

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## ENGINE FLUSH & CLEANER 400ML

Version 8.0      Revision Date: 02.11.2020      SDS Number: 520499-00006      Date of last issue: 01.05.2020  
Date of first issue: 15.02.2013

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### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifier

Trade name : ENGINE FLUSH & CLEANER 400ML  
Product code : 05861 310 400

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

Use of the Sub-stance/Mixture : Additive, Detergent  
Professional use product

#### 1.3 Details of the supplier of the safety data sheet

Company : WÜRTH IRELAND LTD.  
Monaclinoe Ind. Est. Ballysimon  
Limerick  
Telephone : +353 61 430200  
Telefax : +353 61 412428  
E-mail address of person responsible for the SDS : prodsafe@wuerth.com

#### 1.4 Emergency telephone number

(NPIC):+353 1 8092566  
(General): +49 (0)6132 84463

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### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

##### Classification (REGULATION (EC) No 1272/2008)

Skin sensitisation, Category 1      H317: May cause an allergic skin reaction.  
Aspiration hazard, Category 1      H304: May be fatal if swallowed and enters airways.

#### 2.2 Label elements

##### Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal word : Danger

Hazard statements : H304 May be fatal if swallowed and enters airways.

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	H317	May cause an allergic skin reaction.
Supplemental Hazard Statements	: EUH066	Repeated exposure may cause skin dryness or cracking.
Precautionary statements	: <b>Prevention:</b>	
	P261	Avoid breathing mist or vapours.
	P280	Wear protective gloves.
	<b>Response:</b>	
	P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
	P331	Do NOT induce vomiting.
	P333 + P313	If skin irritation or rash occurs: Get medical advice/ attention.
	P362 + P364	Take off contaminated clothing and wash it before reuse.

### Hazardous components which must be listed on the label:

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics  
Benzenesulfonic acid, methyl-, mono-C20-24-branched alkyl derivs., calcium salts

### 2.3 Other hazards

Vapours may form explosive mixture with air.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

#### Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics	Not Assigned  01-2119457273-39	Asp. Tox. 1; H304	>= 90 - <= 100
Benzenesulfonic acid, methyl-, mono-C20-24-branched alkyl derivs., calcium salts	722503-68-6	Skin Sens. 1; H317 Aquatic Chronic 4; H413	>= 2.5 - < 10
Amines, polyethylenepoly-, reaction products with succinic anhydride polyisobutenyl derivs.	84605-20-9	Aquatic Chronic 4; H413	>= 2.5 - < 10
Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts	85940-28-9 288-917-4 01-2119521201-61	Skin Irrit. 2; H315 Eye Irrit. 2; H319 Aquatic Chronic 2; H411	>= 1 - < 2.5
Isotridecanol, ethoxylated	69011-36-5 500-241-6	Aquatic Chronic 3; H412	>= 1 - < 2.5

For explanation of abbreviations see section 16.

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### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

- General advice : In the case of accident or if you feel unwell, seek medical advice immediately.  
When symptoms persist or in all cases of doubt seek medical advice.
- Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).
- If inhaled : If inhaled, remove to fresh air.  
Get medical attention if symptoms occur.
- In case of skin contact : In case of contact, immediately flush skin with plenty of water.  
Remove contaminated clothing and shoes.  
Get medical attention.  
Wash clothing before reuse.  
Thoroughly clean shoes before reuse.
- In case of eye contact : Flush eyes with water as a precaution.  
Get medical attention if irritation develops and persists.
- If swallowed : If swallowed, DO NOT induce vomiting.  
If vomiting occurs have person lean forward.  
Call a physician or poison control centre immediately.  
Never give anything by mouth to an unconscious person.

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

- Risks : May be fatal if swallowed and enters airways.  
May cause an allergic skin reaction.  
Repeated exposure may cause skin dryness or cracking.

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

- Treatment : Treat symptomatically and supportively.
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### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

- Suitable extinguishing media : Water spray  
Alcohol-resistant foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry chemical
- Unsuitable extinguishing media : High volume water jet

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### 5.2 Special hazards arising from the substance or mixture

- |                                       |   |  |
|---------------------------------------|---|--|
| Specific hazards during fire-fighting | : | Do not use a solid water stream as it may scatter and spread fire.<br>Flash back possible over considerable distance.<br>Vapours may form explosive mixtures with air.<br>Exposure to combustion products may be a hazard to health. |
| Hazardous combustion products         | : | Carbon oxides<br>Sulphur oxides<br>Metal oxides<br>Nitrogen oxides (NO <sub>x</sub> )<br>Oxides of phosphorus  |

### 5.3 Advice for firefighters

- |   |   |   |
|---|---|---|
| Special protective equipment for firefighters | : | In the event of fire, wear self-contained breathing apparatus.<br>Use personal protective equipment.  |
| Specific extinguishing methods                | : | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.<br>Use water spray to cool unopened containers.<br>Remove undamaged containers from fire area if it is safe to do so.<br>Evacuate area. |

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## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

- |                      |   |   |
|----------------------|---|---|
| Personal precautions | : | Remove all sources of ignition.<br>Use personal protective equipment.<br>Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8). |
|----------------------|---|---|

### 6.2 Environmental precautions

- |                           |   |  |
|---------------------------|---|--|
| Environmental precautions | : | Avoid release to the environment.<br>Prevent further leakage or spillage if safe to do so.<br>Prevent spreading over a wide area (e.g. by containment or oil barriers).<br>Retain and dispose of contaminated wash water.<br>Local authorities should be advised if significant spillages cannot be contained. |
|---------------------------|---|--|

### 6.3 Methods and material for containment and cleaning up

- |                         |   |   |
|-------------------------|---|---|
| Methods for cleaning up | : | Non-sparking tools should be used.<br>Soak up with inert absorbent material.<br>Suppress (knock down) gases/vapours/mists with a water spray jet.<br>For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container.<br>Clean up remaining materials from spill with suitable absor- |
|-------------------------|---|---|

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bent.

Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.

Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

### 6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

- |                         |   |   |
|-------------------------|---|---|
| Technical measures      | : | See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.   |
| Local/Total ventilation | : | If sufficient ventilation is unavailable, use with local exhaust ventilation.   |
| Advice on safe handling | : | Do not get on skin or clothing.<br>Avoid breathing mist or vapours.<br>Do not swallow.<br>Avoid contact with eyes.<br>Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment<br>Keep container tightly closed.<br>Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.<br>Take precautionary measures against static discharges.<br>Take care to prevent spills, waste and minimize release to the environment. |
| Hygiene measures        | : | If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place. When using do not eat, drink or smoke. Contaminated work clothing should not be allowed out of the workplace.<br>Wash contaminated clothing before re-use.  |

### 7.2 Conditions for safe storage, including any incompatibilities

- |   |   |   |
|---|---|---|
| Requirements for storage areas and containers | : | Keep in properly labelled containers. Store locked up. Keep tightly closed. Keep in a cool, well-ventilated place. Store in accordance with the particular national regulations. Keep away from heat and sources of ignition. |
| Advice on common storage                      | : | Do not store with the following product types:<br>Strong oxidizing agents<br>Explosives<br>Gases  |

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### 7.3 Specific end use(s)

Specific use(s) : No data available

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics	Not Assigned	OELV - 8 hrs (TWA) (inhalable fraction)	5 mg/m <sup>3</sup>	IE OEL

#### Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
Isotridecanol, ethoxylated	Workers	Inhalation	Long-term systemic effects	294 mg/m <sup>3</sup>
	Workers	Skin contact	Long-term systemic effects	2080 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	87 mg/m <sup>3</sup>
	Consumers	Skin contact	Long-term systemic effects	1205 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	25 mg/kg bw/day
	Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts	Workers	Inhalation	Long-term systemic effects
Workers		Skin contact	Long-term systemic effects	9.6 mg/kg bw/day
Consumers		Inhalation	Long-term systemic effects	1.67 mg/m <sup>3</sup>
Consumers		Skin contact	Long-term systemic effects	4.8 mg/kg bw/day
Consumers	Ingestion	Long-term systemic effects	0.19 mg/kg bw/day	

#### Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
Isotridecanol, ethoxylated	Fresh water	0.074 mg/l
	Freshwater - intermittent	0.015 mg/l
	Marine water	0.0074 mg/l
	Sewage treatment plant	1.4 mg/l
	Fresh water sediment	0.604 mg/kg dry weight (d.w.)

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	Marine sediment	0.0604 mg/kg dry weight (d.w.)
	Soil	0.1 mg/kg dry weight (d.w.)
Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts	Fresh water	0.002 mg/l
	Marine water	0.0002 mg/l
	Intermittent use/release	0.02 mg/l
	Sewage treatment plant	100 mg/l
	Fresh water sediment	19.3 mg/kg
	Marine sediment	1.93 mg/kg
	Soil	15.7 mg/kg

### 8.2 Exposure controls

#### Engineering measures

Ensure adequate ventilation, especially in confined areas.  
Minimize workplace exposure concentrations.

#### Personal protective equipment

Eye protection : Wear the following personal protective equipment:  
Safety glasses  
Equipment should conform to I.S. EN 166

#### Hand protection

Material : Nitrile rubber  
Break through time : > 480 min  
Glove thickness :  $\geq$  0.4 mm  
Directive : Equipment should conform to I.S. EN 374  
Wearing time :  $\leq$  240 min

Remarks : Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.

Skin and body protection : Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.  
Wear the following personal protective equipment:  
If assessment demonstrates that there is a risk of explosive atmospheres or flash fires, use flame retardant antistatic protective clothing.  
Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).

Respiratory protection : If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.  
Equipment should conform to I.S. EN 14387

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Filter type : Combined particulates and organic vapour type (A-P)

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### SECTION 9: Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

Appearance : liquid

Colour : yellow, brown

Odour : characteristic

Odour Threshold : No data available

pH : No data available

Melting point/freezing point : No data available

Initial boiling point and boiling range : No data available

Flash point : 63 °C

Evaporation rate : No data available

Flammability (solid, gas) : Not applicable

Upper explosion limit / Upper flammability limit : 6.1 %(V)  
Solvent

Lower explosion limit / Lower flammability limit : 0.6 %(V)  
Solvent

Vapour pressure : No data available

Relative vapour density : > 1

Density : 0.81 g/cm<sup>3</sup> (20 °C)

Solubility(ies)  
Water solubility : insoluble

Partition coefficient: n-octanol/water : Not applicable

Auto-ignition temperature : 230 °C  
Solvent

Decomposition temperature : No data available

Viscosity  
Viscosity, kinematic : < 7 mm<sup>2</sup>/s (40 °C)



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Explosive properties : Not explosive  
Oxidizing properties : The substance or mixture is not classified as oxidizing.

### 9.2 Other information

Flammability (liquids) : Ignitable (see flash point)  
Particle size : Not applicable

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Not classified as a reactivity hazard.

### 10.2 Chemical stability

Stable under normal conditions.

### 10.3 Possibility of hazardous reactions

Hazardous reactions : Combustible liquid.  
Vapours may form explosive mixture with air.  
Can react with strong oxidizing agents.

### 10.4 Conditions to avoid

Conditions to avoid : Heat, flames and sparks.

### 10.5 Incompatible materials

Materials to avoid : Oxidizing agents

### 10.6 Hazardous decomposition products

No hazardous decomposition products are known.

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Information on likely routes of exposure : Inhalation  
Skin contact  
Ingestion  
Eye contact

#### Acute toxicity

|| Not classified based on available information.

#### Components:

#### Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg  
Remarks: Based on data from similar materials

Acute inhalation toxicity : LC50 (Rat): > 4,951 mg/m3

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Exposure time: 4 h  
Test atmosphere: vapour  
Assessment: The substance or mixture has no acute inhalation toxicity  
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rabbit):  $\geq 3,160$  mg/kg  
Assessment: The substance or mixture has no acute dermal toxicity  
Remarks: Based on data from similar materials

### **Benzenesulfonic acid, methyl-, mono-C20-24-branched alkyl derivs., calcium salts:**

Acute oral toxicity : LD50 (Rat):  $> 5,000$  mg/kg  
Method: OECD Test Guideline 401  
Remarks: Based on data from similar materials

Acute inhalation toxicity : LC50 (Rat):  $> 1.9$  mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403  
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rabbit):  $> 2,000$  mg/kg  
Assessment: The substance or mixture has no acute dermal toxicity  
Remarks: Based on data from similar materials

### **Amines, polyethylenepoly-, reaction products with succinic anhydride polyisobutenyl derivs.:**

Acute oral toxicity : LD50 (Rat):  $> 5,000$  mg/kg  
Method: OECD Test Guideline 401

Acute dermal toxicity : LD50 (Rat):  $> 2,000$  mg/kg  
Method: OECD Test Guideline 402  
Assessment: The substance or mixture has no acute dermal toxicity

### **Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts:**

Acute oral toxicity : LD50 (Rat):  $3,080$  mg/kg

Acute inhalation toxicity : LC50 (Rat):  $> 2$  mg/l  
Exposure time: 1 h  
Test atmosphere: dust/mist  
Assessment: The substance or mixture has no acute inhalation toxicity  
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rabbit):  $> 5,000$  mg/kg

### **Isotridecanol, ethoxylated:**

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Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg  
Method: OECD Test Guideline 423  
Remarks: Based on data from similar materials

Acute inhalation toxicity : LC50 (Rat): > 1.6 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg  
Method: OECD Test Guideline 402  
Remarks: Based on data from similar materials

### Skin corrosion/irritation

|| Repeated exposure may cause skin dryness or cracking.

#### Components:

##### **Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics:**

Species : Rabbit  
Result : Mild skin irritation

Assessment : Repeated exposure may cause skin dryness or cracking.

##### **Benzenesulfonic acid, methyl-, mono-C20-24-branched alkyl derivs., calcium salts:**

Species : Rabbit  
Result : No skin irritation  
Remarks : Based on data from similar materials

##### **Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts:**

Species : Rabbit  
Method : OECD Test Guideline 404  
Result : Skin irritation

### Serious eye damage/eye irritation

|| Not classified based on available information.

#### Components:

##### **Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics:**

Species : Rabbit  
Method : OECD Test Guideline 405  
Result : No eye irritation  
Remarks : Based on data from similar materials

##### **Benzenesulfonic acid, methyl-, mono-C20-24-branched alkyl derivs., calcium salts:**

Species : Rabbit  
Result : No eye irritation  
Remarks : Based on data from similar materials

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### **Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts:**

Species : Rabbit  
Result : Irritation to eyes, reversing within 21 days

### **Respiratory or skin sensitisation**

#### **Skin sensitisation**

|| May cause an allergic skin reaction.

#### **Respiratory sensitisation**

|| Not classified based on available information.

#### **Components:**

#### **Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics:**

Test Type : Maximisation Test  
Exposure routes : Skin contact  
Species : Guinea pig  
Result : negative  
Remarks : Based on data from similar materials

#### **Benzenesulfonic acid, methyl-, mono-C20-24-branched alkyl derivs., calcium salts:**

Test Type : Human repeat insult patch test (HRIPT)  
Exposure routes : Skin contact  
Result : positive  
Remarks : Based on data from similar materials

Assessment : Probability or evidence of skin sensitisation in humans

### **Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts:**

Test Type : Buehler Test  
Exposure routes : Skin contact  
Species : Guinea pig  
Method : OECD Test Guideline 406  
Result : negative

#### **Isotridecanol, ethoxylated:**

Test Type : Maximisation Test  
Exposure routes : Skin contact  
Species : Guinea pig  
Result : negative  
Remarks : Based on data from similar materials

#### **Germ cell mutagenicity**

|| Not classified based on available information.

#### **Components:**

#### **Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics:**

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Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test  
Result: negative  
Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)  
Species: Mouse  
Application Route: Ingestion  
Result: negative

Germ cell mutagenicity- Assessment : Classified based on benzene content < 0.1% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note P)

### **Benzenesulfonic acid, methyl-, mono-C20-24-branched alkyl derivs., calcium salts:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Method: OECD Test Guideline 471  
Result: negative  
Remarks: Based on data from similar materials

Test Type: In vitro mammalian cell gene mutation test  
Method: OECD Test Guideline 476  
Result: negative  
Remarks: Based on data from similar materials

Test Type: Chromosome aberration test in vitro  
Method: OECD Test Guideline 473  
Result: negative  
Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)  
Species: Mouse  
Application Route: Ingestion  
Method: OECD Test Guideline 474  
Result: negative  
Remarks: Based on data from similar materials

### **Amines, polyethylenepoly-, reaction products with succinic anhydride polyisobutenyl derivs.:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Method: OECD Test Guideline 471  
Result: negative

Test Type: Chromosome aberration test in vitro  
Result: negative  
Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)  
Species: Mouse  
Application Route: Intraperitoneal injection  
Method: OECD Test Guideline 474  
Result: negative

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### **Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)  
Species: Mouse  
Application Route: Intraperitoneal injection  
Method: OECD Test Guideline 474  
Result: negative

### **Isotridecanol, ethoxylated:**

Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test  
Result: negative  
Remarks: Based on data from similar materials

### **Carcinogenicity**

Not classified based on available information.

### **Components:**

#### **Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics:**

Species : Rat  
Application Route : inhalation (vapour)  
Exposure time : 105 weeks  
Result : negative  
Remarks : Based on data from similar materials

Carcinogenicity - Assessment : Classified based on benzene content < 0.1% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note P)

### **Reproductive toxicity**

Not classified based on available information.

### **Components:**

#### **Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics:**

Effects on fertility : Test Type: Reproduction/Developmental toxicity screening test  
Species: Rat  
Application Route: inhalation (vapour)  
Result: negative

Effects on foetal development : Test Type: Embryo-foetal development  
Species: Rat  
Application Route: inhalation (vapour)  
Result: negative

### **Benzenesulfonic acid, methyl-, mono-C20-24-branched alkyl derivs., calcium salts:**

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Effects on fertility : Test Type: One-generation reproduction toxicity study  
Species: Rat  
Application Route: Ingestion  
Method: OECD Test Guideline 415  
Result: negative  
Remarks: Based on data from similar materials

### **Amines, polyethylenepoly-, reaction products with succinic anhydride polyisobutenyl derivs.:**

Effects on fertility : Test Type: Reproduction/Developmental toxicity screening test  
Species: Rat  
Application Route: Ingestion  
Method: OECD Test Guideline 421  
Result: negative

Effects on foetal development : Test Type: Reproduction/Developmental toxicity screening test  
Species: Rat  
Application Route: Ingestion  
Method: OECD Test Guideline 421  
Result: negative

### **Isotridecanol, ethoxylated:**

Effects on foetal development : Test Type: Embryo-foetal development  
Species: Rat  
Application Route: Ingestion  
Method: OECD Test Guideline 414  
Result: negative  
Remarks: Based on data from similar materials

### **STOT - single exposure**

|| Not classified based on available information.

### **STOT - repeated exposure**

|| Not classified based on available information.

### **Repeated dose toxicity**

#### **Components:**

#### **Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics:**

Species : Rat  
NOAEL :  $\geq 1,000$  mg/kg  
Application Route : Ingestion  
Exposure time : 54 Days  
Remarks : Based on data from similar materials

#### **Benzenesulfonic acid, methyl-, mono-C20-24-branched alkyl derivs., calcium salts:**

Species : Rat  
NOAEL :  $> 300$  mg/kg  
Application Route : Ingestion

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Exposure time : 29 Days  
Method : OECD Test Guideline 407  
Remarks : Based on data from similar materials

Species : Rat  
NOAEL : > 600 mg/kg  
Application Route : Skin contact  
Exposure time : 28 Days  
Method : OECD Test Guideline 410  
Remarks : Based on data from similar materials

### **Amines, polyethylenepoly-, reaction products with succinic anhydride polyisobutenyl derivs.:**

Species : Rat  
NOAEL : 1,000 mg/kg  
Application Route : Ingestion  
Exposure time : 4 Weeks  
Method : OECD Test Guideline 407

### **Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts:**

Species : Rat  
NOAEL : 125 mg/kg  
Application Route : Ingestion  
Exposure time : 28 Days  
Remarks : Based on data from similar materials

### **Isotridecanol, ethoxylated:**

Species : Rat  
LOAEL : > 100 mg/kg  
Application Route : Ingestion  
Exposure time : 90 Days  
Remarks : Based on data from similar materials

### **Aspiration toxicity**

|| May be fatal if swallowed and enters airways.

### **Components:**

#### **Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics:**

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

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## SECTION 12: Ecological information

### 12.1 Toxicity

#### **Components:**

#### **Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics:**



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Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): > 1,000 mg/l  
Exposure time: 96 h  
Test substance: Water Accommodated Fraction  
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): > 1,000 mg/l  
Exposure time: 48 h  
Test substance: Water Accommodated Fraction  
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EL50 (Pseudokirchneriella subcapitata (green algae)): > 1,000 mg/l  
Exposure time: 72 h  
Test substance: Water Accommodated Fraction  
Method: OECD Test Guideline 201  
Remarks: Based on data from similar materials

NOELR (Pseudokirchneriella subcapitata (green algae)): 1,000 mg/l  
Exposure time: 72 h  
Test substance: Water Accommodated Fraction  
Method: OECD Test Guideline 201  
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOELR: > 1 mg/l  
Exposure time: 21 d  
Species: Daphnia magna (Water flea)  
Method: OECD Test Guideline 211  
Remarks: Based on data from similar materials

### **Benzenesulfonic acid, methyl-, mono-C20-24-branched alkyl derivs., calcium salts:**

Toxicity to fish : LL50 (Pimephales promelas (fathead minnow)): > 100 mg/l  
Exposure time: 96 h  
Test substance: Water Accommodated Fraction  
Method: OECD Test Guideline 203  
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): > 100 mg/l  
Exposure time: 48 h  
Test substance: Water Accommodated Fraction  
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : EL50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l  
Exposure time: 96 h  
Test substance: Water Accommodated Fraction  
Remarks: Based on data from similar materials

NOELR (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l  
Exposure time: 96 h  
Test substance: Water Accommodated Fraction  
Remarks: Based on data from similar materials

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Toxicity to microorganisms : EC50 : > 100 mg/l  
Exposure time: 3 h  
Method: OECD Test Guideline 209  
Remarks: Based on data from similar materials

### **Amines, polyethylenepoly-, reaction products with succinic anhydride polyisobutenyl derivs.:**

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): > 1,000 mg/l  
Exposure time: 96 h  
Test substance: Water Accommodated Fraction

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): > 1,000 mg/l  
Exposure time: 48 h  
Test substance: Water Accommodated Fraction

Toxicity to algae/aquatic plants : EL50 (Pseudokirchneriella subcapitata (green algae)): 320 mg/l  
Exposure time: 96 h  
Test substance: Water Accommodated Fraction

### **Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts:**

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): 4.5 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203  
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 5.4 mg/l  
Exposure time: 48 h  
Test substance: Water Accommodated Fraction  
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : EC50 (Selenastrum capricornutum (green algae)): 2.1 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 201  
Remarks: Based on data from similar materials

NOEC (Selenastrum capricornutum (green algae)): 1 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 201  
Remarks: Based on data from similar materials

Toxicity to microorganisms : EC50 : > 10,000 mg/l  
Exposure time: 3 h  
Method: OECD Test Guideline 209  
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0.4 mg/l  
Exposure time: 21 d  
Species: Daphnia magna (Water flea)  
Method: OECD Test Guideline 211  
Remarks: Based on data from similar materials

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### Isotridecanol, ethoxylated:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 1 - 10 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203  
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 1 - 10 mg/l  
Exposure time: 48 h  
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : EL50 (Desmodesmus subspicatus (green algae)): > 1 - 10 mg/l  
Exposure time: 72 h  
Test substance: Water Accommodated Fraction  
Remarks: Based on data from similar materials

NOELR (Desmodesmus subspicatus (green algae)): > 1 mg/l  
Exposure time: 72 h  
Test substance: Water Accommodated Fraction  
Remarks: Based on data from similar materials

Toxicity to microorganisms : EC10 (Pseudomonas putida): > 1 mg/l  
Exposure time: 5 h  
Remarks: Based on data from similar materials

Toxicity to fish (Chronic toxicity) : NOEC: > 0.1 - 1 mg/l

## 12.2 Persistence and degradability

### Components:

#### **Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics:**

Biodegradability : Result: Readily biodegradable.  
Biodegradation: 80 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301F  
Remarks: Based on data from similar materials

#### **Benzenesulfonic acid, methyl-, mono-C20-24-branched alkyl derivs., calcium salts:**

Biodegradability : Result: Not readily biodegradable.  
Method: OECD Test Guideline 301D  
Remarks: Based on data from similar materials

#### **Amines, polyethylenepoly-, reaction products with succinic anhydride polyisobutenyl derivs.:**

Biodegradability : Result: Not readily biodegradable.  
Biodegradation: 16 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301B

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### **Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts:**

Biodegradability : Result: Not readily biodegradable.  
Biodegradation: 1.5 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301B

### **Isotridecanol, ethoxylated:**

Biodegradability : Result: Readily biodegradable.  
Biodegradation: 82 %  
Exposure time: 28 d

## 12.3 Bioaccumulative potential

### Components:

#### **Benzenesulfonic acid, methyl-, mono-C20-24-branched alkyl derivs., calcium salts:**

Partition coefficient: n-octanol/water : log Pow: > 4  
Remarks: Expert judgement

#### **Amines, polyethylenepoly-, reaction products with succinic anhydride polyisobutenyl derivs.:**

Partition coefficient: n-octanol/water : log Pow: 31.8  
Remarks: Calculation

#### **Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts:**

Partition coefficient: n-octanol/water : log Pow: 8.87  
Remarks: Calculation

#### **Isotridecanol, ethoxylated:**

Bioaccumulation : Species: Pimephales promelas (fathead minnow)  
Bioconcentration factor (BCF): < 500  
Remarks: Based on data from similar materials

Partition coefficient: n-octanol/water : log Pow: 6.4  
Method: OECD Test Guideline 117

## 12.4 Mobility in soil

No data available

## 12.5 Results of PBT and vPvB assessment

Not relevant

## 12.6 Other adverse effects

No data available

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### SECTION 13: Disposal considerations

#### 13.1 Waste treatment methods

- Product : Dispose of in accordance with local regulations.  
According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.  
Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.
- Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.  
Empty containers retain residue and can be dangerous.  
Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury and/or death.  
If not otherwise specified: Dispose of as unused product.
- Waste Code : The following Waste Codes are only suggestions:
- used product  
07 07 04, other organic solvents, washing liquids and mother liquors
  - unused product  
07 07 04, other organic solvents, washing liquids and mother liquors
  - uncleaned packagings  
15 01 10, packaging containing residues of or contaminated by hazardous substances
- 

### SECTION 14: Transport information

#### 14.1 UN number

Not regulated as a dangerous good

#### 14.2 UN proper shipping name

Not regulated as a dangerous good

#### 14.3 Transport hazard class(es)

Not regulated as a dangerous good

#### 14.4 Packing group

Not regulated as a dangerous good

#### 14.5 Environmental hazards

Not regulated as a dangerous good

#### 14.6 Special precautions for user

Not applicable

#### 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

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Remarks : Not applicable for product as supplied.

### SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) : Conditions of restriction for the following entries should be considered: Number on list 3

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : Not applicable

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable

Regulation (EU) 2019/1021 on persistent organic pollutants (recast) : Not applicable

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. : Not applicable

Volatile organic compounds : Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control) Volatile organic compounds (VOC) content: 90.2 %

Regulation (EC) No. 648/2004, as amended : 30 % and more: Aliphatic hydrocarbons  
less than 5 %: Non-ionic surfactants

#### Other regulations:

Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

#### 15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

Other information : Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

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### Full text of H-Statements

H304 : May be fatal if swallowed and enters airways.  
H315 : Causes skin irritation.  
H317 : May cause an allergic skin reaction.  
H319 : Causes serious eye irritation.  
H411 : Toxic to aquatic life with long lasting effects.  
H412 : Harmful to aquatic life with long lasting effects.  
H413 : May cause long lasting harmful effects to aquatic life.

### Full text of other abbreviations

Aquatic Chronic : Long-term (chronic) aquatic hazard  
Asp. Tox. : Aspiration hazard  
Eye Irrit. : Eye irritation  
Skin Irrit. : Skin irritation  
Skin Sens. : Skin sensitisation  
IE OEL : Ireland. List of Chemical Agents and Occupational Exposure Limit Values - Schedule 1  
IE OEL / OELV - 8 hrs (TWA) : Occupational exposure limit value (8-hour reference period)

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AIIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

### Further information

Sources of key data used to compile the Safety Data : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agen-

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Sheet cy, <http://echa.europa.eu/>

**Classification of the mixture:**

Skin Sens. 1	H317
Asp. Tox. 1	H304

**Classification procedure:**

Calculation method
Calculation method

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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

IE / EN