

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier:

320102501 Malva EFE SAE 5W30

1.2 Relevant identified uses of the substance or mixture and uses advised against: Relevant uses: Lubricant Uses advised against: All uses not specified in this section or in section 7.3

1.3 Details of the supplier of the safety data sheet:

Dyade Lubricants B.V. Typograaf 16 6921 VB Duiven - The Netherlands Phone.: 0031316745745 info@dyade-lubricants.com http://www.dyade-lubricants.com

1.4 Emergency telephone number:

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:

CLP Regulation (EC) No 1272/2008:

The product is not classified as hazardous according to CLP Regulation (EC) No 1272/2008.

2.2 Label elements:

CLP Regulation (EC) No 1272/2008:

Hazard statements:

Non-applicable

Precautionary statements:

Non-applicable

Supplementary information:

Safety data sheet available on request

2.3 Other hazards:

Product fails to meet PBT/vPvB criteria

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance:

Non-applicable

3.2 Mixture:

Chemical description: Mixture based on hydrocarbons and additives

Components:

In accordance with Annex II of Regulation (EC) No 1907/2006 (point 3), the product contains:

| Identification | | Chemical name/Classification | | | |
|--|--------------------------|--|-----------------|-------------|--|
| CAS: 64742-54-7 | Distillates (petroleum), | hydrotreated heavy paraffinic , < 3 % IP 346, > 20,5 cSt @ $40^{\circ}C^{(1)}$ | ATP CLP00 | | |
| EC: 265-157-1 Index: 649-467-00-8 REACH: 01-2119484627-25- XXXX | Regulation 1272/2008 | | | 75 - <100 % | |
| CAS: 36878-20-3 | Bis(nonylphenyl)amine | 1) | Self-classified | | |
| EC: 253-249-4 Index: Non-applicable REACH: 01-2119488911-28- XXXX | Regulation 1272/2008 | Aquatic Chronic 4: H413 | | 1 - <2.49 % | |



SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS (continued)

| | Identification | | Chemical name/Classification | | | |
|------------------------|--|-------------------------|--|--------------|----------------|--|
| CAS: | 2215-35-2 | zinc 0,0,0',0'-tetrakis | (1,3-dimethylbutyl) bis(phosphorodithioate)(1) Self | f-classified | | |
| EC: Index: REACH | 218-679-9 Non-applicable : 01-2119953275-34- XXXX | Regulation 1272/2008 | Aquatic Chronic 2: H411; Eye Dam. 1: H318; Skin Irrit. 2: H315 - Danger | | 1 - <2.49 % | |
| CAS: | 84605-29-8 | Phosphorodithioic acid, | mixed O,O-bis(1,3-dimethylbutyl and iso-Pr) esters, zinc salts ⁽¹⁾ Selt | f-classified | | |
| EC: Index: REACH | 283-392-8 Non-applicable : 01-2119493626-26- XXXX | Regulation 1272/2008 | Aquatic Chronic 2: H411; Eye Dam. 1: H318; Skin Irrit. 2: H315 - Danger | | 0.15 - <0.99 % | |

⁽¹⁾ Voluntarily-listed substance failing to meet any of the criteria set out in Regulation (EU) No. 2015/830

To obtain more information on the hazards of the substances consult sections 11, 12 and 16.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures:

The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the SDS of this product.

By inhalation:

This product does not contain substances classified as hazardous for inhalation, however, in case of symptoms of intoxication remove the person affected from the exposure area and provide with fresh air. Seek medical attention if the symptoms get worse or persist.

By skin contact:

This product is not classified as hazardous when in contact with the skin. However, in case of skin contact it is recommended to remove contaminated clothes and shoes, rinse the skin or if necessary shower the affected person thoroughly with cold water and neutral soap. In case of serious reaction consult a doctor.

By eye contact:

Rinse eyes thoroughly with water for at least 15 minutes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, in which case removal could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS for the product.

By ingestion/aspiration:

Do not induce vomiting, but if it does happen keep the head down to avoid aspiration. Keep the person affected at rest. Rinse out the mouth and throat, as they may have been affected during ingestion.

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

Acute and delayed effects are indicated in sections 2 and 11.

4.3 Indication of any immediate medical attention and special treatment needed:

Non-applicable

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media:

Product is non-flammable under normal conditions of storage, handling and use. In the case of combustion as a result of improper handling, storage or use preferably use polyvalent powder extinguishers (ABC powder), in accordance with the Regulation on fire protection systems. IT IS NOT RECOMMENDED to use full jet water as an extinguishing agent.

5.2 Special hazards arising from the substance or mixture:

As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

5.3 Advice for firefighters:

Depending on the magnitude of the fire it may be necessary to use full protective clothing and self-contained breathing apparatus (SCBA). Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...) in accordance with Directive 89/654/EC.

Additional provisions:



SECTION 5: FIREFIGHTING MEASURES (continued)

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Eliminate all sources of ignition. In case of fire, cool the storage containers and tanks for products susceptible to combustion, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

Isolate leaks provided that there is no additional risk for the people performing this task. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Evacuate the area and keep out those who do not have protection.

6.2 Environmental precautions:

Avoid spillage into the aquatic environment as it contains substances potentially dangerous for this. Contain the product absorbed in hermetically sealed containers. In the case of serious spillage into the aquatic environment notify the relevant authority.

6.3 Methods and material for containment and cleaning up:

It is recommended:

Absorb the spillage using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. For any concern related to disposal consult section 13.

6.4 Reference to other sections:

See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:

A.- Precautions for safe manipulation

Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.

B.- Technical recommendations for the prevention of fires and explosions

Product is non-flammable under normal conditions of storage, handling and use. It is recommended to transfer at slow speeds to avoid the generation of electrostatic charges that can affect flammable products. Consult section 10 for information on conditions and materials that should be avoided.

C.- Technical recommendations to prevent ergonomic and toxicological risks

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

D.- Technical recommendations to prevent environmental risks

It is recommended to have absorbent material available at close proximity to the product (See subsection 6.3)

7.2 Conditions for safe storage, including any incompatibilities:

A.- Technical measures for storage

Maximum time: 60 Months

B.- General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

7.3 Specific end use(s):

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters:

Substances whose occupational exposure limits have to be monitored in the workplace There are no occupational exposure limits for the substances contained in the product



SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

DNEL (Workers):

| | | Short e | exposure | Long exposure | |
|--|----------------|----------------|----------------|------------------------|----------------|
| Identification | Identification | | Local | Systemic | Local |
| Bis(nonylphenyl)amine | Oral | Non-applicable | Non-applicable | Non-applicable | Non-applicable |
| CAS: 36878-20-3 | Dermal | Non-applicable | Non-applicable | 0,62 mg/kg | Non-applicable |
| EC: 253-249-4 | Inhalation | Non-applicable | Non-applicable | 4,37 mg/m ³ | Non-applicable |
| zinc O,O,O´,O´-tetrakis(1,3-dimethylbutyl) bis (phosphorodithioate) | Oral | Non-applicable | Non-applicable | Non-applicable | Non-applicable |
| CAS: 2215-35-2 | Dermal | Non-applicable | Non-applicable | 12,2 mg/kg | Non-applicable |
| EC: 218-679-9 | Inhalation | Non-applicable | Non-applicable | 8,6 mg/m ³ | Non-applicable |
| Phosphorodithioic acid, mixed O,O-bis(1,3-dimethylbutyl and iso-Pr) esters, zinc salts | Oral | Non-applicable | Non-applicable | Non-applicable | Non-applicable |
| CAS: 84605-29-8 | Dermal | Non-applicable | Non-applicable | 12,1 mg/kg | Non-applicable |
| EC: 283-392-8 | Inhalation | Non-applicable | Non-applicable | 8,31 mg/m ³ | Non-applicable |

DNEL (General population):

| | | Short e | Short exposure | | xposure |
|--|------------|----------------|----------------|------------------------|----------------|
| Identification | | Systemic | Local | Systemic | Local |
| Bis(nonylphenyl)amine | Oral | Non-applicable | Non-applicable | 0,31 mg/kg | Non-applicable |
| CAS: 36878-20-3 | Dermal | Non-applicable | Non-applicable | 0,31 mg/kg | Non-applicable |
| EC: 253-249-4 | Inhalation | Non-applicable | Non-applicable | 1,09 mg/m ³ | Non-applicable |
| zinc O,O,O',O'-tetrakis(1,3-dimethylbutyl) bis (phosphorodithioate) | Oral | Non-applicable | Non-applicable | 0,24 mg/kg | Non-applicable |
| CAS: 2215-35-2 | Dermal | Non-applicable | Non-applicable | 6,1 mg/kg | Non-applicable |
| EC: 218-679-9 | Inhalation | Non-applicable | Non-applicable | 2,13 mg/m ³ | Non-applicable |
| Phosphorodithioic acid, mixed O,O-bis(1,3-dimethylbutyl and iso-Pr) esters, zinc salts | Oral | Non-applicable | Non-applicable | 0,24 mg/kg | Non-applicable |
| CAS: 84605-29-8 | Dermal | Non-applicable | Non-applicable | 6,1 mg/kg | Non-applicable |
| EC: 283-392-8 | Inhalation | Non-applicable | Non-applicable | 2,11 mg/m ³ | Non-applicable |

PNEC:

| Identification | | | | |
|---|--------------|----------------|-------------------------|----------------|
| Distillates (petroleum), hydrotreated heavy paraffinic , < 3 % IP 346, > 20,5 cSt @ 40°C | STP | Non-applicable | Fresh water | Non-applicable |
| CAS: 64742-54-7 | Soil | Non-applicable | Marine water | Non-applicable |
| EC: 265-157-1 | Intermittent | Non-applicable | Sediment (Fresh water) | Non-applicable |
| | Oral | 9,33 g/kg | Sediment (Marine water) | Non-applicable |
| Bis(nonylphenyl)amine | STP | 1 mg/L | Fresh water | 0,1 mg/L |
| CAS: 36878-20-3 | Soil | 263000 mg/kg | Marine water | 0,01 mg/L |
| EC: 253-249-4 | Intermittent | 1 mg/L | Sediment (Fresh water) | 132000 mg/kg |
| | Oral | Non-applicable | Sediment (Marine water) | 13200 mg/kg |
| zinc O,O,O´,O´-tetrakis(1,3-dimethylbutyl) bis (phosphorodithioate) | STP | 100 mg/L | Fresh water | 0,004 mg/L |
| CAS: 2215-35-2 | Soil | 0,01 mg/kg | Marine water | 0,0046 mg/L |
| EC: 218-679-9 | Intermittent | 0,045 mg/L | Sediment (Fresh water) | 0,06 mg/kg |
| | Oral | 10,67 g/kg | Sediment (Marine water) | 0,006 mg/kg |
| Phosphorodithioic acid, mixed O,O-bis(1,3-dimethylbutyl and iso-Pr) esters, zinc salts | STP | 100 mg/L | Fresh water | 0,004 mg/L |
| CAS: 84605-29-8 | Soil | 0,0548 mg/kg | Marine water | 0,0046 mg/L |
| EC: 283-392-8 | Intermittent | 0,045 mg/L | Sediment (Fresh water) | Non-applicable |
| | Oral | 10,67 g/kg | Sediment (Marine water) | Non-applicable |

8.2 Exposure controls:

A.- General security and hygiene measures in the work place



SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

As a preventative measure it is recommended to use basic Personal Protective Equipment, with the corresponding <<CE marking>> in accordance with Directive 89/686/EC. For more information on Personal Protective Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1.

All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

B.- Respiratory protection

The use of protection equipment will be necessary if a mist forms or if the occupational exposure limits are exceeded.

C.- Specific protection for the hands

| Pictogram | PPE | Labelling | CEN Standard | Remarks |
|------------------------------|---------------------------------------|-----------|--------------|---|
| Mandatory hand protection | Protective gloves against minor risks | CATI | | Replace gloves in case of any sign of damage. For prolonged periods of exposure to the product for professional users/industrials, we recommend using CE III gloves in line with standards EN 420:2003+ A1:2009 and EN ISO 374-1:2016 |

"As the product is a mixture of several substances, the resistance of the glove material can not be predicted in advance with total reliability and has therefore to be checked prior to the application"

D.- Ocular and facial protection

| Pictogram | PPE | Labelling | CEN Standard | Remarks |
|------------------------------|--|-----------|---------------------------------|---|
| Mandatory face protection | Panoramic glasses against splash/projections. | CAT II | EN 166:2001 EN ISO 4007:2018 | Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing. |

E.- Body protection

| Pictogram | PPE | Labelling | CEN Standard | Remarks |
|-----------|----------------------|-----------|-------------------|--|
| | Work clothing | CATI | | Replace before any evidence of deterioration. For periods of prolonged exposure to the product for professional/industrial users CE III is recommended, in accordance with the regulations in EN ISO 6529:2013, EN ISO 6530:2005, EN ISO 13688:2013, EN 464:1994. |
| | Anti-slip work shoes | | EN ISO 20347:2012 | Replace before any evidence of deterioration. For periods of prolonged exposure to the product for professional/industrial users CE III is recommended, in accordance with the regulations in EN ISO 20345:2012 y EN 13832-1:2007 |

F - Additional emergency measures

| Emergency measure | Standards | Emergency measure | Standards |
|-------------------|---|-------------------|--|
| + | ANSI Z358-1 ISO 3864-1:2011, ISO 3864-4:2011 | 0 + T | DIN 12 899 ISO 3864-1:2011, ISO 3864-4:2011 |
| Emergency shower | | Eyewash stations | |

Environmental exposure controls:

In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. For additional information see subsection 7.1.D

Volatile organic compounds:

With regard to Directive 2010/75/EU, this product has the following characteristics:

| V.O.C. (Supply): | 0 % weight |
|---------------------------|-----------------|
| V.O.C. density at 15 °C: | 0 kg/m³ (0 g/L) |
| Average carbon number: | Non-applicable |
| Average molecular weight: | Non-applicable |

- CONTINUED ON NEXT PAGE -



| For com Appeara Physical Appeara Colour: Odour H Volatility Boiling p Vapour p | cal state at 20 °C: | eet. |
|--|---------------------------------------|--------------------------------|
| Appeara Physical Appeara Colour: Odour th Volatility Boiling p Vapour p Solubility Solubility Solubility Decomp Melting p Explosiv Oxidising Flammal Autoignit Lower fla | rance: cal state at 20 °C: | |
| Physical Appeara Colour: Odour: Odour th Volatility Boiling p Vapour p Vapour p Evapora Product Density a Relative Dynamic Kinemat Kinemat Concent pH: Vapour of Partition Solubility Decomp Melting p Explosiv Oxidising Flammal Flash Pc Flammal Autoignit Lower fla | cal state at 20 °C: | |
| Appeara Colour: Odour th Volatility Boiling p Vapour p Vapour p Vapour p Evapora Product Density a Relative Dynamic Kinemat Concent pH: Vapour o Partition Solubility Decomp Melting p Explosiv Oxidising Flammal Autoignit Lower fla | | L face did |
| Colour: Odour: Odour th Volatility Boiling p Vapour p Vapour p Vapour p Evapora Product Density a Relative Dynamic Kinemat Kinemat Concent pH: Vapour o Partition Solubility Solubility Decomp Melting p Explosiv Oxidising Flammal Flash Pc Flammal Autoignit Lower fla | rance: | Liquid |
| Odour: Odour th Volatility Boiling p Vapour p Vapour p Evapora Product Density a Relative Dynamic Kinemat Concent pH: Vapour o Partition Solubility Decomp Melting p Explosiv Oxidising Flammal Flash Pc Flammal Autoignit Lower fla | | Oily |
| Odour the Volatility Boiling p Vapour p Evapora Product Density a Relative Dynamic Kinemat Concent pH: Vapour o Partition Solubility Decomp Melting p Explosiv Oxidising Flammal Autoignit Lower fla | | Amber |
| Volatility Boiling p Vapour p Vapour p Evapora Product Density a Relative Dynamic Kinemat Kinemat Concent pH: Vapour o Partition Solubility Solubility Decomp Melting p Explosiv Oxidising Flammal Flash Po Flammal Autoignit Lower fla | : | Characteristic |
| Boiling p Vapour p Vapour p Evapora Product Density a Relative Dynamic Kinemat Concent pH: Vapour o Partition Solubility Decomp Melting p Explosiv Oxidising Flammal Autoignit Lower fla | threshold: | Non-applicable * |
| Vapour p Vapour p Evapora Product Density a Relative Dynamic Kinemat Concent pH: Vapour o Partition Solubility Decomp Melting p Explosiv Oxidising Flammal Autoignit Lower fla | ity: | |
| Vapour p Evapora Product Density a Relative Dynamic Kinemat Concent pH: Vapour o Partition Solubility Decomp Melting p Explosiv Oxidising Flammal Autoignit Lower fla | point at atmospheric pressure: | Non-applicable * |
| Evapora Product Density a Relative Dynamic Kinemat Concent pH: Vapour of Partition Solubility Decomp Melting p Explosiv Oxidising Flammal Autoignit Lower fla | r pressure at 15 ℃: | Non-applicable * |
| Product Density a Relative Dynamic Kinemat Kinemat Concent pH: Vapour o Partition Solubility Decomp Melting p Explosiv Oxidising Flammal Autoignit Lower fla | r pressure at 50 °C: | <300000 Pa (300 kPa) |
| Density a Relative Dynamic Kinemat Kinemat Concent pH: Vapour o Partition Solubility Decomp Melting p Explosiv Oxidising Flammal Flash Pc Flammal Autoignit Lower fla | ration rate at 15 °C: | Non-applicable * |
| Relative Dynamic Kinemati Concent pH: Vapour of Partition Solubility Decomp Melting p Explosiv Oxidising Flammal Autoignit Lower fla | ct description: | |
| Dynamic Kinemat Kinemat Concent pH: Vapour o Partition Solubility Decomp Melting p Explosiv Oxidising Flammal Flash Po Flammal Autoignit Lower fla | y at 15 ⁰C: | 853 kg/m³ |
| Kinemati Kinemati Concent pH: Vapour of Partition Solubility Decomp Melting p Explosiv Oxidising Flammal Flash Po Flammal Autoignit Lower fla | ve density at 15 °C: | 0,868 |
| Kinemati Concent pH: Vapour of Partition Solubility Decomp Melting p Explosiv Oxidising Flammal Flash Po Flammal Autoignit Lower fla | nic viscosity at 15 °C: | 62,17 cP |
| Concent pH: Vapour of Partition Solubility Decomp Melting p Explosiv Oxidising Flammal Flash Po Flammal Autoignit Lower fla | atic viscosity at 15 °C: | 71,6 cSt |
| pH: Vapour of Partition Solubility Decomp Melting p Explosiv Oxidising Flammal Flash Po Flammal Autoignit Lower fla | atic viscosity at 40 °C: | 61 cSt |
| Vapour of Partition Solubility Decomp Melting p Explosiv Oxidising Flammal Flash Po Flammal Autoignit Lower fla | ntration: | Non-applicable * |
| Partition Solubility Decomp Melting p Explosiv Oxidising Flammal Flash Po Flammal Autoignit Lower fla | | Non-applicable * |
| Solubility Solubility Decomp Melting p Explosiv Oxidising Flammal Flash Pc Flammal Autoignit Lower fla | r density at 15 ℃: | Non-applicable * |
| Solubility Decomp Melting p Explosiv Oxidising Flammal Flash Pc Flammal Autoignit Lower fla Upper fla | on coefficient n-octanol/water 15 °C: | Non-applicable * |
| Decomp Melting p Explosiv Oxidising Flammal Flash Po Flammal Autoignit Lower fla Upper fla | lity in water at 15 °C: | Non-applicable * |
| Melting p Explosiv Oxidising Flammal Flash Pc Flammal Autoignit Lower fla Upper fla | lity properties: | Slightly soluble in cold water |
| Explosiv Oxidising Flammal Flash Po Flammal Autoignit Lower fla Upper fla | nposition temperature: | Non-applicable * |
| Oxidising Flammal Flash Po Flammal Autoignit Lower fla Upper fla | g point/freezing point: | Non-applicable * |
| Flamma l Flash Po Flammal Autoignit Lower fla Upper fla | sive properties: | Non-applicable * |
| Flash Po Flammal Autoignit Lower fla Upper fla | ing properties: | Non-applicable * |
| Flammal Autoignit Lower fla Upper fla | nability: | |
| Autoignii Lower fla Upper fla | Point: | >200 °C (ASTM D-92) |
| Lower fla Upper fla | nability (solid, gas): | Non-applicable * |
| Upper fla | nition temperature: | 288 °C |
| | flammability limit: | Non-applicable * |
| | flammability limit: | Non-applicable * |
| Explosiv | sive: | |
| Lower ex | explosive limit: | Non-applicable * |
| Upper ex | explosive limit: | Non-applicable * |
| 9.2 Other inf | information: | |
| Surface | e tension at 15 °C: | Non-applicable * |
| Refractio | tion index: | Non-applicable * |

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity:



SECTION 10: STABILITY AND REACTIVITY (continued)

No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7.

10.2 Chemical stability:

Chemically stable under the conditions of storage, handling and use.

10.3 Possibility of hazardous reactions:

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

10.4 Conditions to avoid:

Applicable for handling and storage at room temperature:

| Shock and friction | Contact with air | Increase in temperature | Sunlight | Humidity |
|--------------------|------------------|-------------------------|----------------|----------------|
| Not applicable | Not applicable | Not applicable | Not applicable | Not applicable |

10.5 Incompatible materials:

| | Acids | Water | Oxidising materials | Combustible materials | Others | | |
|----|-------------------|----------------|---------------------|-----------------------|-------------------------------|--|--|
| Av | void strong acids | Not applicable | Not applicable | Not applicable | Avoid alkalis or strong bases | | |

10.6 Hazardous decomposition products:

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO2), carbon monoxide and other organic compounds.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

The experimental information related to the toxicological properties of the product itself is not available

Dangerous health implications:

In case of exposure that is repetitive, prolonged or at concentrations higher than the recommended occupational exposure limits, adverse effects on health may result, depending on the means of exposure:

- A- Ingestion (acute effect):
 - Acute toxicity : Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for consumption. For more information see section 3.
 - Corrosivity/Irritability: Based on available data, the classification criteria are not met. However, it does contain substances classified as dangerous for this effect. For more information see section 3.
- B- Inhalation (acute effect):
 - Acute toxicity : Based on available data, the classification criteria are not met, as it does not contain substances classified
 - as dangerous for inhalation. For more information see section 3.
 - Corrosivity/Irritability: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
- C- Contact with the skin and the eyes (acute effect):
 - Contact with the skin: Based on available data, the classification criteria are not met. However, it contains substances classified as dangerous for skin contact. For more information see section 3.
 - Contact with the eyes: Based on available data, the classification criteria are not met. However, it does contain substances classified as dangerous for this effect. For more information see section 3.
- D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):
 - Carcinogenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for the effects mentioned. For more information see section 3.
 - IARC: Non-applicable
 - Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
 - Reproductive toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
- E- Sensitizing effects:



SECTION 11: TOXICOLOGICAL INFORMATION (continued)

- Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous with sensitising effects. For more information see section 3.
- Cutaneous: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
- F- Specific target organ toxicity (STOT) single exposure:

Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

- G- Specific target organ toxicity (STOT)-repeated exposure:
 - Specific target organ toxicity (STOT)-repeated exposure: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
 - Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
- H- Aspiration hazard:

Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

Other information:

Non-applicable

Specific toxicology information on the substances:

| Identification | Acute toxicity | | Genus |
|--|-----------------|----------------|-------|
| zinc O,O,O´,O´-tetrakis(1,3-dimethylbutyl) bis(phosphorodithioate) | LD50 oral | 2230 mg/kg | Rat |
| CAS: 2215-35-2 | LD50 dermal | Non-applicable | |
| EC: 218-679-9 | LC50 inhalation | Non-applicable | |
| Phosphorodithioic acid, mixed O,O-bis(1,3-dimethylbutyl and iso-Pr) esters, zinc salts | LD50 oral | 3100 mg/kg | Rat |
| CAS: 84605-29-8 | LD50 dermal | Non-applicable | |
| EC: 283-392-8 | LC50 inhalation | Non-applicable | |

SECTION 12: ECOLOGICAL INFORMATION

The experimental information related to the eco-toxicological properties of the product itself is not available

Contains phosphates. Excessive discharge may cause eutrophication.

12.1 Toxicity:

| Identification | Acute toxicity | | Species | Genus |
|--|----------------|--------------------|---------|------------|
| zinc O,O,O′,O′-tetrakis(1,3-dimethylbutyl) bis (phosphorodithioate) | LC50 | 1 - 10 mg/L (96 h) | | Fish |
| CAS: 2215-35-2 | EC50 | 1 - 10 mg/L | | Crustacean |
| EC: 218-679-9 | EC50 | 1 - 10 mg/L | | Algae |
| Phosphorodithioic acid, mixed O,O-bis(1,3-dimethylbutyl and iso- Pr) esters, zinc salts | LC50 | 1 - 10 mg/L (96 h) | | Fish |
| CAS: 84605-29-8 | EC50 | 1 - 10 mg/L | | Crustacean |
| EC: 283-392-8 | EC50 | 1 - 10 mg/L | | Algae |

12.2 Persistence and degradability:

| Identification | Degradability | | Biodegradability | |
|---|---------------|----------------|------------------|----------------|
| zinc O,O,O´,O´-tetrakis(1,3-dimethylbutyl) bis (phosphorodithioate) | BOD5 | Non-applicable | Concentration | Non-applicable |
| CAS: 2215-35-2 | COD | Non-applicable | Period | 28 days |
| EC: 218-679-9 | BOD5/COD | Non-applicable | % Biodegradable | 1,5 % |

12.3 Bioaccumulative potential:

Not available

12.4 Mobility in soil:



SECTION 12: ECOLOGICAL INFORMATION (continued)

| Identification | Absorp | Absorption/desorption | | Volatility | |
|---|-----------------|-----------------------|------------|----------------|--|
| zinc O,O,O´,O´-tetrakis(1,3-dimethylbutyl) bis (phosphorodithioate) | Кос | Non-applicable | Henry | Non-applicable | |
| CAS: 2215-35-2 | Conclusion | Non-applicable | Dry soil | Non-applicable | |
| EC: 218-679-9 | Surface tension | 5,98E-2 N/m (22,2 °C) | Moist soil | Non-applicable | |

12.5 Results of PBT and vPvB assessment:

Product fails to meet PBT/vPvB criteria

12.6 Other adverse effects:

Not described

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

| Code | Description | Waste class (Regulation (EU) No 1357/2014) |
|----------|--|---|
| 16 05 09 | discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08 | Non dangerous |

Type of waste (Regulation (EU) No 1357/2014):

Non-applicable

Waste management (disposal and evaluation):

Consult the authorized waste service manager on the assessment and disposal operations in accordance with Annex 1 and Annex 2 (Directive 2008/98/EC). As under 15 01 (2014/955/EC) of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. We do not recommended disposal down the drain. See paragraph 6.2.

Regulations related to waste management:

In accordance with Annex II of Regulation (EC) No 1907/2006 (REACH) the community or state provisions related to waste management are stated

Community legislation: Directive 2008/98/EC, 2014/955/EU, Regulation (EU) No 1357/2014

SECTION 14: TRANSPORT INFORMATION

This product is not regulated for transport (ADR/RID,IMDG,IATA)

SECTION 15: REGULATORY INFORMATION

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

Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Non-applicable

Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Non-applicable

Regulation (EC) No 1005/2009, about substances that deplete the ozone layer: Non-applicable

Article 95, REGULATION (EU) No 528/2012: Non-applicable

REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Non-applicable

Seveso III:

Non-applicable

Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII REACH, etc): Non-applicable

Specific provisions in terms of protecting people or the environment:

It is recommended to use the information included in this safety data sheet as a basis for conducting workplace-specific risk assessments in order to establish the necessary risk prevention measures for the handling, use, storage and disposal of this product.

- CONTINUED ON NEXT PAGE -



SECTION 15: REGULATORY INFORMATION (continued)

Other legislation:

The product could be affected by sectorial legislation

15.2 Chemical safety assessment:

The supplier has not carried out evaluation of chemical safety.

SECTION 16: OTHER INFORMATION

Legislation related to safety data sheets:

This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) No 1907/2006 (Regulation (EC) No 2015/830)

Modifications related to the previous Safety Data Sheet which concerns the ways of managing risks.:

Non-applicable

Texts of the legislative phrases mentioned in section 3:

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3

CLP Regulation (EC) No 1272/2008:

Aquatic Chronic 2: H411 - Toxic to aquatic life with long lasting effects Aquatic Chronic 4: H413 - May cause long lasting harmful effects to aquatic life Eye Dam. 1: H318 - Causes serious eye damage Skin Irrit. 2: H315 - Causes skin irritation

Advice related to training:

Minimal training is recommended in order to prevent industrial risks for staff using this product and to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

Principal bibliographical sources:

http://echa.europa.eu http://eur-lex.europa.eu

Abbreviations and acronyms:

ADR: European agreement concerning the international carriage of dangerous goods by road

IMDG: International maritime dangerous goods code

IATA: International Air Transport Association

ICAO: International Civil Aviation Organisation

COD: Chemical Oxygen Demand

BOD5: 5-day biochemical oxygen demand

BCF: Bioconcentration factor LD50: Lethal Dose 50

LC50: Lethal Concentration 50

EC50: Effective concentration 50

Log-POW: Octanol-water partition coefficient

Koc: Partition coefficient of organic carbon

Product safety information sheet prepared in accordance with Article 32 of Regulation (EC) 1907/2006 (REACH); this document does not constitute a Safety Data Sheet under Article 31 of Regulation (EC) No. 1907/2006, as a Safety Data Sheet is not mandatory for this product

The information contained in this safety data sheet is based on sources, technical knowledge and current legislation at European and state level, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product, it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within our awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.