



SAFETY DATA SHEET

according to the Global Harmonized System

SDS # : 37763

MULTIS COMPLEX SHD 220

Issuing date: 2016-03-23

Revision Date: 2019-01-08

Version 1.02

1. IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER

Product identifier

Product name MULTIS COMPLEX SHD 220

Other means of identification

Number O8E
Substance/mixture Mixture

Recommended use of the chemical and restrictions on use

Identified uses Lubricating grease.
Uses advised against Do not use for any purpose other than the one for which it is intended.

Details of the supplier of the safety data sheet

Supplier TOTAL VIETNAM LTD
 Landlot 3, Go Dau Industrial Zone
 Long Thanh Dist., Dong Nai Prov., Vietnam
 Tel: +84 251 3543056
 Fax: +84 251 3543694

For further information, please contact:

Contact Point HSE
E-mail Address ms.ap-sds@total.com

Emergency telephone

Vietnam: +84 28 4458 2388
 Asia-Pacific: +65 3158 1074

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

Skin corrosion/irritation - Category 3
 Skin sensitization - Category 1
 Acute aquatic toxicity - Category 3
 Chronic aquatic toxicity - Category 3

GHS Label elements, including precautionary statements

Contains Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts



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Signal word

WARNING**Hazard Statements**

H316 - Causes mild skin irritation

H317 - May cause an allergic skin reaction

H412 - Harmful to aquatic life with long lasting effects

Precautionary Statements - Prevention

- Avoid breathing dust/fume/gas/mist/vapors/spray
- Contaminated work clothing should not be allowed out of the workplace
- Wear protective gloves
- Avoid release to the environment

Precautionary Statements - Response

- IF ON SKIN: Wash with plenty of water/soap
- If skin irritation or rash occurs: Get medical advice/attention
- Take off contaminated clothing and wash it before reuse

Precautionary Statements - Disposal

- Dispose of contents/ container to an approved waste disposal plant

Other hazards which do not result in classification

Physical-Chemical Properties Contaminated surfaces will be extremely slippery

3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Chemical nature The product is made from synthetic base oils

Chemical Name	CAS-No	EC-No	Weight %
Polyalkylated naphthalene	^	-	10-<20
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts	68649-42-3	272-028-3	1-<2.5
Dilithium azelate	38900-29-7	254-184-4	1-<2.5
Phenol, 4-nonyl-, branched	84852-15-3	284-325-5	0.025-<0.1



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Additional information

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

4. FIRST AID MEASURES

Description of necessary 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 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.

Most important symptoms/effects, acute and delayed

Skin contact	Causes mild skin irritation. May cause an allergic skin reaction. High pressure injection of the products under the skin may have very serious consequences even though no symptom or injury may be apparent.
Eye contact	Not classified based on available data.
Inhalation	Not classified based on available data.
Ingestion	Not classified based on available data. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

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

Notes to physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES



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Suitable 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.

Specific hazards arising from the chemical

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. Combustion products include sulphur oxides (SO₂ and SO₃) and Hydrogen sulphide H₂S, Phosphorous oxides, Nitrogen oxides (NO_x), Mercaptans, Zinc oxides.

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.

6. ACCIDENTAL RELEASE MEASURES

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.

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.

Methods and material for containment and cleaning up

Methods for containment 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.

Other information

Personal Protective Equipment See Section 8 for more detail.

Waste treatment See section 13.



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7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling	For personal protection see section 8. Use only in well-ventilated areas. 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.

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.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits	Mineral oil mist: USA: OSHA (PEL) TWA 5 mg/m ³ , NIOSH (REL) TWA 5 mg/m ³ , STEL 10 mg/m ³ , ACGIH (TLV) TWA 5 mg/m ³ (highly refined)
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Appropriate engineering 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.
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Individual protection measures, such as personal protective equipment (PPE)

Personal Protective Equipment

General Information	Protective engineering solutions should be implemented and in use before personal protective equipment is considered. These recommendations apply to the product as supplied.
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	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.

9. PHYSICAL AND CHEMICAL PROPERTIES

General Information

Color	yellow
Physical State @20°C	solid
Odor	Characteristic
Odor Threshold	No information available

Important health safety and environmental information

<u>Property</u>	<u>Values</u>	<u>Remarks</u>	<u>Method</u>
pH		Not applicable	
Melting point/range		No information available	



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Boiling point/boiling range		Not applicable
Flash point		Not applicable
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	0.900	@ 20 °C
Density	900 kg/m ³	@ 20 °C
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		Not applicable
Explosive properties	Not explosive	
Oxidizing Properties	Not applicable	
Possibility of hazardous reactions	None under normal processing	

Other information

Freezing Point No information available

10. STABILITY AND REACTIVITY

<u>Reactivity</u>	None under normal processing.
<u>Chemical stability</u>	Stable under recommended storage conditions.
<u>Possibility of hazardous reactions</u>	No dangerous reaction known under conditions of normal use.
<u>Conditions to avoid</u>	Keep away from open flames, hot surfaces and sources of ignition. Keep away from heat and sparks.
<u>Materials to Avoid</u>	Strong oxidizing agents.



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Hazardous Decomposition Products Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot. Combustion products include sulphur oxides (SO₂ and SO₃) and Hydrogen sulphide H₂S, Phosphorous oxides, Nitrogen oxides (NO_x), Mercaptans, Zinc oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation	Not classified based on available data.
Ingestion	Not classified based on available data. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Skin contact	Causes mild skin irritation. May cause an allergic skin reaction. High pressure injection of the products under the skin may have very serious consequences even though no symptom or injury may be apparent.
Eye contact	Not classified based on available data.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Acute toxicity - Product Information

Oral Not classified based on available data.
0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

Dermal Not classified based on available data.
0 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity

Inhalation Not classified based on available data.
1.95 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity

Acute toxicity - Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Polyalkylated naphthalene	LD50 >2000 mg/kg (rat)	LD50 >2000 mg/kg (rat)	
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts	LD50 > 5000 mg/kg bw		
Dilithium azelate	LD50 >300 mg/kg bw (rat)	LD50 >2000 mg/kg bw (rat)	
Phenol, 4-nonyl-, branched	1412 mg/kg bw (rat-ECHA)		



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Skin corrosion/irritation	Causes mild skin irritation.
Serious eye damage/eye irritation	Not classified based on available data.
Sensitization	May cause an allergic skin reaction.
Carcinogenicity	Not classified based on available data
Germ Cell Mutagenicity	Not classified based on available data
Reproductive toxicity	Not classified based on available data.
Target Organ Effects (STOT)	None known
STOT - single exposure	Not classified based on available data
STOT - repeated exposure	Not classified based on available data
Aspiration hazard	Not classified based on available data.
Other adverse effects	Characteristic skin lesions (pimples) may develop following prolonged and repeated exposures (contact with contaminated clothing).

12. ECOLOGICAL INFORMATION

Ecotoxicity

Harmful to aquatic life with long lasting effects.

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
Polyalkylated naphthalene ^	EC50(72h) >100 mg/l	EC50(48h) >100 mg/l	EC50(96h) >100 mg/l	
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts 68649-42-3		EC50 (48h) 2.1 mg/l (daphnia magna)		
Dilithium azelate 38900-29-7	LC50 >100 mg/l	LC50 >100 mg/l	LC50 >100 mg/l	
Phenol, 4-nonyl-, branched	LC50 (72h) 0,0563 mg/l	EC50 (48h) 0,035 mg/l	LC50(96h) = 0.1383 mg/l	



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84852-15-3	alguea	daphnia magna	Pimephales promelas LC50(96h) 0.14-0.23 Oncorhynchus mykiss
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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
Phenol, 4-nonyl-, branched 84852-15-3			NOEC (91d) 0.006 mg/l Oncorhynchus mykiss	

Effects on terrestrial organisms No information available.

Persistence and degradability

No information available.

Bioaccumulative potential

Product Information No information available.

logPow No information available

Component Information No information available

Mobility

Soil Given its physical and chemical characteristics, the product has no soil mobility.
Air Loss by evaporation is limited.
Water The product is insoluble and floats on water.

Other adverse effects

General Information No information available.

13. DISPOSAL CONSIDERATIONS

Waste from Residues / Unused Products Should not be released into the environment. Do not empty into drains. Dispose of in accordance with all applicable national environmental laws and regulations.



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

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

14. TRANSPORT INFORMATION

ADR/RID Not regulated

IMDG/IMO Not regulated

ICAO/IATA Not regulated

ADN

UN/ID No	ID9005
Hazard class	9
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., MOLTEN
Description	ID9005, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., MOLTEN, 9 (Phenol, 4-nonyl-, branched, Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts)
Hazard Labels	none

15. REGULATORY INFORMATION

Further information

No information available

National regulatory information

No information available

16. OTHER INFORMATION

Issuing date:	2016-03-23
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Revision Note	No information available.

Abbreviations, acronyms

ACGIH = American Conference of Governmental Industrial Hygienists



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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

Legend

Section 8

ACGIH - American Conference of Governmental Industrial Hygienists

TWA - Time Weight Average

STEL - Short Term Exposure Limits

S* - Skin notation Ceiling: Maximum limit value

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