SAFETY DATA SHEET
ENGINE FLUSH

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

1.1. Product identifier

Product name ENGINE FLUSH

Product number ZMF300

UFI UFI: AVYR-YAC7-1A3F-T2RY

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

Identified uses Additive for motor oil. Additive for diesel oil.

1.3. Details of the supplier of the safety data sheet

Supplier
TETROSYL EUROPE
79 rue du chemin vert
59.273 Fretin
TEL: 03 20 28 06 30
qualite@tetrosyl-france.com

Manufacturer
TETROSYL LIMITED
Bury
Lancashire
England
BL9 7NY
0161 764 5981
0161 797 5899
info@tetrosyl.com

1.4. Emergency telephone number

Emergency telephone +44 (0)161 764 5981 (24 hrs)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (SI 2019 No. 720)

Physical hazards Not Classified

Health hazards Asp. Tox. 1 - H304

Environmental hazards Aquatic Chronic 3 - H412

Environmental The product contains a substance which is harmful to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.

2.2. Label elements

Hazard pictograms

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Signal word	Danger
Hazard statements	H304 May be fatal if swallowed and enters airways. H412 Harmful to aquatic life with long lasting effects.
Precautionary statements	P101 If medical advice is needed, have product container or label at hand. P102 Keep out of reach of children. P273 Avoid release to the environment. P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor. P331 Do NOT induce vomiting. P405 Store locked up. P501 Dispose of contents/ container in accordance with national regulations.
Supplemental label information	EUH066 Repeated exposure may cause skin dryness or cracking.
UFI	UFI: AVYR-YAC7-1A3F-T2RY
Contains	DISTILLATES (PETROLEUM), HYDROTREATED LIGHT; KEROSINE - UNSPECIFIED, AROMATIC HYDROCARBONS (<0.1% BENZENE)

2.3. Other hazards

This substance is not classified as PBT or vPvB according to current UK criteria.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT; KEROSINE - UNSPECIFIED **10-<30%**

CAS number: — EC number: 926-141-6

Repeated exposure may cause skin dryness or cracking.

Classification
Asp. Tox. 1 - H304

AROMATIC HYDROCARBONS (<0.1% BENZENE) **10-<30%**

CAS number: 64742-95-6 EC number: 918-668-5

Classification
Flam. Liq. 3 - H226
STOT SE 3 - H335, H336
Asp. Tox. 1 - H304
Aquatic Chronic 2 - H411

The full text for all hazard statements is displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information Remove affected person from source of contamination. Effects may be delayed. Keep affected person under observation. Move affected person to fresh air at once. Keep affected person away from heat, sparks and flames. Place unconscious person on the side in the recovery position and ensure breathing can take place. Keep the affected person warm and at rest. Get prompt medical attention.

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Inhalation Remove affected person from source of contamination. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Keep affected person under observation. Get medical attention. Show this Safety Data Sheet to the medical personnel.

Ingestion Rinse mouth thoroughly with water. Give plenty of water to drink. Give milk instead of water if readily available. Keep affected person under observation. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention immediately. Show this Safety Data Sheet to the medical personnel. Never give anything by mouth to an unconscious person. Keep affected person away from heat, sparks and flames.

Skin contact Remove contaminated clothing immediately and wash skin with soap and water. Consult a physician for specific advice.

Eye contact Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Do not rub eye. Get medical attention if any discomfort continues.

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

General information The severity of the symptoms described will vary dependent on the concentration and the length of exposure. Effects may be delayed. Keep affected person under observation.

Inhalation Vapours in high concentrations are anaesthetic. Symptoms following overexposure may include the following: Headache. Fatigue. Dizziness. Central nervous system depression.

Ingestion May cause discomfort if swallowed. May cause stomach pain or vomiting. May cause nausea, headache, dizziness and intoxication. Fumes from the stomach contents may be inhaled, resulting in the same symptoms as inhalation. Congestion of the lungs may occur, producing severe shortness of breath.

Skin contact Prolonged or repeated contact with skin may cause irritation, redness and dermatitis.

Eye contact May cause temporary eye irritation.

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

Notes for the doctor No specific recommendations. If in doubt, get medical attention promptly.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Extinguish with alcohol-resistant foam, carbon dioxide or dry powder. Use fire-extinguishing media suitable for the surrounding fire.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards Fire creates: Carbon monoxide (CO). Carbon dioxide (CO_2). May form explosive mixture with air at very high concentration.

Hazardous combustion products Oxides of carbon. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

5.3. Advice for firefighters

Protective actions during firefighting No specific firefighting precautions known.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

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Personal precautions Use suitable respiratory protection if ventilation is inadequate. No smoking, sparks, flames or other sources of ignition near spillage. Avoid contact with skin and eyes. In case of spills, beware of slippery floors and surfaces. For personal protection, see Section 8. Avoid inhalation of vapours and contact with skin and eyes.

6.2. Environmental precautions

Environmental precautions Do not discharge into drains or watercourses or onto the ground. Avoid the spillage or runoff entering drains, sewers or watercourses. Avoid discharge to the aquatic environment. Collect and dispose of spillage as indicated in Section 13.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up For waste disposal, see Section 13. Stop leak if possible without risk. Eliminate all sources of ignition. No smoking, sparks, flames or other sources of ignition near spillage. Provide adequate ventilation. Provide adequate ventilation. Contain spillage with sand, earth or other suitable non-combustible material. Avoid the spillage or runoff entering drains, sewers or watercourses. Cover large spillages with alcohol-resistant foam. Absorb spillage with inert, damp, non-combustible material. Flush contaminated area with plenty of water. Collect and place in suitable waste disposal containers and seal securely. For waste disposal, see Section 13.

6.4. Reference to other sections

Reference to other sections For waste disposal, see section 13. For personal protection, see Section 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Read and follow manufacturer's recommendations. Eliminate all sources of ignition. Keep away from heat, sparks and open flame. Static electricity and formation of sparks must be prevented. Do not eat, drink or smoke when using the product. Avoid inhalation of vapours/spray and contact with skin and eyes. Good personal hygiene procedures should be implemented. Mechanical ventilation or local exhaust ventilation may be required. Provide adequate ventilation.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Keep container tightly closed. Keep containers upright. Keep only in the original container. Avoid contact with oxidising agents. Do not store near heat sources or expose to high temperatures.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

MINERAL OIL - H304 (<3% DMSO EXTRACT, IP 346) (CAS: 64742-55-8)

DNEL

Workers - Dermal; Long term systemic effects: 0.97 mg/kg
Workers - Inhalation; Long term local effects: 5.58 mg/m³
Workers - Inhalation; Long term systemic effects: 2.73 mg/m³
General population - Oral; Long term systemic effects: 0.74 mg/kg
General population - Inhalation; Long term local effects: 1.19 mg/m³

PHOSPHORODITHIOIC ACID, MIXED O,O-BIS(1,3-DIMETHYLBUTYL AND ISO-PR)ESTERS, ZINC SALTS (CAS: 84605-29-8)

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DNEL

Workers - Dermal; Long term systemic effects: 0.25 mg/kg
Workers - Dermal; Short term systemic effects: 166 mg/kg
Workers - Inhalation; Short term systemic effects: 44.18 mg/m³
General population - Dermal; Long term systemic effects: 0.075 mg/kg
General population - Dermal; Short term systemic effects: 50 mg/kg
General population - Inhalation; Long term systemic effects: 0.79 mg/m³
General population - Inhalation; Short term systemic effects: 13.26 mg/m³
General population - Oral; Long term systemic effects: 0.075 mg/kg
General population - Oral; Short term systemic effects: 1.26 mg/kg

PNEC

Fresh water; 0.004 mg/l
marine water; 0.0046 mg/l
Sediment (Freshwater); 0.022 mg/kg
Sediment (Marinewater); 0.002 mg/kg
Soil; 0.002 mg/kg
STP; 100 mg/l

HINDERED ALKYLPHENOL, ESTER (CAS: 125643-61-0)

DNEL

General population - Oral; Short term systemic effects: 50 mg/kg
General population - Inhalation; Short term systemic effects: 875 mg/m³
General population - Dermal; Short term local effects: 8.33 mg/cm²
General population - Dermal; Short term systemic effects: 50 mg/kg
General population - Dermal; Long term systemic effects: 4.3 mg/kg
General population - Oral; Long term systemic effects: 0.93 mg/kg
General population - Inhalation; Long term systemic effects: 1.62 mg/m³
Workers - Dermal; Short term systemic effects: 100 mg/kg
Workers - Inhalation; Long term systemic effects: 6.6 mg/kg
Workers - Dermal; Long term systemic effects: 1.67 mg/kg
Workers - Dermal; Short term local effects: 16.67 mg/cm²

PNEC

Sediment (Freshwater); 233 mg/kg
Sediment (Marinewater); 23.3 mg/kg
marine water; 0.002 mg/l
Fresh water; 0.03 mg/l
STP; 100 mg/l
Soil; 189 mg/kg

PHENOL, DODECYL-, BRANCHED (CAS: 121158-58-5)

DNEL

Workers - Dermal; Short term systemic effects: 166 mg/kg
General population - Dermal; Long term systemic effects: 0.075 mg/kg
General population - Inhalation; Short term systemic effects: 13.26 mg/m³
General population - Inhalation; Long term systemic effects: 0.79 mg/m³
General population - Oral; Long term systemic effects: 0.075 mg/kg
Workers - Dermal; Long term systemic effects: 0.25 mg/kg
General population - Oral; Short term systemic effects: 1.26 mg/kg
Workers - Inhalation; Short term systemic effects: 44.18 mg/m³
General population - Dermal; Short term systemic effects: 50 mg/kg

PNEC

Sediment (Marinewater); 0.027 mg/kg
Soil; 0.118 mg/kg
STP; 100 mg/l
Sediment (Freshwater); 0.226 mg/kg

8.2. Exposure controls

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Protective equipment

Appropriate engineering controls	Avoid inhalation of vapours. Observe any occupational exposure limits for the product or ingredients. Provide adequate ventilation.
Eye/face protection	Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Tight-fitting safety glasses.
Hand protection	Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. It should be noted that liquid may penetrate the gloves. Frequent changes are recommended. It is recommended that gloves are made of the following material: Nitrile rubber.
Other skin and body protection	Provide eyewash station. Wear appropriate clothing to prevent repeated or prolonged skin contact.
Hygiene measures	When using do not eat, drink or smoke. Wash hands after contact. Wash at the end of each work shift and before eating, smoking and using the toilet. Wash contaminated clothing before reuse.
Respiratory protection	If ventilation is inadequate, suitable respiratory protection must be worn. Wear a respirator fitted with the following cartridge: Gas filter, type A2.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Clear liquid. Liquid.
Colour	Brown.
Melting point	Not determined.
Initial boiling point and range	>150°C @
Flash point	68°C
Evaporation rate	Not determined.
Upper/lower flammability or explosive limits	Not determined.
Vapour pressure	Not determined.
Vapour density	Not determined.
Relative density	0.85 g/cm³ @ 20°C
Solubility(ies)	Insoluble in water.
Partition coefficient	Not determined.
Auto-ignition temperature	Not determined.
Decomposition Temperature	Not determined.
Viscosity	8.0 cSt @ 40°C

9.2. Other information

Other information	None.

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SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity Oxidising materials.

10.2. Chemical stability

Stability Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Not relevant.

10.4. Conditions to avoid

Conditions to avoid Avoid heat, flames and other sources of ignition.

10.5. Incompatible materials

Materials to avoid Strong oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products Does not decompose when used and stored as recommended.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Summary Based on available data the classification criteria are not met.

Acute toxicity oral (LD_{50} mg/kg) 5,000.0

Species Rat

Notes (oral LD_{50}) KEROSINE (PETROLEUM); STRAIGHT RUN KEROSINE

Acute toxicity - dermal

Summary Based on available data the classification criteria are not met.

Acute toxicity dermal (LD_{50} mg/kg) 2,000.0

Species Rabbit

Notes (dermal LD_{50}) KEROSINE (PETROLEUM); STRAIGHT RUN KEROSINE

Acute toxicity - inhalation

Summary Based on available data the classification criteria are not met.

Species Rat

Notes (inhalation LC_{50}) KEROSINE (PETROLEUM); STRAIGHT RUN KEROSINE

Skin corrosion/irritation

Summary Based on available data the classification criteria are not met.

Serious eye damage/irritation

Summary Based on available data the classification criteria are not met.

Respiratory sensitisation

Summary Based on available data the classification criteria are not met.

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Skin sensitisation

Summary Based on available data the classification criteria are not met.

Germ cell mutagenicity

Summary Based on available data the classification criteria are not met.

Carcinogenicity

Summary Based on available data the classification criteria are not met.

Reproductive toxicity

Summary Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

Summary Based on available data the classification criteria are not met.

Specific target organ toxicity - repeated exposure

Summary Based on available data the classification criteria are not met.

Aspiration hazard

Summary Based on available data the classification criteria are not met.

General information Prolonged and repeated contact with solvents over a long period may lead to permanent health problems.

Inhalation Aspiration hazard if swallowed. Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis.

Ingestion Harmful: may cause lung damage if swallowed. Pneumonia may be the result if vomited material containing solvents reaches the lungs.

Acute and chronic health hazards This chemical can be hazardous when inhaled and/or touched. May cause severe internal injury. Vapour from this product may be hazardous by inhalation.

Route of exposure Inhalation Ingestion. Skin and/or eye contact Skin absorption

Medical considerations Aspiration hazard if swallowed. Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis.

SECTION 12: Ecological information

Ecotoxicity Dangerous for the environment if discharged into watercourses. The product contains a substance which is harmful to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.

12.1. Toxicity

Acute aquatic toxicity

Acute toxicity - fish NOEC, : > 0.01 - <= 0.1 mg/l,
KEROSINE (PETROLEUM); STRAIGHT RUN KEROSINE

Acute toxicity - aquatic invertebrates NOEC, : > 0.1 - <= 1.0 mg/l,
KEROSINE (PETROLEUM); STRAIGHT RUN KEROSINE

12.2. Persistence and degradability

Persistence and degradability There are no data on the degradability of this product.

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient Not determined.

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12.4. Mobility in soil

Adsorption/desorption coefficient Not available.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current UK criteria.

12.6. Other adverse effects

Other adverse effects Not available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information Waste is classified as hazardous waste. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

Disposal methods Confirm disposal procedures with environmental engineer and local regulations.

SECTION 14: Transport information

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

Transport labels
No transport warning sign required.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

SECTION 15: Regulatory information

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

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

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SECTION 16: Other information

Revision comments	NOTE: Lines within the margin indicate significant changes from the previous revision.
Issued by	Regulatory Department
Revision date	09/03/2023
Revision	23
Supersedes date	05/07/2022
SDS status	Approved.
Hazard statements in full	H226 Flammable liquid and vapour. H304 May be fatal if swallowed and enters airways. H335 May cause respiratory irritation. H336 May cause drowsiness or dizziness. H411 Toxic to aquatic life with long lasting effects. H412 Harmful to aquatic life with long lasting effects.