



Material Safety Data Sheet

Product name :

ELF MOTO COOLANT ORGANIC AP

Page : 1 o

MSDS number : 110327-08

Version : 0

Date : 12/02/2008

Supersedes MSDS dated : -

PRODUCT LABELS

LABELING (standard or EU) : Not Concerned

R-phrases : None

S-phrases : None

TRANSPORT LABELING : Not Applicable

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY UNDERTAKING

Name of the product : **ELF MOTO COOLANT ORGANIC AP**

Code No : SDS003

Product application : Anti-freeze / Cooling Liquid

Supplier : Total Oil Asia-Pacific Pte. Ltd.
10 Pandan Avenue Singapore 609385
Tel : (65) 6266 2800
Fax: (65) 6266 3800

2. COMPOSITION/INFORMATION OF INGREDIENTS

PREPARATION

Chemical nature : Petroleum-derived severely refined mineral-base product, in which the polycyclic aromatic hydrocarbons (PCA or PAH) content, measured by IP 346 is less than 3%

| Substances presenting a health hazards: | EC No. | CAS No | Content | Symbol(s) | R-phrases |
|---|--------|----------|---------|-----------|-----------|
| Monoethylene glycol | | 107-21-1 | <100% | Xn | R-22 |

See section 16 for explanations of R-phrases :

3. HAZARD IDENTIFICATION

Health effects : Accidental ingestion may be harmful to the central nervous system
The product contains an approved repellent (bitter), for the purpose of avoiding the risk of accidental ingestion.

Environmental impact : Do not discard this product into the environment

Physical and chemical hazards : If overheated, the product may release flammable vapours that can form explosive gas mixtures.

Product classification : Harmful : Xn
Harmful if swallowed

4. FIRST AID MEASURES

IN CASE OF SERIOUS OR PERSISTENT MANIFESTATIONS, CALL A DOCTOR OR EMERGENCY MEDICAL CARE

Inhalation : Inhalation of heavy concentrations of vapour, fumes or spray, may cause mild irritation of the throat.

Transport the person into fresh air, keep warm and allow to rest.

Skin contact : Immediately remove all soiled or stained clothing.



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| Eye contact : | Wash the affected area immediately and repeatedly with soap and water. |
| Ingestion : | Keep eyes open and rinse immediately and repeatedly with water for at least 15 minutes. Possible risk of vomiting and diarrhoea. Do not induce vomiting to avoid the risk of aspiration into the respiratory tract. Give nothing to drink. |
| Aspiration : | If the product is believed to have entered the lungs (in case of vomiting, for example), take the person to hospital for immediate care. |

5. FIRE FIGHTING MEASURES

| | |
|---------------------------------------|---|
| Flash Point : | See heading 9 |
| Fire extinguishers media : | |
| - suitable : | Foam, carbon dioxide (CO ₂), powder. |
| - not recommended : | Do not use water jet (stick jets) for extinguishing fire since they could help to spread the flames. |
| Specific hazards : | Incomplete combustion and thermolysis produce gases of varying toxicity such as CO, CO ₂ , various hydrocarbons, aldehydes and soot. These may be highly dangerous if inhaled. Vapours can build explosive mixtures with air. Vapours are heavier than air and may spread on the ground to source of ignition. |
| Protective measures for firefighter : | Insulated breathing apparatus must be worn in confined premises with heavy concentrations of fumes and gases. |
| Other : | The combustion residues and contaminated water for fire fighting have to be disposed according to the local regulations. |

6. ACCIDENTAL RELEASE MEASURES

See sections 8 and 13

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| Personnel protection : | Ensure good ventilation. Remove sources of ignition. Do not smoke. |
| After spillage / leakage : | |
| - on the soil : | Surfaces on which the product has been spilled may become slippery. Do not allow the product to enter sewers or rivers or contaminate the soil. Recover with mechanical means such as pumps and skimmers. |
| - on water : | Floating absorbent material, then mechanical recovery. If the product is spilled in a river or in the sewers, notify the authorities of the possible presence of surface effluent. |
| Spill cleanup methods : | |
| - Recovery | Contain and collect the spilled product, sand the surfaces concerned if necessary. Contain and collect the spilled product with sand or any other inert absorbent material. In the event of a major spill, inform the competent authorities if the situation cannot be brought under control rapidly and efficiently. |
| - Elimination : | Dispose of waste in compliance with regulations. Avoid discharge of the material in a stream or a sewer or cause ground contamination. |

7. HANDLING AND STORAGE

HANDLING :



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| - Prevention of user exposure : | Ventilate extensively if the formation of vapour, fumes, mist or aerosol is a risk. Make all the necessary arrangement in order to reduce exposure risk, notably to products in use or to wastes. Keep away from combustive substances; keep away from food and beverages. |
| - Prevention of fire and explosion : | Empty containers may contain flammable or explosive vapours. There is a fire hazard associated with rags, papers or any other material used to remove spills which become soaked with product. Avoid accumulation of these : they are to be disposed off safely after use. |
| - Precautions : | Avoid static electricity build up with connection to earth. Set up machinery and equipment so as to avoid the risk of accidental spills or splashes onto hot machine parts and electrical contacts (on joints failure, for example). |

STORAGE :

- | | |
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| - Technical measures : | Make the necessary arrangements to prevent water and soil pollution. |
| - Storage precautions : | |
| - Suitable : | Store at room temperature, protected against contact with water and moisture, and away from any sources of ignition. Keep containers closed when not in use. |
| - To be avoided: | Do not store exposed to the elements. |
| - Incompatible products : | Dangerous reaction with strong oxidizing agents. |
| - Packaging materials : | |
| - Recommended : | Use only hydrocarbon resistant containers, joints, pipes etc... Keep in original container if possible. |
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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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| Technical measures : | Use the product in a properly ventilated atmosphere. When working in enclosed place (tanks, reservoirs,...), make sure that atmosphere is not suffocating and/ or wear recommended equipment. |
| Occupational exposure limit : | - oil mist : 10mg/m ³ , for 15 minutes - oil mist : 5mg/m ³ , for 8 hours |
| Hand protection : | Impermeable hydrocarbon-proof gloves. Recommended material: nitrile, neoprene. The break through times of the same type of glove of different manufacturers can be very different - even if the layer thickness is similar. Therefore the break through times have to be found out from the manufacturer of the protective gloves themselves. The demands on the gloves are determined by the conditions in practice (e.g. multiple use, mechanical load, temperature, strength and duration of exposition). Before choosing suitable gloves, it is recommended that the user tests the gloves. |
| Eye protection : | Goggles, in case of splashing. |
| Skin and body (other than the hands) protection : | As required, wear a face mask, hydrocarbon-proof clothing, and safety boots (when handling drums). Don't wear ring, watches or anything similar which can retain the product and may give rise to skin conditions. |
| Hygienic work practices : | Avoid prolonged and repeated contact with the skin, especially with used or waste product. Immediately remove all soiled or stained clothing. If the product comes into contact with the skin, wash the affected area immediately and |



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and repeatedly with soap and water.
Use no abrasives, solvents or fuels.
Do not use cloths stained with the product to dry hands.
Do not put the product-soaked rags in the pockets of working clothes.
Do not eat, drink or smoke while handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

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|---|--|
| Appearance : | Clear Liquid |
| Colour : | Blue |
| Odour : | Characteristics |
| Density/Specific Gravity : | about 1032 -1060 kg/m ³ at 15°C |
| Flash point : | >100°C (ASTM D92) |
| Auto-ignition temperature : | >250°C (ASTM E 659) |
| Comments on auto-ignition temperature : | This temperature may be significantly lower under particular conditions (slow oxidation on finely divided materials...). |
| Comments on explosively : | Not applicable |
| Solubility : | |
| - in water : | Insoluble and immiscible. |
| - in organic solvents : | Soluble in many common solvents. |
| pH value, conc solution : | 8.6 |

10. STABILITY AND REACTIVITY

| | |
|------------------------------------|--|
| Stability : | The product is stable under normal storage, handling and use temperatures. |
| Condition to avoid : | Heat (temperatures above flash point), sparks, ignition points, flames, static electricity |
| Materials to avoid : | Avoid contact with strong oxidizing agents |
| Hazardous decomposition products : | Incomplete combustion and thermolysis produces potentially toxic gases such as CO, CO ₂ , various hydrocarbons, aldehydes and soot. |

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY / LOCAL EFFECTS :

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| - Inhalation, comments : | Risk is improbable under normal conditions of use. Inhalation of important concentration of vapour or aerosols may cause irritation of the upper respiratory tract. |
| - Skin contact : | Skin test LD50 (Rabbit) = 19530 mg/kg |
| - Skin contact, comments : | Skin penetration is possible |
| - Ingestion : | LD50 (Rabbit) = 5840 mg/kg |
| - Ingestion, comments : | Ingestion constitutes the main danger because of the toxicity of ethylene glycol. Acute intoxication is particularly dangerous for children Ingestion is followed first by digestive disorders (nausea, vomiting, abdominal pain), then by loss of muscular coordination, convulsions, headaches and dizzy spells, preceding serious nervous disorders. This develops into a stage of torpor and then coma, at times accompanied by convulsions. High metabolic acidosis (oxalic acid) leads to afflictions of the renal ducts, with anuresis |



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Intoxication can lead to a coma with metabolic acidosis that may be fatal
The minimum lethal dose known for humans is 100ml of ethylene glycol. But there are also cases known of humans who survived intoxications with more than 1L ethylene glycol (source : BIA - Gestis data base, Germany)

CHRONIC TOXICITY OR LONG TERM TOXICITY :

12. ECOLOGICAL INFORMATION

Ecotoxicity : Acute toxicity. LC50 96 hours Rainbow Trout 18-46 g/l
Acute toxicity. EC50 24 hours Daphnia magna 46-51 g/l
Acute toxicity. EC50 Algae (Selenastrum Capricornutum) 10 g/l

Comments about ecotoxicity : Experimental data on the finished product are not available.
No information available for used product.
It is considered to present a little danger for aquatic life.

Mobility :

- Air : There is a slow loss by evaporation.

- Soil : Given its physical and chemical characteristics, the product generally shows little mobility in the ground.

- Water : The product is insoluble; it spreads on the surface of the water.

13. DISPOSAL INFORMATION

Waste disposal : Dispose of in a safe manner, in accordance with local regulations.
If need be, collection by an authorized waste collector and regeneration or incineration in an approved installation.

Waste class : 13-02-05 (non-chlorinated engine, gear, lubricating oils)
The waste classification is dependent on the composition of the product at the time of disposal.
The waste classification mentioned here represents only a recommendation. The waster producer is responsible for the correct specification of the waste. The specification of the waster classification should be in arrangement with the authorized waste disposal company.

Disposal of contaminated packaging : Proceed in compliance with the prevailing regulations.

14. TRANSPORT INFORMATION

Not concerned by the transport regulatory below

Road (ADR) / Rail (RID) :

Class : Not restricted for transport

Transport by barge (ADNR) :

Marine (IMO-IMDG) :

Air (ICAO / IATA) :

15. REGULATORY INFORMATION

Risk phrase(s) : None

Safety phrase(s) : None

EU directives : Hazardous preparations directive 1999/45/EC modified (Directive 2001/60/EC)



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Social Security code :

Art. L 461-6, Art. D461-1, appendix A, No. 601.
Table of occupational illnesses and diseases No. 36

labor code :

Art. R 241-50, decree of 07.11.1977

16. OTHER INFORMATION

Explanations of R-phrases in section 2 :

R22 -- Harmful if swallowed
R36/38 -- Irritating to eyes and skin
R38 -- Irritating to skin
R41 -- Risk of serious damage to eye
R43 -- May cause sensitisation by skin contact
R51/53 -- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R53 -- May cause long-term adverse effects in aquatic environment

This Safety Data Sheet serves to complete but not to replace the technical product sheets. The information contained herein is given in good faith and is accurate to the best of our knowledge at the date indicated above. It is understood by the user that any use of the product for purposes other than those for which it was designed entails potential risk. The information given herein in no way dispenses the user from knowing and applying all provisions regulating his or her activity. The user bears sole liability for the precautions required when using the product. The regulatory texts herein are intended to aid the user to fulfil his obligations. This list is not to be considered complete and exhaustive. It is the user's responsibility to ensure that he is subject to no other obligations than those mentioned.