

MATERIAL SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

SDS #: 31280 HYDROFLO CT

Date of the previous version: 2013-03-19 Revision Date: 2013-09-27 Version 2.01

IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name HYDROFLO CT

Number L02 Pure substance/mixture Mixture

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

Identified uses Hydraulic oil, Antiwear.

1.3. Details of the supplier of the safety data sheet

Supplier TOTAL LUBRIFIANTS

562 Avenue du Parc de L'ile 92029 Nanterre Cedex Tél: +33 (0)1 41 35 40 00 Fax: +33 (0)1 41 35 84 71

For further information, please contact:

Contact Point HSI

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

1.4. Emergency telephone number

+33 1 49 00 00 49 (24h/24, 7d/7)

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)

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.

DIRECTIVE 67/548/EEC or 1999/45/EC

For the full text of the R-phrases mentioned in this Section, see Section 16



HYDROFLO CT

Revision Date: 2013-09-27 Version 2.01

The substance/mixture is classified as dangerous in accordance with Directive(s) 67/548/EEC with amendments and/or 1999/45/EC with amendments

Classification

R52-53

2.2. Label elements

Labelled according to

Directive 1999/45/EC

R-phrase(s)

R52/53 - Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment

S-phrase(s)

S61 - Avoid release to the environment. Refer to special instructions/safety data sheets

2.3. Other hazards

Physical-Chemical Properties

Contaminated surfaces will be extremely slippery.

Environmental properties

Should not be released into the environment.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixture

Chemical Name	EC-No	REACH registration No	CAS-No	Weight %	Classification (Dir. 67/548)	Classification (Reg. 1272/2008)
zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate)	224-235-5	01-2119493635-27	4259-15-8	<1	Xi;R41 N;R51-53	Aquatic Chronic 2 (H411) Eye Dam. 1 (H318)
2,6-di-tert-butylphenol	204-884-0	01-2119490822-33	128-39-2	<0.5	Xi;R38 N;R50-53	Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) Skin Irrit. 2 (H315)
Methyl methacrylate	201-297-1	no data available	80-62-6	<0.02	F;R11 Xi;R37/38 R43	STOT SE 3 (H335) Skin Irrit. 2 (H315) Skin Sens. 1 (H317) Flam Liq. 1 (H224)
toluene	203-625-9	01-2119471310-51	108-88-3	<0.015	F;R11 Xi;R38 Xn;R48/20-65 Repr.Cat.3;R63 R67	Flam. Liq. 2 (H225) Skin Irrit. 2 (H315) Repr. 2 (H361d) STOT SE 3 (H336) STOT RE 2 (H373) Asp. Tox. 1 (H304)

Additional information

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



HYDROFLO CT

Revision Date: 2013-09-27 Version 2.01

For the full text of the R-phrases mentioned in this Section, see Section 16

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

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. Inhalation of high concentrations of vapor or aerosols may cause irritation

of the upper respiratory tract.

Ingestion Rinse mouth. Do NOT induce vomiting.

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

Eye contact Not classified. Avoid contact with eyes.

Skin contact Not classified. Avoid contact with skin.

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.

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

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

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 No information available.



HYDROFLO CT

Revision Date: 2013-09-27 Version 2.01

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.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Do not touch or walk through spilled material. Keep people away from and upwind of

Use personal protective equipment. Avoid contact with skin, eyes and inhalation of vapors.

spill/leak. Contaminated surfaces will be extremely slippery.

Environmental precautions

General Information

Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Local authorities should be advised if significant spillages cannot be contained.

6.3. Methods and materials for containment and cleaning up

Methods for cleaning up

Dam up. Soak up with inert absorbent material. After cleaning, flush away traces with water. 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).

6.4. Reference to other sections

Personal Protective Equipment

See Section 8 for more detail.

Waste treatment

See section 13.

HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling

Wear personal protective equipment. Prevent the formation of vapors, mists and aerosols. Do not breathe vapors or spray mist. Use only in well-ventilated areas.

Version FU



HYDROFLO CT

Revision Date: 2013-09-27 Version 2.01

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. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and at the end of workday. Do not dry hands with rags that have been contaminated with product. Do not use abrasives, solvents or fuels. Do not put product contaminated rags into workwear pockets.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions

Keep out of the reach of children. Keep container tightly closed in a dry and well-ventilated place. Design the installations in order to avoid accidental emissions of product (due to seal breakage, for example) onto hot casings or electrical contacts. Keep away from food, drink and animal feedingstuffs. Keep in a bunded area. Protect from moisture. Store in original

container.

Materials to Avoid

Strong oxidizing agents.

7.3. Specific end uses

Specific use(s)

No information available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure limits

oil mist: 10mg/m³, for 15 minutes oil mist: 5mg/m³, for 8 hours

Chemical Name	European Union
Methyl methacrylate	STEL 100 ppm
80-62-6	TWA 50 ppm
toluene	TWA 50 ppm
108-88-3	TWA 192 mg/m ³
	STEL 100 ppm
	STEL 384 mg/m ³
	S*

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
zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) 4259-15-8			9.6 mg/kg bw/day Dermal 6.6 mg/m³ Inhalation	
2,6-di-tert-butylphenol 128-39-2			2.77 mg/kg bw/day Dermal 19.6 mg/m³ Inhalation	



HYDROFLO CT

Revision Date: 2013-09-27 Version 2.01

Methyl methacrylate 80-62-6		1.5 mg/cm ² Dermal	208 mg/m ³ Inhalation 13.67 mg/kg Dermal	208 mg/m³ Inhalation 1.5 mg/cm² Dermal
toluene 108-88-3	384 mg/m ³ (inhalation)	384 mg/m³ (inhalation)	192 mg/m³ (inhalation) 384 mg/kg bw/day (dermal)	192 mg/m ³ (inhalation)

			(40	
DNEL Consumer				
Chemical Name	Short term, systemic	Short term, local effects	Long term, systemic	Long term, local effects
	effects		effects	
zinc			4.8 mg/kg bw/day Dermal	
bis[O,O-bis(2-ethylhexyl)]			1.67 mg/m ³ Inhalation	
bis(dithiophosphate)			0.19 mg/kg/bw/day Oral	
4259-15-8				
2,6-di-tert-butylphenol			1.67 mg/kg bw/day Oral	
128-39-2			5.8 mg/m ³ Inhalation	
Methyl methacrylate		1.5 mg/cm ² Dermal	74.3 mg/m3 Inhalation	104 mg/m³ Inhalation
80-62-6		_	8.2 mg/kg Dermal	1.5 mg/cm ² Dermal
toluene	226 mg/m ³	226 mg/m ³	226 mg/kg bw/day	
108-88-3	(inhalation)	(inhalation)	(dermal)	
	,	,	56.5 mg/m³ (inhalation)	
			8.13 mg/kg bw/day (oral)	

Predicted No Effect Concentration (PNEC)

Chemical Name	Water	Sediment	Soil	Air	STP	Oral
zinc bis[O,O-bis(2-ethylh exyl)] bis(dithiophosphate) 4259-15-8	0.004 mg/l fw 0.0046 mg/l mw 0.044 mg/l or	0.0701 mg/kg dw fw 0.00701 mg/kg dw mw	0.0548 mg/kg dw		3.8 mg/l	8.33 mg/kg food
2,6-di-tert-butylphen ol 128-39-2	0.00045 mg/l fw 0.000045 mg/l mw 0.0045 mg//l or	0.196 mg/kg dw fw 0.0196 mg/kg dw mw	0.0389 mg/kg dw		10 mg/l	
Methyl methacrylate 80-62-6	0.94 mg/l fw 0.94 mg/l mw 0.94 mg/l or	5.74 mg/kg dw fw	1.47 mg/kg dw		10 mg/l	
toluene 108-88-3	0.68 mg/l fw 0.68 mg/l mw 0.68 mg/l or	16.39 mg/kg dw fw 16.39 mg/kg dw mw	2.89 mg/kg dw		13.61 mg/l	

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.



HYDROFLO CT

Revision Date: 2013-09-27 Version 2.01

Personal Protective Equipment

General Information Protective engineering solutions should be implemented and in use before personal

protective equipment is considered.

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). 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. Long sleeved clothing. Protective shoes or boots.

Extended and repeated contacts with skin can cause skin ailments which may be

aggravated by minor injuries or contact with soiled clothing.

Hand Protection Impervious gloves. Hydrocarbon-proof gloves. Nitrile rubber. Fluorinated rubber. 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. If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the

supplier of the EC approved gloves.

Environmental exposure controls

General Information Do not allow material to contaminate ground water system.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance limpid
Color blue
Physical State @20°C liquid

Odor Characteristic

Property
pHValuesRemarks
Not applicableMethod

Boiling point/boiling range No information available

> 428 °F **Evaporation rate**No information available

Flammability Limits in Air

Vapor Pressure

Vapor density

No information available
No information available
No information available

Density 876 - 886 kg/m³ @ 15 °C Water solubility Insoluble

Solubility in other solvents No information available



HYDROFLO CT

Revision Date: 2013-09-27 Version 2.01

logPow

No information available

Autoignition temperature

No information available

Viscosity, kinematic

48.2 - 50.4 mm2/s

@ 40 °C

ISO 3104

Explosive properties Oxidizing Properties Not explosive

Oxidizing Properties Not applicable

Possibility of hazardous reactions No information available

9.2. Other information

Pour point < - 39 °C

ASTM D 97

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, flames and sparks. Take precautionary measures against static discharges.

10.5. Incompatible Materials

Materials to Avoid

Strong oxidizing agents.

10.6. Hazardous Decomposition Products

Hazardous Decomposition Products No information available.

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity Local effects Product Information

Skin contact

. Not classified. Avoid contact with skin.



HYDROFLO CT

Revision Date: 2013-09-27 Version 2.01

Eye contact

. Not classified. Avoid contact with eyes.

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.

Acute toxicity - Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate)	= 3100 mg/kg (Rat)	> 5000 mg/kg (Rabbit)	
2,6-di-tert-butylphenol	> 5000 mg/kg (Rat)	LD50 > 2000 mg/kg (Rabbit)	
Methyl methacrylate	LD50 > 5000 mg/kg (Rat)	LD50 > 5000 mg/kg (Rabbit)	LD50(4h) 29.8 mg/kg (Rat - Vapour)
toluene	5580 mg/kg bw (rat)	> 5000 mg/kg bw (rabbit)	28.1 mg/L (Rat-vapour) 4h

Sensitization

Sensitization

Not classified as a sensitizer.

Specific effects

Carcinogenicity Mutagenicity This product is not classified carcinogenic. This product is not classified as mutagenic.

Reproductive toxicity

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

reproductive toxicity	y This product does not present any known or suspected reproductive nazards.				
Chemical Name		European Union			
	toluene 108-88-3	Repr. 2 (H361d)			

Repeated Dose Toxicity

Subchronic toxicity

No information available.

Target Organ Effects (STOT)

Target Organ Effects (STOT)

No information available.

Other information

Other adverse effects

No information available.

12. ECOLOGICAL INFORMATION

12.1. Toxicity

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

Acute aquatic toxicity - Product Information

No information available.



HYDROFLO CT

Revision Date: 2013-09-27 Version 2.01

Acute aquatic toxicity - Component Information

Chemical Name	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates	Toxicity to fish	Toxicity to microorganisms
zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) 4259-15-8	EC50 (72h) > 240 mg/l (Desmodesmus subspicatus)	EC50 (48h) > 1 - < 10 mg/l (Daphnia magna - OECD 202)	LC50 (96h) 1 - 10 mg/l (Oncorhynchus mykiss - OECD 203)	
2,6-di-tert-butylphenol 128-39-2	EC50 (72h) 1.2 mg/l	EC50 (48h) = 0.45 mg/L Daphnia magna	LC50(96h) 1 mg/l (fish)	
Methyl methacrylate 80-62-6	EC50 (72h) > 110 mg/l (Selenastrum capricornutum)	EC50 (48h) = 69 mg/L Daphnia magna	LC50 (96h) > 79 mg/l (Oncorhynchus mykiss)	
toluene 108-88-3	EC50 (3 h) 134 mg/l Chlorella vulgaris NOEC(72h) 10 mg/l Skeletonema costatum	EC50 (48h) 3.78mg/l Daphnia magna	LC50 (96h) 5.5 mg/l Oncorhynchus kisutch	-

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
2,6-di-tert-butylphenol 128-39-2			NOEC (28d) 0.3 mg/l (fish)	

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

Component information .					
Chemical Name	log Pow				
zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) - 4259-15-8	3.6				
2,6-di-tert-butylphenol - 128-39-2	4.48				
Methyl methacrylate - 80-62-6	1.38				
toluene - 108-88-3	2.73				

12.4. Mobility in soil



HYDROFLO CT

Revision Date: 2013-09-27 Version 2.01

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.

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.

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

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. If recycling is not

practicable, dispose of in compliance with local regulations.

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. The following Waste Codes are only suggestions:. 13 02 05.

14. TRANSPORT INFORMATION

ADR/RID

Not regulated

IMDG/IMO

Not regulated

ICAO/IATA

Not regulated

ADN

Not regulated

15. REGULATORY INFORMATION



HYDROFLO CT

Revision Date: 2013-09-27 Version 2.01

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

European Union

International Inventories

EINECS/ELINCS
TSCA
DSL
ENCS
IECSC
KECL
PICCS
AICS
NZIOC
Legend

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

NZIoC - New Zealand Inventory of Chemicals

Further information

15.2. Chemical Safety Assessment

Chemical Safety Assessment

No information available

16. OTHER INFORMATION

Full text of R-phrases referred to under sections 2 and 3

R41 - Risk of serious damage to eyes

R38 - Irritating to skin

R11 - Highly flammable

R43 - May cause sensitization by skin contact

R67 - Vapors may cause drowsiness and dizziness

R63 - Possible risk of harm to the unborn child

R65 - Harmful: may cause lung damage if swallowed

R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

R37/38 - Irritating to respiratory system and skin

R48/20 - Harmful: danger of serious damage to health by prolonged exposure through inhalation

R52/53 - Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment



HYDROFLO CT

Revision Date: 2013-09-27 Version 2.01

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

H225 - Highly flammable liquid and vapor

H304 - May be fatal if swallowed and enters airways

H315 - Causes skin irritation

H317 - May cause an allergic skin reaction

H318 - Causes serious eye damage

H335 - May cause respiratory irritation

H336 - May cause drowsiness or dizziness

H361d - Suspected of damaging the unborn child

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

H400 - Very toxic to aquatic life

H410 - Very toxic to aquatic life with long lasting effects

H411 - Toxic to aquatic life with long lasting effects

Abbreviations, acronyms

Legend Section 8

+ Sensitizer * Skin designation

** Hazard Designation C: Carcinogen

M: Mutagen R: Toxic to reproduction

Revision Date: 2013-09-27

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