Engine Ice HI-Performance

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 05/13/2015 Version: 1.0

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

1.1. Product identifier

Product form : Mixture

Product name : Engine Ice HI-Performance

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

Use of the substance/mixture : Antifreeze.
Coolant.

1.3. Details of the supplier of the safety data sheet

KOST USA, Inc.
1000 Tennessee Ave.
Cincinnati, 45229 - USA
T 1-800-661-9391 - F 1-513-492-5555
sales@KOSTusa.com - www.KOSTusa.com

1.4. Emergency telephone number

Emergency number : 1-800-424-9300
CHEMTREC (24 HOURS)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Repr. 1B H360

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :

GHS08

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : H360 - May damage fertility or the unborn child

Precautionary statements (GHS-US) : P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P280 - Wear protective gloves, protective clothing
P308+P313 - If exposed or concerned: Get medical advice/attention
P405 - Store locked up
P501 - Dispose of contents/container to an authorised waste collection point

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

0.11 percent of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Components with health hazards above applicable thresholds are shown. Exact concentrations withheld as trade secret.

Name	Product identifier	%	GHS-US classification
sodium nitrite	(CAS No) 7632-00-0	0.1 – 0.5	Ox. Sol. 3, H272 Acute Tox. 3 (Oral), H301 Aquatic Acute 1, H400
disodium tetraborate, anhydrous	(CAS No) 1330-43-4	0.1 – 0.5	Repr. 1B, H360

Full text of H-phrases: 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 medical advice is needed, have product container or label at hand.

First-aid measures after inhalation : 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 : Remove contaminated clothing and shoes. Wash skin with plenty of water. Wash contaminated clothing before reuse.

First-aid measures after eye contact : If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

First-aid measures after ingestion : Call a POISON CENTER or doctor/physician if you feel unwell.

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

Symptoms/injuries : May damage fertility or the unborn child.

Symptoms/injuries after inhalation : Inhalation may cause: irritation, coughing, shortness of breath.

Symptoms/injuries after eye contact : Direct contact with the eyes is likely to be irritating.

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

All treatments should be based on observed signs and symptoms of distress in the patient.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Dry powder. Carbon dioxide. Foam. Water fog. Water spray. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard : No particular fire or explosion hazard.

Reactivity : No dangerous reactions known.

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. 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 a self contained breathing apparatus. Wear fire/flame resistant/retardant clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Avoid contact with skin and eyes.

6.1.1. For non-emergency personnel

Protective equipment : Chemical goggles or safety glasses. Wear suitable protective clothing and gloves.

Emergency procedures : Evacuate area.

6.1.2. For emergency responders

Protective equipment : Wear suitable protective clothing and gloves. Chemical goggles or face shield with safety glasses.

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. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Do not allow minor leaks or spills to accumulate on walking surfaces.

Methods for cleaning up : 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 breathing mist, spray, vapours. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use.

Hygiene measures : Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. 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 : Store in a dry, cool and well-ventilated place. Keep container closed when not in use.

Incompatible products : Strong bases. Strong acids. Strong oxidizers.

Incompatible materials : Heat sources. Sources of ignition.

Prohibitions on mixed storage : Incompatible materials.

7.3. Specific end use(s)

Antifreeze. Coolant.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Engine Ice HI-Performance		
ACGIH	Not applicable	
OSHA	Not applicable	

sodium nitrite (7632-00-0)		
ACGIH	ACGIH TWA (mg/m³)	10 mg/m³ as dust
OSHA	Not applicable	

disodium tetraborate, anhydrous (1330-43-4)		
ACGIH	ACGIH TWA (mg/m³)	2 mg/m³
ACGIH	ACGIH STEL (mg/m³)	6 mg/m³
ACGIH	Remark (ACGIH)	Varies URT irr
OSHA	OSHA PEL (TWA) (mg/m³)	10 mg/m³ 8 hours

8.2. Exposure controls

Appropriate engineering controls : Avoid creating mist or spray. Avoid splashing. Ensure good ventilation of the work station.

Personal protective equipment : Avoid all unnecessary exposure.

Hand protection : Wear suitable gloves. nitrile rubber gloves. neoprene gloves. PVC.

Eye protection : Chemical goggles or safety glasses.

Skin and body protection : Wear suitable protective clothing. Impervious clothing.

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

Consumer exposure controls : Avoid contact during pregnancy/while nursing.

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

Colour : Green

Odour : slight

Odour threshold : No data available

pH : 10.5

Relative evaporation rate (butyl acetate=1) : No data available

Melting point : No data available

Freezing point : -50 - -31 °C

Boiling point	:	105 - 106 °C
Flash point	:	None (PMCC)
Auto-ignition temperature	:	371 °C
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	No data available
Vapour pressure	:	< 0.1 mm Hg @ 20 °C
Relative vapour density at 20 °C	:	No data available
Relative density	:	1.043 - 1.049 @ 20 °C
Solubility	:	Totally soluble in water in all proportions.
Log Pow	:	No data available
Log Kow	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive properties	:	No data available
Oxidising properties	:	No data available
Explosive limits	:	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Sparks. Open flame. Heat.

10.5. Incompatible materials

Strong oxidizers. Strong bases. Strong acids.

10.6. Hazardous decomposition products

alcohols. Aldehydes. Carbon monoxide. Carbon dioxide. Organic acids.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

sodium nitrite (7632-00-0)	
LD50 oral rat	180 mg/kg
ATE US (oral)	180.000 mg/kg bodyweight

disodium tetraborate, anhydrous (1330-43-4)	
LD50 oral rat	3450 mg/kg male
LD50 dermal rabbit	> 2000 mg/kg no deaths occurred
LC50 inhalation rat (mg/l)	> 2.03 mg/l 5h - no deaths occurred
ATE US (oral)	3450.000 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	:	May damage fertility or the unborn child.
Specific target organ toxicity (single exposure)	:	Not classified
Specific target organ toxicity (repeated exposure)	:	Not classified

disodium tetraborate, anhydrous (1330-43-4)	
LOAEL (oral, rat, 90 days)	58.5 mg/kg bodyweight/day
NOAEL (oral, rat, 90 days)	17.5 mg/kg bodyweight/day

Aspiration hazard : Not classified

Symptoms/injuries after inhalation : Inhalation may cause: irritation, coughing, shortness of breath.

Symptoms/injuries after eye contact : Direct contact with the eyes is likely to be irritating.

Likely routes of exposure : Inhalation;Skin and eye contact

SECTION 12: Ecological information

12.1. Toxicity

sodium nitrite (7632-00-0)	
LC50 fish 1	0.11 mg/l

disodium tetraborate, anhydrous (1330-43-4)	
LC50 fish 1	74 mg/l 96h Limanda limanda

12.2. Persistence and degradability

Engine Ice HI-Performance	
Persistence and degradability	inherently biodegradable.

12.3. Bioaccumulative potential

Engine Ice HI-Performance	
Bioaccumulative potential	Not expected to bioaccumulate.

12.4. Mobility in soil

Engine Ice HI-Performance	
Ecology - soil	Dissolves in water. If products enter soil, will be highly mobile and may contaminate ground water.

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Do not dispose in household garbage.

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

In accordance with DOT

Not considered a dangerous good for transport regulations

Additional information

Other information : No supplementary information available.

ADR

No additional information available

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

sodium nitrite (7632-00-0)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Disodium tetraborate, anhydrous (1330-43-4)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

sodium nitrite (7632-00-0)
Listed on the Canadian DSL (Domestic Substances List) inventory.

Disodium tetraborate, anhydrous (1330-43-4)
Listed on the Canadian DSL (Domestic Substances List) inventory.

EU-Regulations

sodium nitrite (7632-00-0)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Disodium tetraborate, anhydrous (1330-43-4)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Classification according to Regulation (EC) No. 1272/2008 [CLP]
Not classified

15.2.2. National regulations

sodium nitrite (7632-00-0)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on Taiwan National Chemical Inventory Listed on KECI (Korean Existing Chemicals Inventory) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on the AICS (Australian Inventory of Chemical Substances) Listed on the Chinese Catalog of Hazardous Chemicals.

Disodium tetraborate, anhydrous (1330-43-4)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on Taiwan National Chemical Inventory Listed on KECI (Korean Existing Chemicals Inventory) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on the AICS (Australian Inventory of Chemical Substances)

15.3. US State regulations

sodium nitrite (7632-00-0)
U.S. - Pennsylvania - List of Hazardous Substances U.S. - New York - Right to Know List of Hazardous Chemicals U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Massachusetts - Right To Know List

SECTION 16: Other information

Disclaimer:

Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained herein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s).

End-use applications **NOT** supported by KOST USA, Inc. for monopropylene glycol. These limitations include products restricted by law, in applications which may raise unacceptable risks, and other applications which KOST USA, Inc. has decided not to support, including minimizing unnecessary risk and liabilities to the company. KOST USA, Inc. does not knowingly market these products into these non-supported applications. This list is not all-inclusive, and KOST USA, Inc. reserves the right to modify the same at any time.

- 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 the manufacture of munitions.
- The use in aircraft deicers.
- KOST USA propylene containing products can not be upgraded to or substituted for USP monopropylene glycol, nor used in any pharmaceutical or other application such as cosmetics and personal or animal health care.

- 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).

For more information contact your KOST USA, Inc. representative.

Indication of changes : Original Document.

Data sources : 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.

TSCA Chemical Substance Inventory. Accessed at http://www.epa.gov/oppt/existingchemicals/pubs/tscainventory/howto.html.

Abbreviations and acronyms : ACGIH (American Conference of Governement Industrial Hygienists).

ATE: Acute Toxicity Estimate. CAS (Chemical Abstracts Service) number.

CLP: Classification, Labelling, Packaging.

DNEL: Derived No Effect Level.

EC50: Environmental Concentration associated with a response by 50% of the test population.

GHS: Globally Harmonized System (of Classification and Labeling of Chemicals).

LD50: Lethal Dose for 50% of the test population.

NOEC: No Observable Effect Concentration.

OSHA: Occupational Safety & Health Administration.

PBT: Persistent, Bioaccumulative, Toxic.

PNEC: Predicted No Effect Level.

STEL: Short Term Exposure Limits.

TSCA: Toxic Substances Control Act.

TWA: Time Weight Average.

Other information : None.

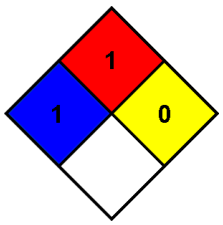
Full text of H-phrases:

Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Ox. Sol. 3	Oxidising Solids, Category 3
Repr. 1B	Reproductive toxicity, Category 1B
H272	May intensify fire; oxidiser
H301	Toxic if swallowed
H360	May damage fertility or the unborn child
H400	Very toxic to aquatic life

NFPA health hazard : 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.

NFPA fire hazard : 1 - Must be preheated before ignition can occur.

NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and not reactive with water.



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