



Name	Product identifier	% (w/w)	GHS classification
Ethylene glycol	(CAS-No.) 107-21-1	45 - 95	Acute Tox. 4 (Oral), H302 STOT RE 2, H373
sodium benzoate	(CAS-No.) 532-32-1	1 - 5	Eye Irrit. 2A, H319

\*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

Full text of hazard classes and H-statements : see section 16

## SECTION 4: First-aid measures

### 4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
- First-aid measures after inhalation : If inhaled and if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
- First-aid measures after skin contact : Wash skin thoroughly with mild soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- First-aid measures after ingestion : Rinse mouth. Call a POISON CENTER/doctor if you feel unwell.

### 4.2. Most important symptoms and effects (acute and delayed)

- Symptoms/effects after inhalation : In high concentrations : Inhalation may cause: irritation, coughing, shortness of breath.
- Symptoms/effects after skin contact : May cause slight irritation.
- Symptoms/effects after eye contact : May cause slight irritation.
- Symptoms/effects after ingestion : Swallowing a small quantity of this material will result in serious health hazard. Harmful if swallowed. May cause damage to organs (kidneys) through prolonged or repeated exposure (oral).

### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media : Carbon dioxide. Dry powder. Foam. Sand. Water spray.
- Unsuitable extinguishing media : None known.

### 5.2. Specific hazards arising from the chemical

- Fire hazard : No specific fire or explosion hazard.

### 5.3. Special protective equipment and precautions for fire-fighters

- Firefighting instructions : Exercise caution when fighting any chemical fire. Do not allow run-off from fire fighting to enter drains or water courses.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Wear fire/flame resistant/retardant clothing. Wear a self contained breathing apparatus.

## SECTION 6: Accidental release measures

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

- General measures : Avoid all eye and skin contact and do not breathe vapour and mist.

#### 6.1.1. For non-emergency personnel

- Protective equipment : Chemical goggles or safety glasses. protective gloves. In case of inadequate ventilation wear respiratory protection.
- Emergency procedures : Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders

- Protective equipment : Chemical goggles or safety glasses. Neoprene or nitrile rubber gloves. Where excessive vapour, mist, or dust may result, use approved respiratory protection equipment.
- Emergency procedures : Ventilate area.

### 6.2. Environmental precautions

Avoid release to the environment.

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

- For containment : Absorb and/or contain spill with inert material, then place in suitable container.  
Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Take up in non-combustible absorbent material and shove into container for disposal.

### 6.4. Reference to other sections

Section 13: disposal information. Section 7: safe handling. Section 8: personal protective equipment.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Precautions for safe handling : Avoid contact with skin, eyes and clothing. Do not breathe aerosol. Do not breathe vapours.  
Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

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

- Storage conditions : Keep container closed when not in use. Keep only in the original container in a cool well ventilated place.  
Incompatible products : Strong oxidizing agents. Strong acids. Strong bases.  
Incompatible materials : Heat sources. Direct sunlight.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Commercial HD HOAT ELC Premix 50/50 Antifreeze/Coolant	
No data available	
Ethylene glycol (107-21-1)	
- ACGIH - Occupational Exposure Limits	
Local name	Ethylene glycol
ACGIH OEL TWA [ppm]	25 ppm (V - Vapor fraction)
ACGIH STEL (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (I - Inhalable particulate matter, H - Aerosol only)
ACGIH OEL STEL [ppm]	50 ppm (V - Vapor fraction)
ACGIH OEL C	100 mg/m <sup>3</sup>
ACGIH OEL C [ppm]	39.4 ppm
Remark (ACGIH)	TLV® Basis: URT irr. Notations: A4 (Not classifiable as a Human Carcinogen)
Regulatory reference	ACGIH 2020
- NIOSH - Occupational Exposure Limits	
NIOSH REL C [ppm]	50 ppm
sodium benzoate (532-32-1)	
No data available	

### 8.2. Appropriate engineering controls

- Appropriate engineering controls : Avoid creating mist or spray. Avoid splashing. Either local exhaust or general room ventilation is usually required. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.  
Environmental exposure controls : Prevent leakage or spillage. Prevent contaminated water run-off.

### 8.3. Individual protection measures/Personal protective equipment

#### Personal protective equipment:

Avoid all unnecessary exposure.

#### Hand protection:

Wear suitable gloves. Impermeable protective nitrile gloves

#### Eye protection:

Chemical goggles or safety glasses

#### Skin and body protection:

Wear suitable protective clothing. Impervious clothing

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**Respiratory protection:**

In case of inadequate ventilation wear respiratory protection. Use an approved respirator equipped with oil/mist cartridges.

**Other information:**

Do not eat, drink or smoke when using this product.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Physical state	: Liquid
Appearance	: Free & clear.
Colour	: red
Odour	: No data available
Odour threshold	: No data available
pH	: 8.5 – 10
Melting point	: No data available
Freezing point	: -36 °C
Boiling point	: 107°C
Flash point	: > 116 °C
Relative evaporation rate (butylacetate=1)	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: 1.12
Density	: 9.364 @ 15.6 °C
Solubility	: No data available
Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive limits	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available

**9.2. Other information**

No data available

**SECTION 10: Stability and reactivity****10.1. Reactivity**

No dangerous reactions known.

**10.2. Chemical stability**

Stable at ambient temperature and under normal conditions of use.

**10.3. Possibility of hazardous reactions**

Hazardous polymerization will not occur.

**10.4. Conditions to avoid**

Avoid excessive heat or cold. Keep away from sources of ignition.

**10.5. Incompatible materials**

Strong acids. Strong bases. Strong oxidizers.

**10.6. Hazardous decomposition products**

Carbon monoxide. Carbon dioxide.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral)	: Harmful if swallowed.
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

ATE (oral)	532.359 mg/kg bodyweight
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#### Ethylene glycol (107-21-1)

LD50 dermal rat	> 3500 mg/kg (mouse)
LC50 Inhalation - Rat	> 2.5 mg/l/4h
ATE (oral)	500 mg/kg bodyweight

#### sodium benzoate (532-32-1)

LD50 oral rat	3140 mg/kg bodyweight
ATE (oral)	3140 mg/kg bodyweight

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: May cause damage to organs (kidneys) through prolonged or repeated exposure (oral).

#### Ethylene glycol (107-21-1)

LOAEL (oral, rat, 90 days)	1000 mg/kg bodyweight/day
NOAEL (oral, rat, 90 days)	150 mg/kg bodyweight/day kidney
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard	: Not classified
Viscosity, kinematic	: No data available
Likely routes of exposure	: Skin and eye contact. Inhalation.
Symptoms/effects after inhalation	: In high concentrations : Inhalation may cause: irritation, coughing, shortness of breath.
Symptoms/effects after skin contact	: May cause slight irritation.
Symptoms/effects after eye contact	: May cause slight irritation.
Symptoms/effects after ingestion	: Swallowing a small quantity of this material will result in serious health hazard. Harmful if swallowed. May cause damage to organs (kidneys) through prolonged or repeated exposure (oral).

## SECTION 12: Ecological information

### 12.1. Toxicity

#### Ethylene glycol (107-21-1)

LC50 fish 1	72860 mg/l Pimephales promelas
EC50 crustacea	> 100 mg/l
NOEC chronic fish	15380 mg/l Pimephales promelas
NOEC chronic crustacea	8590 mg/l Ceriodaphnia sp.

#### sodium benzoate (532-32-1)

LC50 fish 1	484 mg/l 96 h
EC50 crustacea	> 100 mg/l 96 h

### 12.2. Persistence and degradability

#### Commercial HD HOAT ELC Premix 50/50 Antifreeze/Coolant

Persistence and degradability	Large quantities. May cause long-term adverse effects in the environment.
<b>Ethylene glycol (107-21-1)</b>	
Persistence and degradability	Readily biodegradable.

<b>Ethylene glycol (107-21-1)</b>	
Biodegradation	> 60 % 28 d

### 12.3. Bioaccumulative potential

<b>Commercial HD HOAT ELC Premix 50/50 Antifreeze/Coolant</b>	
Bioaccumulative potential	Not established.

<b>Ethylene glycol (107-21-1)</b>	
Log Pow	- 1.36
Bioaccumulative potential	Not expected to bioaccumulate.

### 12.4. Mobility in soil

<b>Commercial HD HOAT ELC Premix 50/50 Antifreeze/Coolant</b>	
Ecology - soil	Not established.

### 12.5. Other adverse effects

Other information : No data available.

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Sewage disposal recommendations : Do not dispose of waste into sewer.  
Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.  
Ecology - waste materials : Avoid release to the environment.

## SECTION 14: Transport information

### Transportation of Dangerous Goods

NOT REGULATED.

### Transport by sea

NOT REGULATED.

### Air transport

NOT REGULATED.

## SECTION 15: Regulatory information

### CANADA

<b>Commercial HD HOAT ELC Premix 50/50 Antifreeze/Coolant</b>	
All substances contained in this product are in compliance with the Canadian Environmental Protection Act and are present on the Domestic Substances List (DSL) or are exempt.	

## SECTION 16: Other information

Data sources : ESIS (European chemical Substances Information System; accessed at: <http://esis.jrc.ec.europa.eu/index.php?PGM=cla>. European Chemicals Agency (ECHA) Registered Substances list. Accessed at <http://echa.europa.eu/>. Krister Forsberg and S.Z. Mansdorf, "Quick Selection Guide to Chemical Protective Clothing", Fifth Edition. National Fire Protection Association. Fire Protection Guide to Hazardous Materials; 10th edition. OSHA 29CFR 1910.1200 Hazard Communication Standard. TSCA Chemical Substance Inventory. Accessed at <http://www.epa.gov/oppt/existingchemicals/pubs/tscainventory/howto.html>. United Nations Economic Commission for Europe: About the GHS. Accessed at [http://www.unece.org/trans/danger/publi/ghs/ghs\\_welcome\\_e.html](http://www.unece.org/trans/danger/publi/ghs/ghs_welcome_e.html). WHMIS: The Workplace Hazardous Materials Information System: Canada's national hazard communication standard.

Other information : None.

Full text of H-statements:

H302	Harmful if swallowed.
H319	Causes serious eye irritation.
H373	May cause damage to organs through prolonged or repeated exposure.

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Abbreviations and acronyms:

	ACGIH (American Conference of Government Industrial Hygienists)
	ATE: Acute Toxicity Estimate
	CAS (Chemical Abstracts Service) number
	CLP: Classification, Labelling, Packaging.
	LD50: Lethal Dose for 50% of the test population
	EC50: Environmental Concentration associated with a response by 50% of the test population.
	GHS: Globally Harmonized System (of Classification and Labeling of Chemicals)
	OSHA: Occupational Safety & Health Administration
	TSCA: Toxic Substances Control Act
	STEL: Short Term Exposure Limits
	TWA: Time Weighted Average

**Disclaimer:**

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- The use of production of tobacco and in the manufacture of tobacco products (including but not limited to additives, humectants, filters, inks, and paper)
- The use for the generation of artificial smoke / theatrical fogs / mist. This includes applications such as artificial / e-cigarettes.
- The use as ingredient in fuel for warming foods (Sterno™-like application) or in fuel for heating an enclosed space where human exposure is possible.
- The use in fire extinguishing sprinkler systems.
- The use in the manufacture of munitions.
- The use in the production of de-icers for use on roadways, sidewalks and in aircraft lavatories.
- The use as a component of heat transfer fluids in systems where the heat transfer fluids could infiltrate (i.e., via an exchanger leak, backflow prevention failure, or other means) a potable water.
- The use as a non-reacted component in a formulation for direct internal or external human / animal contact, including, but not limited to ingestion, inhalation, and skin contact and in medical / veterinary devices and medial / veterinary. Examples of some such applications are uses as a direct component in foods, beverages, pharmaceuticals, cosmetics, personal care products or children's products.
- The use for consumer or hospital usage for deodorizing or air "purifying" purposes by spraying as an aerosol.
- The use as a non-reacted component in adhesives, plasticizers, and softening agents for packaging having direct contact with food or beverage.
- The use as a non-reacted component in the formulation of glues, pastes, ice / heat packs or other items where the potential for significant human contact and/or ingestion exists (including but not limited to children's school glue/paste or arts/craft glue/paste, toys, children products).
- The use as a fluid for pressure testing piping.