MATERIAL SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

SDS # : 32799

MOTO COOLANT ORGANIC

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

1.1. Product identifier

Product name: MOTO COOLANT ORGANIC
Number: H0B
Pure substance/mixture: Mixture

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

Identified uses: Antifreeze, Coolant.

1.3. Details of the supplier of the safety data sheet

Supplier: TOTAL LUBRIFANTS
562 Avenue du Parc de L'île
92029 Nanterre Cedex
Tél: +33 (0)1 41 35 40 00
Fax: +33 (0)1 41 35 84 71

For further information, please contact

Contact Point: HSE
E-mail Address: rm.msds-lubs@total.com

1.4. Emergency telephone number

+33 1 49 00 00 49
ORFILA Tél : 01.45.42.59.59
In France : - PARIS : Hôpital Fernand Widal 200, rue du Faubourg Saint-Denis 75475 Paris Cedex 10 , Tel : 01.40.05.48.48. - MARSEILLE : Hopital Salvador, 249 bd Ste Marguerite 13274 Marseille cedex 5, Tel : 04.91.75.25.25. - LYON : Hopital Hérouard Herriot, 5 place d'Arsonvill, 69437 Lyon cedex 3, Tel : 04.72.11.69.11. - NANCY : Hopital central, 29 Av du Mal De Lattre de Tassigny, 54000 Nancy, Tel : 03.83.32.36.36 ou le SAMU : Tel ( 15 )

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

REGULATION (EC) No 1272/2008
For the full text of the H-Statements mentioned in this Section, see Section 2.2.

DIRECTIVE 67/548/EEC or 1999/45/EC
For the full text of the R-phrases mentioned in this Section, see Section 16
The substance/mixture is classified as dangerous in accordance with Directive(s) 67/548/EEC with amendments and/or 1999/45/EC with amendments
Symbol(s)
Xn - Harmful
Classification
Xn;R22

2.2. Label elements

Labelled according to: Directive 1999/45/EC

Contains Glycol

R-phrase(s)
R22 - Harmful if swallowed

S-phrase(s)
S 2 - Keep out of the reach of children
S46 - If swallowed, seek medical advice immediately and show this container or label
S36/37 - Wear suitable protective clothing and gloves

2.3. Other hazards

Physical-Chemical Properties
Vapors may form explosive mixtures with air.

Environmental properties
Should not be released into the environment.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>EC-No</th>
<th>REACH registration No:</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>Classification (Dir. 67/548)</th>
<th>Classification (Reg. 1272/2008)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycol</td>
<td>203-473-3</td>
<td>no data available</td>
<td>107-21-1</td>
<td>30-60</td>
<td>Xn; R22</td>
<td>Acute Tox. 4 (H302)</td>
</tr>
</tbody>
</table>

Additional information
Product with ethylene-glycol base. Accidental ingestion may be harmful to the central nervous system. This product contains an approved repellant (bitter), for the purpose of avoiding the risk of accidental ingestion. If overheated, the product may release flammable vapors that can form explosive gas mixtures.
4. FIRST AID MEASURES

4.1. Description of first-aid measures

General advice
IN CASE OF SERIOUS OR PERSISTENT CONDITIONS, CALL A DOCTOR OR EMERGENCY MEDICAL CARE.

Eye contact
Rinse thoroughly with plenty of water, also under the eyelids. Keep eye wide open while rinsing.

Skin contact
Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Remove contaminated clothing and shoes. Wash contaminated clothing before reuse.

Inhalation
Move to fresh air. Consult a physician.

Ingestion
Do NOT induce vomiting. If symptoms persist, call a physician. Never give anything by mouth to an unconscious person. Rinse mouth.

Protection of First-aiders
Use personal protective equipment.

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

Ingestion
Ingestion constitutes the main danger because of the toxicity of ethylene glycol. Accidental ingestion may be harmful to the central nervous system. 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 state of torpor and then coma, at times accompanied by convulsions. Intoxication can lead to a coma with metabolic acidosis that may be fatal.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician
Ingestion, depending on the dose, can cause i.a. abnormal behaviour, unconsciousness, convulsions, respiratory paralysis, pulmonary oedemas, as well as damages to liver and kidneys and can lead, in the worst case, to death. A quick treatment of an ethylene-glycol intoxication, when necessary with haemodialysis, may reduce the toxic effects. Intravenous ethyl alcohol in sodium bicarbonate solution is an approved antitoxin.

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media
Use CO2, dry chemical, or foam. Alcohol-resistant foam.

Unsuitable Extinguishing Media
Do not use a solid water stream as it may scatter and spread fire
5.3. Advice for fire-fighters

Special protective equipment for fire-fighters
Wear self-contained breathing apparatus and protective suit

Other information
Cool containers / tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

General Information
Do not touch or walk through spilled material.

6.2. Environmental precautions

General Information
Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Local authorities should be advised if significant spillages cannot be contained.

6.3. Methods and materials for containment and cleaning up

Methods for cleaning up
Dam up. Soak up with inert absorbent material. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Keep in suitable, closed containers for disposal.

6.4. Reference to other sections

Personal Protective Equipment
See Section 8 for more detail

Waste treatment
See section 13

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling
Avoid contact with skin, eyes and clothing. Wear personal protective equipment. For personal protection see section 8. When using, do not eat, drink or smoke. Use only in well-ventilated areas. Do not breathe vapors or spray mist.

Hygiene measures
Ensure the application of strict rules of hygiene by the personnel exposed to the risk of contact with the product. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and at the end of workday. Wash hands with water as a precaution. Do not dry hands with rags that have been contaminated with product. Do not put product contaminated rags into workwear pockets.

7.2. Conditions for safe storage, including any incompatibilities
Technical measures/Storage conditions

Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Do not remove the hazard labels of the containers (even if they are empty). Keep preferably in the original container. Otherwise reproduce all indication of the regulation label on the new container. Design the installations in order to avoid accidental emissions of product (due to seal breakage, for example) onto hot casings or electrical contacts. Protect from frost, heat and sunlight. Protect from moisture.

Materials to Avoid

Oxidizing agents, Strong acids

7.3. Specific end uses

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure limits

Ingredients with workplace control parameters

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>European Union</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycol 107-21-1</td>
<td>TWA 20 ppm TWA 52 mg/m$^3$</td>
</tr>
<tr>
<td></td>
<td>STEL 40 ppm STEL 104 mg/m$^3$</td>
</tr>
</tbody>
</table>

Legend

See section 16

8.2. Exposure controls

Occupational Exposure Controls

Engineering Measures

Apply technical measures to comply with the occupational exposure limits. When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment.

Personal Protective Equipment

General Information

If the product is used in mixtures, it is recommended that you contact the appropriate protective equipment suppliers. These recommendations apply to the product as supplied

Respiratory protection

None under normal use conditions

Eye Protection

No special protective equipment required. If splashes are likely to occur, wear: Safety glasses with side-shields.

Skin and body protection

No special protective equipment required. If necessary: Wear suitable protective clothing.

Hand Protection

# Environmental exposure controls

**General Information**  
Do not allow material to contaminate ground water system.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td></td>
<td>yellow</td>
<td></td>
</tr>
<tr>
<td>Physical State @20°C</td>
<td></td>
<td>liquid</td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td></td>
<td>Slight</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>7.8 - 8.6</td>
<td>No information available</td>
<td>ASTM D 1287</td>
</tr>
<tr>
<td>Boiling point/boiling range</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flash point</td>
<td></td>
<td>Not applicable</td>
<td></td>
</tr>
<tr>
<td>Evaporation rate</td>
<td></td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Flammability Limits in Air</td>
<td></td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Vapor Pressure @20°C (kPa)</td>
<td></td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Vapor density</td>
<td></td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Density</td>
<td>1053 - 1063 kg/m³</td>
<td>@ 20 °C</td>
<td>ASTM D 5931</td>
</tr>
<tr>
<td>Water solubility</td>
<td></td>
<td>soluble</td>
<td></td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td></td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>logPow</td>
<td></td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td></td>
<td>Not applicable</td>
<td></td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td></td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Explosive properties</td>
<td></td>
<td>May form explosive mixtures with air</td>
<td></td>
</tr>
<tr>
<td>Oxidizing Properties</td>
<td></td>
<td>Not applicable</td>
<td></td>
</tr>
<tr>
<td>Possibility of hazardous reactions</td>
<td></td>
<td>Not applicable</td>
<td></td>
</tr>
</tbody>
</table>

### 9.2. Other information

| Freezing Point                  |        |                           |                      |
|                                 | -25 °C |       | ASTM D 1177            |
|                                 | -13 °F |       | ASTM D 1177            |

## 10. STABILITY AND REACTIVITY

### 10.1. Reactivity

### 10.2. Chemical stability

**Stability**  
Stable under recommended storage conditions.
10.3. Possibility of hazardous reactions

Hazardous Reactions
None under normal processing.

10.4. Conditions to Avoid

Conditions to Avoid
Heat (temperatures above flash point), sparks, ignition points, flames, static electricity. Take precautionary measures against static discharges.

10.5. Incompatible Materials

Materials to Avoid
Strong oxidizing agents

10.6. Hazardous Decomposition Products

Hazardous Decomposition Products
Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot. Acetaldehyde at temperatures around 500 - 600 °C.

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity

Local effects, Product Information

Skin contact
Not classified.

Eye contact
Not classified.

Inhalation
Not classified.

Ingestion
Ingestion constitutes the main danger because of the toxicity of ethylene glycol. Accidental ingestion may be harmful to the central nervous system. 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 state of torpor and then coma, at times accompanied by convulsions. Intoxication can lead to a coma with metabolic acidosis that may be fatal.

Acute toxicity Component Information

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycol</td>
<td>$= 4000 \text{ mg/kg (Rat)}$</td>
<td>$= 9530 \text{ µL/kg (Rabbit)}$</td>
<td></td>
</tr>
</tbody>
</table>

Sensitization

No sensitization responses were observed.

Specific effects
Carcinogenicity

This product is not classified carcinogenic.

Mutagenicity

None known.

Reproductive toxicity

This product does not contain any known or suspected reproductive hazards.

Repeated Dose Toxicity

Subchronic toxicity

No information available.

Target Organ Effects (STOT)

Central nervous system (CNS). Respiratory system.

Other information

12. ECOLOGICAL INFORMATION

12.1. Toxicity

Acute aquatic toxicity Product Information

No information available.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Toxicity to algae</th>
<th>Toxicity to daphnia and other aquatic invertebrates</th>
<th>Toxicity to fish</th>
<th>Toxicity to microorganisms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycol 107-21-1</td>
<td>EC50 (96h) 6500 - 13000 mg/L Pseudokirchneriella subcapitata</td>
<td>EC50 (48h) = 46300 mg/L Daphnia magna</td>
<td>LC50 (96h) = 16000 mg/L Poecilia reticulata (static) LC50 (96h) 40000 - 60000 mg/L Pimephales promelas (static) LC50 (96h) = 40761 mg/L Oncorhynchus mykiss (static) LC50 (96h) 14 - 18 mL/L Oncorhynchus mykiss (static) LC50 (96h) = 27540 mg/L Lepomis macrochirus (static) LC50 (96h) = 41000 mg/L Oncorhynchus mykiss ()</td>
<td>EC50 = 620 mg/L 30 min EC50 = 10000 mg/L 16 h EC50 = 620.0 mg/L 30 min</td>
</tr>
</tbody>
</table>

Chronic aquatic toxicity Product Information

No information available.

Chronic aquatic toxicity Component Information

No information available.

Effects on terrestrial organisms

No information available.
12.2. Persistence and degradability

General Information
Product is biodegradable. Based on compositional information available and measured or predicted data on key constituents.

12.3. Bioaccumulative potential

Product Information
No information available

logPow
No information available.

Component Information
<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycol - 107-21-1</td>
<td>-1.93</td>
</tr>
</tbody>
</table>

12.4. Mobility in soil

Soil
Given its physical and chemical characteristics, the product is generally mobile in the ground.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment
No information available.

12.6. Other adverse effects

General Information
No information available.

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from Residues / Unused Products
Dispose of in accordance with the European Directives on waste and hazardous waste. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations.

Contaminated packaging
Empty containers should be taken to an approved waste handling site for recycling or disposal

EWC Waste Disposal No.
The following Waste Codes are only suggestions: 16 01 14.

Other information
According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used.

14. TRANSPORT INFORMATION
15. REGULATORY INFORMATION

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

European Union

International Inventories

<table>
<thead>
<tr>
<th>International Inventories</th>
<th>Compliance Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>EINECS/ELINCS</td>
<td>Complies</td>
</tr>
<tr>
<td>TSCA</td>
<td>Complies</td>
</tr>
<tr>
<td>DSL</td>
<td>-</td>
</tr>
<tr>
<td>ENCS</td>
<td>-</td>
</tr>
<tr>
<td>IECSC</td>
<td>-</td>
</tr>
<tr>
<td>KECL</td>
<td>-</td>
</tr>
<tr>
<td>PICCS</td>
<td>-</td>
</tr>
<tr>
<td>AICS</td>
<td>Complies</td>
</tr>
<tr>
<td>NZIoC</td>
<td>-</td>
</tr>
</tbody>
</table>

Legend

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances
NZIoC - New Zealand Inventory of Chemicals

Further information

15.2. Chemical Safety Assessment

Chemical Safety Assessment No information available

16. OTHER INFORMATION
Full text of R-phrases referred to under sections 2 and 3
R22 - Harmful if swallowed

Full text of H-Statements referred to under section 2 and 3
H302 - Harmful if swallowed

Abbreviations, acronyms

Legend Section 8

| + | Sensitizer |
| ** | Hazard Designation |
| M: | Mutagen |

Skin designation
C: Carcinogen
R: Toxic to reproduction

Revision Date: 2010-12-28
Revision Note
*** Indicates updated section

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

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

End of the safety data sheet