal irritation,

nausea, vomiting and diarrhoea.\*\*

ATEmix (oral)

>= 5000\*\*\* mg/kg\*\*\*

ATEmix (dermal)

=> 3000\*\*\* mg/kg\*\*\*

#### Acute toxicity - Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Triethylene glycol, monobutyl ether***	= 5300 mg/kg (Rat)	= 3480 mg/kg ( Rabbit )	
2,2'-oxydiethanol***		LD50 13300 mg/kg bw (rabbit)	LC50 (4h) > 4.6 mg/l (rat -
			aerosol)
Diethylene glycol monomethyl ether***	= 4 mL/kg ( Rat )	= 2500 μL/kg (Rabbit)	
2-(2-butoxyethoxy)ethanol***	LD50 5500 mg/kg (Rat)	LD50 2201 mg/kg (Rabbit)	

## **Sensitisation**

Sensitisation Not classified based on available data.\*\*\*

Specific effects

Carcinogenicity Mutagenicity Not classified based on available data.\*\*\*

\*\*\*

Germ cell mutagenicity Not classified based on available data.\*\*\*

Reproductive toxicity Not classified based on available data. Contains toxic substance(s) listed as toxic to

reproduction.\*\*\*

Chemical Name	European Union
Diethylene glycol monomethyl ether***	Repr. 2 (H361d)
111-77-3	

## Repeated dose toxicity

## **Target Organ Effects (STOT)**

Specific target organ systemic toxicity (single exposure)

Not classified based on available data.\*\*\*

Specific target organ toxicity -

repeated exposure

Not classified based on available data.\*\*\*

Aspiration toxicity Not classified based on available data.\*\*\*



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Other information

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

exposures (contact with contaminated clothing).\*\*\*

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

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
Triethylene glycol, monobutyl ether*** 143-22-6	EC50 (72h) > 500 mg/L Desmodesmus subspicatus	EC50 (48h) > 500 mg/L Daphnia magna	LC50 (96h) 2200-4600 mg/L Leuciscus idus (static) LC50 (96h) = 2400 mg/L Pimephales promelas () LC50 (96h) = 2400 mg/L Pimephales promelas (static)	
2,2'-oxydiethanol*** 111-46-6	EC50 (96h) 9362 mg/l (green algae)	EC100 (24h) >10000 mg/l (Daphnia magna) EC50 (24h) >10000 mg/l (Daphnia magna)	LC50 (96h) 75200 mg/l (Pimephales promelas)	
Diethylene glycol monomethyl ether*** 111-77-3	EC50 (72h) > 500 mg/L Desmodesmus subspicatus	EC50 (48h) > 500 mg/L Daphnia magna	LC50 (96h) = 7500 mg/L Lepomis macrochirus (static) LC50 (96h) = 7500 mg/L Lepomis macrochirus () LC50 (96h) = 5741 mg/L Pimephales promelas ()	EC50 > 10000 mg/L 17 h
2-(2-butoxyethoxy)ethanol*** 112-34-5	EC50 (96h) > 100 mg/L Desmodesmus subspicatus	EC50 (48h) > 100 mg/L Daphnia magna EC50 (24h) = 2850 mg/L Daphnia magna	LC50 (96h) = 1300 mg/l (Lepomis macrochirus - static - OECD 203)	

# Chronic aquatic toxicity - Product Information

No information available.\*

# <u>Chronic aquatic toxicity - Component Information</u> No information available.\*\*\*

## Effects on terrestrial organisms

No information available.\*

# 12.2. Persistence and Degradability



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#### **General Information**

Readily biodegradable (100 % after 21 days).\*\*\*

## 12.3. Bioaccumulative potential

Product Information Does not bioaccumulate.\*\*\*

logPow <\*\*\* 2.0\*\*\* \*\*\*

Component Information

Chemical Name	log Pow
Triethylene glycol, monobutyl ether*** - 143-22-6	0.51
Diethylene glycol monomethyl ether*** - 111-77-3	0
2-(2-butoxyethoxy)ethanol*** - 112-34-5	0.56

## 12.4. Mobility in soil

**Soil** Given its physical and chemical characteristics, the product is generally mobile in the

ground.\*\*\*

Air Loss by evaporation is limited.\*\*\*

Water Forms an emulsion.\*\*\*

#### 12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment This product contains no substance considered as PBT and/or vPvB according to REACH

regulation annex XIII criteria.\*\*\*

#### 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 packageing 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:. 16 01

13 .\*\*\*

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



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## 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\*\*\*

15.3. National regulatory information

#### **The United Kingdom**

• Avoid exceeding occupational exposure limits (see section 8).

## <u>Ireland</u>

• Avoid exceeding occupational exposure limits (see section 8).

## Section 16: OTHER INFORMATION

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

H302 - Harmful if swallowed

H318 - Causes serious eye damage

H319 - Causes serious eye irritation

H361d - Suspected of damaging the unborn child

H373 - May cause damage to organs through prolonged or repeated exposure\*\*\*



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#### 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

+ Sensitiser \* Skin designation
\*\* Hazard Designation C: Carcinogen

M: Mutagen R: Toxic to reproduction

**Revision Date:** 2018-05-18

**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 Safety Data Sheet**