



SAFETY DATA SHEET

SDS # : 082946

COOLELF AUTO SUPRA -26°C

Issuing date: 2015-06-30

Revision Date: 2019-06-11

Version 1.01

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

1.1. Product identifier

| | |
|--------------------------|--------------------------|
| Product name | COOLELF AUTO SUPRA -26°C |
| Number | EKH |
| Substance/mixture | Mixture |

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

| | |
|------------------------|----------|
| Identified uses | Coolant. |
|------------------------|----------|

1.3. Details of the supplier of the safety data sheet

| | |
|-----------------|--|
| Supplier | TOTAL OIL ASIA PACIFIC PTE LTD 182 Cecil Street #27-01 Frasers Tower Singapore 069547 Tel: +65 6879 2200 Fax: +65 6879 2203 |
| | See section 16 for additional information |

For further information, please contact:

| | |
|-----------------------|---------------------|
| Contact Point | HSE |
| E-mail Address | ms.ap-sds@total.com |

1.4. Emergency telephone number

Asia-Pacific: +65 3158 1074
Philippines: +65 3158 1203

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

Classification
Specific target organ toxicity (repeated exposure) - Category 2

Label elements



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Signal word WARNING

Hazard Statements

H373 - May cause damage to organs through prolonged or repeated exposure

Precautionary Statements - Prevention

- Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response

- Get medical advice/attention if you feel unwell

Precautionary Statements - Disposal

- Dispose of contents/ container to an approved waste disposal plant

Other hazards which do not result in classification

Physical-Chemical Properties Contaminated surfaces will be extremely slippery.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature Product with ethylene-glycol base

| Chemical Name | CAS-No | EC-No | Weight % |
|-------------------------|------------|-----------|----------|
| Ethylene glycol | 107-21-1 | 203-473-3 | 40-<50 |
| Sodium 2-ethylhexanoate | 19766-89-3 | 243-283-8 | 1-<3 |

Additional information This product contains an approved repellent (bitter), for the purpose of avoiding the risk of accidental ingestion

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 Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing.



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| | |
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| Skin contact | Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. |
| Inhalation | Remove casualty to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration. |
| Ingestion | Rinse mouth. Take victim immediately to hospital. Induce vomiting, but only if victim is fully conscious. Never give anything by mouth to an unconscious person. |
| Protection of First-aiders | First aider needs to protect himself. See Section 8 for more detail. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. |

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

| | |
|---------------------|---|
| Skin contact | Not classified based on available data. |
| Eye contact | Not classified based on available data. May cause slight irritation. |
| Inhalation | Not classified based on available data. Vapors inhaled in strong concentration have a narcotic effect on the central nervous system. May cause central nervous system depression with nausea, headache, dizziness, vomiting, and incoordination. Symptoms of overexposure are dizziness, headache, tiredness, nausea, unconsciousness, cessation of breathing. |
| Ingestion | Harmful if swallowed. 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. |
| Symptoms | Symptoms of overexposure are dizziness, headache, tiredness, nausea, unconsciousness, cessation of breathing. |

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

| | |
|---------------------------|--|
| 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. Rinse mouth. |
|---------------------------|--|

5. FIRE-FIGHTING MEASURES



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5.1. Extinguishing media

Suitable Extinguishing Media Water spray. Dry chemical powder. Carbon dioxide (CO₂). Alcohol-resistant foam.

Unsuitable Extinguishing Media Do not use a solid water stream as it may scatter and spread fire.

5.2. Special hazards arising from the substance or mixture

Special Hazard Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot. These may be highly dangerous if inhaled in confined spaces or at high concentration. Sodium oxides.

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. Contaminated surfaces will be extremely slippery. Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition.

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

Methods for containment Dike to collect large liquid spills. If necessary dike the product with dry earth, sand or similar non-combustible materials.

Methods for cleaning up Dispose of contents/container in accordance with local regulation. In case of soil contamination, remove contaminated soil for remediation or disposal, in accordance with local regulations.

6.4. Reference to other sections

Personal Protective Equipment See Section 8 for more detail.



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Waste treatment See section 13.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling For personal protection see section 8. Use only in well-ventilated areas. Do not breathe vapors or spray mist. Avoid contact with skin, eyes and clothing.

Prevention of fire and explosion Take precautionary measures against static discharges.

Hygiene measures Ensure the application of strict rules of hygiene by the personnel exposed to the risk of contact with the product. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product. Provide regular cleaning of equipment, work area and clothing. Do not use abrasives, solvents or fuels. 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 away from food, drink and animal feedingstuffs. Keep in a banded area. Keep container tightly closed. Keep preferably in the original container. Otherwise reproduce all indication of the regulation label on the new container. Do not remove the hazard labels of the containers (even if they are empty). Design the installations in order to avoid accidental emissions of product (due to seal breakage, for example) onto hot casings or electrical contacts. Store at room temperature. Protect from moisture.

Materials to Avoid Strong oxidizing agents.

Packaging material Recommended materials: steel , Aluminium, Polyethylene.
Not Compatible: Zinc.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure limits

Ingredients with workplace control parameters

| Chemical Name | ACGIH (Additional information) | Singapore | Philippines |
|-----------------------------|--|--|-------------|
| Ethylene glycol 107-21-1 | TWA 25 ppm STEL 50 ppm STEL 10 mg/m ³ | STEL 50 ppm STEL 127 mg/m ³ High odour threshold : 63 mg/m ³ Low odour threshold : 63 mg/m ³ | |

Legend See section 16



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8.2. Exposure controls

Appropriate engineering controls

Engineering Measures

Apply technical measures to comply with the occupational exposure limits. Ensure adequate ventilation, especially in confined areas. 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

Protective engineering solutions should be implemented and in use before personal protective equipment is considered. The personal protective equipment (PPE) recommendations apply to the product ITSELF. In case of mixtures or formulations, it is suggested that you contact the relevant PPE suppliers.

Respiratory protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Respirator with combination filter for vapour/particulate (EN 14387): Type A/P2. Warning ! filters have a limited use duration. The use of breathing apparatus must comply strictly with the manufacturer's instructions and the regulations governing their choices and uses.

Eye Protection

Safety glasses with side-shields. EN 166.

Skin and body protection

Wear suitable protective clothing. Protective shoes or boots. Long sleeved clothing. Type 4/6.

Hand Protection

Nitrile rubber, Neoprene gloves, Polyvinylchloride. In case of prolonged contact with the product, it is recommended to wear gloves complying with EN 420 and EN 374 standards, protecting at least for 480 minutes and having a thickness of 0,38 mm at least. These values are indicative only. The level of protection is provided by the material of the glove, its technical characteristics, its resistance to the chemicals to be handled, the appropriateness of its use and its replacement frequency. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.

Environmental exposure controls

General Information

The product should not be allowed to enter drains, water courses or the soil.

9. PHYSICAL AND CHEMICAL PROPERTIES

General Information



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| | |
|----------------------|--------------------------|
| Appearance | limpid |
| Color | orange |
| Physical State @20°C | liquid |
| Odor | Characteristic |
| Odor Threshold | No information available |

Important health safety and environmental information

| <u>Property</u> | <u>Values</u> | <u>Remarks</u> | <u>Method</u> |
|------------------------------------|------------------------------|--------------------------|---------------|
| pH | 8.6 | | ASTM D1287 |
| Melting point/range | | Not applicable | |
| Boiling point/boiling range | | No information available | |
| Flash point | | Not applicable | |
| Evaporation rate | | No information available | |
| Flammability Limits in Air | | No information available | |
| upper | | No information available | |
| Lower | | No information available | |
| Vapor Pressure | | No information available | |
| Vapor density | | No information available | |
| Relative density | 1.056 | @ 20 °C | ASTM D4052 |
| Density | 1056 kg/m ³ | @ 20 °C | ASTM D4052 |
| Water solubility | | soluble | |
| Solubility in other solvents | | No information available | |
| logPow | | No information available | |
| Autoignition temperature | | No information available | |
| Decomposition temperature | | No information available | |
| Viscosity, kinematic | | No information available | |
| Explosive properties | Not explosive | | |
| Oxidizing Properties | Not applicable | | |
| Possibility of hazardous reactions | None under normal processing | | |

Other information

| | |
|----------------|--------|
| Freezing Point | -26 °C |
| | -15 °F |

10. STABILITY AND REACTIVITY

10.1. Reactivity



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General Information None under normal processing.

10.2. Chemical stability

Stability Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

Hazardous Reactions No dangerous reaction known under conditions of normal use.

10.4. Conditions to avoid

Conditions to avoid Keep away from open flames, hot surfaces and sources of ignition. Keep away from heat and sparks.

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. Sodium oxides.

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Information on likely routes of exposure

Inhalation Not classified based on available data. Vapors inhaled in strong concentration have a narcotic effect on the central nervous system. May cause central nervous system depression with nausea, headache, dizziness, vomiting, and incoordination. Symptoms of overexposure are dizziness, headache, tiredness, nausea, unconsciousness, cessation of breathing.

Ingestion Harmful if swallowed. 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.

Skin contact Not classified based on available data.



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Eye contact Not classified based on available data. May cause slight irritation.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Symptoms of overexposure are dizziness, headache, tiredness, nausea, unconsciousness, cessation of breathing.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Acute toxicity - Product Information

Oral Not classified based on available data.
ATEmix (oral) 4,565.00 mg/kg

Dermal Not classified based on available data.

Inhalation Not classified based on available data.
ATEmix (inhalation-dust/mist) 11.60 mg/l
ATEmix (inhalation-vapor) 560.50 mg/l

Acute toxicity - Component Information

| Chemical Name | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|---------------------------------------|---|--|---|
| Ethylene glycol 107-21-1 | LD50 2000 mg/kg Oral (Rat) LD50 1600 mg/kg (cat) | LD50 > 3500 mg/kg Dermal (Mouse) | LC50(6h) >2.5 mg/l Inhalation (Rat) |
| Sodium 2-ethylhexanoate 19766-89-3 | LD50 2043 mg/kg bw (rat - OECD 401) | LD50 > 2000 mg/kg bw (rat - OECD 402) | LC0 (8h) 0.11 mg/l (rat - vapour - OECD 403) |

Skin corrosion/irritation Not classified based on available data.

Serious eye damage/eye irritation Not classified based on available data.

Sensitization Not classified based on available data.

Germ Cell Mutagenicity Not classified based on available data.

Carcinogenicity Not classified based on available data.

Reproductive toxicity Not classified based on available data. Contains toxic substance(s) listed as toxic to reproduction.

| Chemical Name | European Union |
|---------------------------------------|-----------------|
| Sodium 2-ethylhexanoate 19766-89-3 | Repr. 2 (H361d) |



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| | |
|------------------------------------|--|
| Target Organ Effects (STOT) | Kidney, Liver, Respiratory system, Central nervous system (CNS), Eyes. |
| STOT - single exposure | Not classified based on available data. |
| STOT - repeated exposure | May cause damage to organs through prolonged or repeated exposure: |
| Aspiration hazard | Not classified based on available data. |
| Other adverse effects | None known. |

12. ECOLOGICAL INFORMATION

12.1. Toxicity

Not classified based on available data.

Acute aquatic toxicity - Product Information

No information available.

Acute aquatic toxicity - Component Information

| Chemical Name | Toxicity to algae | Toxicity to daphnia and other aquatic invertebrates | Toxicity to fish | Toxicity to microorganisms |
|---------------------------------------|---|---|---|----------------------------|
| Ethylene glycol 107-21-1 | NOEC(72h) >100 mg/l (Pseudokirchneriella subcapitata - OECD Guideline 201) | EC50(48h) >100 mg/l Daphnia magna (OECD 202) | LC50(96h) 72860 mg/l (Phimephales promelas) | |
| Sodium 2-ethylhexanoate 19766-89-3 | | | LC50 (96h) > 100 mg/l (Oryzias latipes - OECD 203) | |

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



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General Information Readily biodegradable.

12.3. Bioaccumulative potential

Product Information No information available.

logPow No information available

Component Information

| Chemical Name | log Pow |
|----------------------------|---------|
| Ethylene glycol - 107-21-1 | -1.93 |

12.4. Mobility in soil

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

Air the product may evaporate.

Water soluble.

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 Disposal Methods Should not be released into the environment. Do not empty into drains. Dispose of in accordance with all applicable national environmental laws and regulations.

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

Disposal Precautions Refer to section 8 for safety and protective measures for disposal personnel.

14. TRANSPORT INFORMATION



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ADR/RID Not regulated

IMDG/IMO Not regulated

ICAO/IATA Not regulated

15. REGULATORY INFORMATION

International Inventories All the substances contained in this product are listed or exempted from listing in the following inventories:
 Australia (AICS)
 China (IECSC)
 Korea (KECL)
 Philippines (PICCS)
 U.S.A. (TSCA)
 Canada (DSL/NDSL)
 Europe (EINECS/ELINCS/NLP)
 New Zealand (NZIoC)

National regulatory information

Singapore

This Safety Data Sheet (SDS) has been prepared according to Singapore Standard SS 586 on "Specification for Hazard Communication for Hazardous Chemicals and Dangerous Goods"

Applicable National Regulation:
 Workplace Safety and Health (General Provision) Regulations

Philippines

This Safety Data Sheet (SDS) has been prepared according to EMB Memorandum Circular on "Guidance Manual for Department Administrative Order 2015-09, Rules and Procedures for the Implementation of GHS in Preparation of SDS and Labelling Requirements of Toxic Chemical Substances"

Priority Chemical List

Not regulated

Chemical Control Order

Not regulated

16. OTHER INFORMATION

Abbreviations, acronyms

ACGIH = American Conference of Governmental Industrial Hygienists
 bw = body weight
 bw/day = body weight/day



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EC x = Effect Concentration associated with x% response

GLP = Good Laboratory Practice

IARC = International Agency for Research of Cancer

LC50 = 50% Lethal concentration - Concentration of a chemical in air or a chemical in water which causes the death of 50% (one half) of a group of test animals

LD50 = 50% Lethal Dose - Chemical amount, given at once, which causes the death of 50% (one half) of a group of test animals

LL = Lethal Loading

NIOSH = National Institute of Occupational Safety and Health

NOAEL = No Observed Adverse Effect Level

NOEC = No Observed Effect Concentration

NOEL = No Observed Effect Level

OECD = Organization for Economic Co-operation and Development

OSHA = Occupational Safety and Health Administration

UVCB = Substance of unknown or Variable composition, Complex reaction products or Biological material

Legend Section 8

OEL = Occupational Exposure Limit

TWA: Time Weight Average

STEL: Short Time Exposure Limit

PEL: Permissible exposure limit

REL: Recommended exposure limit

TLV: Threshold Limit Values

+ Sensitizer

** Hazard Designation

M: Mutagen

*

C:

R:

Skin designation

Carcinogen

Toxic to reproduction

Revision Date: 2019-06-11

Revision Note: *** Indicates updated section.

Additional details on the supplier of the product

PHILIPPINES Supplier

Total (Philippines) Corporation
 7th Floor, 11th Corporate Center
 11th Avenue, corner Triangle Drive,
 North Bonifacio, Bonifacio Global City
 1634 Taguig City
 Philippines
 Tel : +63 2 8490888
 Fax : +63 2 8490889

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 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.



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End of the Safety Data Sheet