

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

SDS #: 34197 MULTIS COMPLEX SHD 2

Date of the previous version: 2018-08-28 Revision Date: 2018-10-02 Version 6

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

COMPANY/UNDERTAKING

### 1.1. Product identifier

Product name MULTIS COMPLEX SHD 2

Number IOV Substance/mixture Mixture

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

**Identified uses** Lubricating grease.

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 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\*\*\*

EUH208 - Contains Cashew nutshell liquid. May produce an allergic reaction\*\*\*

### 2.3. Other hazards

**Physical-Chemical Properties** 

Contaminated surfaces will be extremely slippery.\*\*\*

### Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.2. Mixture\*\*\*

### Chemical nature Hazardous components

The product is made from refined mineral base oils and synthetic oils.\*\*\*

| Chemical Name                                                                        | EC-No     | REACH<br>Registration<br>Number | CAS-No     | Weight % | Classification (Reg. 1272/2008)                                       |
|--------------------------------------------------------------------------------------|-----------|---------------------------------|------------|----------|-----------------------------------------------------------------------|
| Paraffin oils<br>(petroleum),catalytic<br>dewaxed heavy***                           | 265-174-4 | 01-2119487080-42                | 64742-70-7 | 10-<20   | Asp. Tox. 1 (H304)                                                    |
| Dilithium azelate***                                                                 | 254-184-4 | 01-2120119814-57                | 38900-29-7 | 3-<5     | Acute Tox. 4 (H302)                                                   |
| Phosphorodithioic acid,<br>mixed O,O-bis(iso-Bu and<br>pentyl) esters, zinc salts*** | 270-608-0 | 01-2119493628-22                | 68457-79-4 | 1-<2.5   | Aquatic Chronic 2 (H411)<br>Eye Dam. 1 (H318)<br>Skin Irrit. 2 (H315) |
| Benzenamine, N-phenyl-,<br>reaction products with<br>2,4,4-trimethylpentene***       | 270-128-1 | 01-2119491299-23                | 68411-46-1 | 1-<2.5   | Aquatic Chronic 3 (H412)                                              |
| Hydrocarbon waxes (petroleum), oxidized***                                           | 265-205-1 | no data available               | 64743-00-6 | 1-<3     | Eye Irrit. 2 (H319)                                                   |



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| Ī | Cashew nutshell liquid*** | 232-355-4 | 01-2119502450-57 | 8007-24-7 | 0.1-<1 | Eye Dam. 1 (H318)    |
|---|---------------------------|-----------|------------------|-----------|--------|----------------------|
| 1 |                           |           |                  |           |        | Skin Sens. 1 (H317)  |
| 1 |                           |           |                  |           |        | Acute Tox. 4 (H302)  |
| 1 |                           |           |                  |           |        | Acute Tox. 4 (H312)  |
|   |                           |           |                  |           |        | Skin Irrit. 2 (H315) |

**Additional information** 

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

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

Section 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

General advice IN CASE OF SERIOUS OR PERSISTENT CONDITIONS, CALL A DOCTOR OR

**EMERGENCY MEDICAL CARE.\*\*\*** 

Eye contact Immediately flush with plenty of water. After initial flushing, remove any contact lenses and

continue flushing for at least 15 minutes. Keep eye wide open while rinsing.\*\*\*

**Skin contact**Wash off immediately with soap and plenty of water while removing all contaminated

clothes and shoes. Wash contaminated clothing before reuse. 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, classification is not

required.\*\*\*

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

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



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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.\*\*\*

Unsuitable Extinguishing Media Do not use a solid water stream as it may scatter and spread fire.

5.2. Special hazards arising from the substance or mixture

Special hazard Incomplete combustion and thermolysis may produce gases of varying toxicity such as

carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot. These may be highly dangerous if inhaled in confined spaces or at high concentration. Phosphorous oxides, Nitrogen oxides (NOx), Zinc oxides, Combustion products include sulphur oxides (

SO2 and SO3) and Hydrogen sulphide H2S, Mercaptans.\*\*\*

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.\*\*\*

6.3. 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.\*\*\*

6.4. Reference to other sections



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Personal protective equipment See Section 8 for more detail.

Waste treatment See section 13.

Section 7: HANDLING AND STORAGE

### 7.1. Precautions for safe handling

Advice on safe handling For personal protection see section 8. Use only in well-ventilated areas. 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** Mineral oil mist:

USA: OSHA (PEL) TWA 5 mg/m3, NIOSH (REL) TWA 5 mg/m3, STEL 10 mg/m3, ACGIH

(TLV) TWA 5 mg/m³ (highly refined);

**Legend** See section 16

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

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

Chemical Name Short term, systemic Short term, local effects Long term, systemic Long term, local effects



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|                                                                                                       | effects | effects                                               |                                   |
|-------------------------------------------------------------------------------------------------------|---------|-------------------------------------------------------|-----------------------------------|
| Dilithium azelate***<br>38900-29-7                                                                    |         |                                                       | 0.172 mg/cm <sup>2</sup> (dermal) |
| Phosphorodithioic acid,<br>mixed O,O-bis(iso-Bu<br>and pentyl) esters, zinc<br>salts***<br>68457-79-4 |         | 11.87 mg/kg bw/day<br>Dermal<br>8.13 mg/m³ Inhalation |                                   |
| Benzenamine, N-phenyl-,<br>reaction products with<br>2,4,4-trimethylpentene***<br>68411-46-1          |         | 0.62 mg/kg bw/day<br>Dermal<br>4.37 mg/m³ Inhalation  |                                   |
| Cashew nutshell liquid***<br>8007-24-7                                                                |         | 0.88 mg/m³ Inhalation<br>0.5 mg/kg bw/day Dermal      |                                   |

DNEL Consumer\*\*\*

| Chemical Name                                                                                | Short term, systemic effects | Short term, local effects | Long term, systemic effects                                                    | Long term, local effects          |
|----------------------------------------------------------------------------------------------|------------------------------|---------------------------|--------------------------------------------------------------------------------|-----------------------------------|
| Dilithium azelate***<br>38900-29-7                                                           |                              |                           |                                                                                | 0.023 mg/cm <sup>2</sup> (dermal) |
| Phosphorodithioic acid, mixed O,O-bis(iso-Bu                                                 |                              |                           | 5.93 mg/kg bw/day<br>Dermal                                                    |                                   |
| and pentyl) esters, zinc<br>salts***<br>68457-79-4                                           |                              |                           | 2.06 mg/m³ Inhalation<br>0.24 mg/kg bw/day Oral                                |                                   |
| Benzenamine, N-phenyl-,<br>reaction products with<br>2,4,4-trimethylpentene***<br>68411-46-1 |                              |                           | 0.31 mg/kg bw/day<br>Dermal<br>1.09 mg/m³ Inhalation<br>0.31 mg/kg bw/day Oral |                                   |
| Cashew nutshell liquid*** 8007-24-7                                                          |                              |                           | 0.2 mg/m³ Inhalation<br>0.25 mg/kg bw/day<br>Dermal<br>0.25 mg/kg bw/day Oral  |                                   |

Predicted No Effect Concentration \*\*\* (PNEC)

| Chemical Name         | Water            | Sediment      | Soil          | Air | STP      | Oral             |
|-----------------------|------------------|---------------|---------------|-----|----------|------------------|
| Paraffin oils         |                  |               |               |     |          | 9.33 mg/kg food  |
| (petroleum),catalytic |                  |               |               |     |          |                  |
| dewaxed heavy***      |                  |               |               |     |          |                  |
| 64742-70-7            |                  |               |               |     |          |                  |
| Dilithium azelate***  | 0.023 mg/l (fw)  |               |               |     |          |                  |
| 38900-29-7            | 0.0023 mg/l (mw) |               |               |     |          |                  |
|                       | 0.23 mg/l (ir)   |               |               |     |          |                  |
| Phosphorodithioic     | 4 μg/l fw        |               |               |     | 100 mg/l | 10.67 mg/kg food |
| acid, mixed           | 4.6 μg/l mw      |               |               |     |          |                  |
| O,O-bis(iso-Bu and    | 45 μg/l or       |               |               |     |          |                  |
| pentyl) esters, zinc  |                  |               |               |     |          |                  |
| salts***              |                  |               |               |     |          |                  |
| 68457-79-4            |                  |               |               |     |          |                  |
| Benzenamine,          | 0.051 mg/l fw    | 9320 mg/kg fw | 1860 mg/kg dw |     | 1 mg/l   |                  |
| N-phenyl-, reaction   | 0.0051 mg/l mw   | dw            |               |     |          |                  |
| products with         | 0.51 mg/l or     | 932 mg/kg mw  |               |     |          |                  |



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| 2,4,4-trimethylpente |                | dw               |                |          |               |
|----------------------|----------------|------------------|----------------|----------|---------------|
| ne***                |                |                  |                |          |               |
| 68411-46-1           |                |                  |                |          |               |
| Cashew nutshell      | 0.003mg/l fw   | 0.97 mg/kg dw fw | 11.87 mg/kg dw | 100 mg/l | 10 mg/kg food |
| liquid***            | 0.0003 mg/l mw | 0.038 mg/kg dw   |                |          |               |
| 8007-24-7            | 0.03 mg/l or   | mw               |                |          |               |

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/P1. Warning! filters have a limited use duration. The use of breathing apparatus must comply strictly with the manufacturer's

instructions and the regulations governing their choices and uses.\*\*\*

Eye protection If splashes are likely to occur, wear:. Safety glasses with side-shields. EN 166.\*\*\*

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

4/6.\*\*\*

Hand protection Hydrocarbon-proof gloves. Fluorinated rubber. Nitrile rubber. In case of prolonged contact

with the product, it is recommended to wear gloves complying with EN 420 and EN 374 standards, protecting at least for 480 minutes and having a thickness of 0,38 mm at least. These values are indicative only. The level of protection is provided by the material of the glove, its technical characteristics, its resistance to the chemicals to be handled, the appropriateness of its use and its replacement frequency. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is

used, such as the danger of cuts, abrasion, and the contact time.\*\*\*

#### **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



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Colour blue\*\*\*
Physical state @20°C solid\*\*\*

Odour characteristic\*\*\*

Odour Threshold No information available

<u>Property</u> <u>Values</u> <u>Remarks</u> <u>Method</u>

pH Not applicable\*\*\*

Melting point/range No information available

Boiling point/boiling range Not applicable\*\*\*

Flash point \*\*\* Not applicable\*\*\*

Evapouration rate No information available\*\*\*

Flammability Limits in Air

Vapour density

No information available\*\*\*

 Relative density
 0.900\*\*\*
 @ 20 °C\*\*\*

 Density
 900\*\*\* kg/m³\*\*\*
 @ 20 °C\*\*\*

Water solubility Insoluble\*\*\*

Solubility in other solvents

logPow

No information available\*\*\*

No information available\*\*\*

Autoignition temperature \*\*\*

No information available\*\*\*

Decomposition temperature

Viscosity, kinematic \*\*\*

No information available

Not applicable\*\*\*

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 No dangerous reaction known under conditions of normal use.\*\*\*



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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 Incomplete combustion and thermolysis may produce gases of varying toxicity such as

carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot. Phosphorous oxides, Nitrogen oxides (NOx), Zinc oxides, Combustion products include sulphur oxides (

SO2 and SO3) and Hydrogen sulphide H2S, Mercaptans.\*\*\*

### Section 11: TOXICOLOGICAL INFORMATION

## 11.1. Information on toxicological effects

#### Acute toxicity Local effects Product Information

**Skin contact** . Not classified based on available data. May produce an allergic reaction. 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. 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, classification is not

required.\*\*\*

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

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

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

ATEmix (oral) 7,337.00\*\*\* mg/kg\*\*\*

ATEmix (inhalation-dust/mist) 28.50\*\*\* mg/l\*\*\*
ATEmix (inhalation-vapour) 112.30\*\*\* mg/l\*\*\*

### Acute toxicity - Component Information

| Chemical Name                                                                                                    | LD50 Oral                | LD50 Dermal                               | LC50 Inhalation |
|------------------------------------------------------------------------------------------------------------------|--------------------------|-------------------------------------------|-----------------|
| Paraffin oils (petroleum),catalytic dewaxed heavy***                                                             | LD50 >5000 mg/kg (rat)   | LD50 >5000 mg/kg (rabbit)                 |                 |
| Dilithium azelate***                                                                                             | LD50 >300 mg/kg bw (rat) | LD50 >2000 mg/kg bw (rat)                 |                 |
| Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts***  LD50 3600 mg/kg (Rat - OECI 401) |                          | LD50 > 20000 mg/kg (Rabbit -<br>OECD 402) |                 |
| Benzenamine, N-phenyl-, reaction products                                                                        | LD50 > 5000 mg/kg Oral   | LD50 > 2000 mg/kg Dermal                  |                 |



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| with 2,4,4-trimethylpentene***             | (Rat-OECD 401)          | (Rat-OECD 402)                       |             |
|--------------------------------------------|-------------------------|--------------------------------------|-------------|
| Hydrocarbon waxes (petroleum), oxidized*** | LD50 > 5000 mg/kg (rat) | LD50 > 2000 mg/kg (rabbit)           |             |
| Cashew nutshell liquid***                  | ATE (Cat 4)             | LD50 > 2000 mg/kg (Rat -<br>OECD402) | ATE (Cat 4) |

Sensitisation

Sensitisation Not classified based on available data. Contains senitizer(s). May produce an allergic

reaction.\*\*\*

Specific effects

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

Mutagenicity .\*

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

Reproductive toxicity

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

Repeated dose toxicity

**Target Organ Effects (STOT)** 

Specific target organ systemic

toxicity (single exposure)

Specific target organ toxicity -

repeated exposure

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

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

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

Aspiration toxicity

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 |
|------------------------------------------------------|-------------------------------------------------------------|------------------------------------------------------|----------------------------------------------|----------------------------|
| Paraffin oils (petroleum),catalytic dewaxed heavy*** | NOEL(72h) >100 mg/l<br>(Pseudokirchneriella<br>subcapitata) | EL50(48h) >10000 mg/l<br>(Daphnia magna)             | LC50(96h) >100 mg/l<br>(Pimephales promelas) |                            |



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| 64742-70-7                                                                                   |                                                                |                                                     |                                                              |  |
|----------------------------------------------------------------------------------------------|----------------------------------------------------------------|-----------------------------------------------------|--------------------------------------------------------------|--|
| Dilithium azelate***<br>38900-29-7                                                           | LC50 >100 mg/l                                                 | LC50 >100 mg/l                                      | LC50 >100 mg/l                                               |  |
| Phosphorodithioic acid,                                                                      | EbL50 (72h) 21 mg/l<br>(Scenedesmus subspicatus -<br>OECD 201) | EC50 (48h) 23 mg/l<br>(Daphnia magna - OECD<br>202) | LC50 (96h) 4.5 mg/l<br>(Cyprinodon variegatus -<br>OECD 203) |  |
| Benzenamine, N-phenyl-,<br>reaction products with<br>2,4,4-trimethylpentene***<br>68411-46-1 | EC50 >100 mg/l<br>Desmodesmus subspicatus<br>(OECD 201)        | EC50 51 mg/l Daphnia<br>magna (OECD 202)            | LC50 >100 mg/l Danio rerio<br>(OECD 203)                     |  |

### 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 |
|----------------------------------------------------------------------------------------------------|-------------------|------------------------------------------------------|------------------|----------------------------|
| Phosphorodithioic acid,<br>mixed O,O-bis(iso-Bu and<br>pentyl) esters, zinc salts***<br>68457-79-4 |                   | NOEC(21d) 0.8 mg/l<br>Daphnia magna                  |                  |                            |

### 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 |
|-----------------------------------------------------------------------|---------|
| Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc | 0.69    |
| salts*** - 68457-79-4                                                 |         |
| Benzenamine, N-phenyl-, reaction products with                        | 6.1     |
| 2,4,4-trimethylpentene*** - 68411-46-1                                |         |

## 12.4. Mobility in soil

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.\*\*\*



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12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment No information available.\*\*\*

12.6. Other adverse effects

General Information No information available.\*\*\*

Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from residues / unused

products

Should not be released into the environment. Do not empty into drains. Dispose of in

accordance with the European Directives on waste and hazardous waste.\*\*\*

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:. 12 01

12.\*\*\*

Other information R

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

### Section 14: TRANSPORT INFORMATION

ADR/RID not regulated

IMDG/IMO not regulated

ICAO/IATA not regulated

ADN not regulated

### Section 15: REGULATORY INFORMATION

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

European Union

#### REACH

All substances contained in this mixture have been pre-registered, registered or are exempt from registration in accordance with Regulation (CE) No. 1907/2006 (REACh)\*\*\*



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International Inventories

All the substances contained in this product are listed or exempted from listing in the following inventories:
Philippines (PICCS)
Korea (KECL)
U.S.A. (TSCA)

Australia (AICS) China (IECSC)\*\*\*

Canada (DSL/NDSL)

#### 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).

### Ireland

• 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

H304 - May be fatal if swallowed and enters airways

H312 - Harmful in contact with skin

H315 - Causes skin irritation

H317 - May cause an allergic skin reaction

H318 - Causes serious eye damage

H319 - Causes serious eye irritation

H411 - Toxic to aquatic life with long lasting effects

H412 - Harmful to aquatic life with long lasting effects\*\*\*

### 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



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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: 2018-10-02

**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**