



KOSTChill PG HD Concentrate, 60/40, 70/30, 80/20

Safety Data Sheet

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

Date of issue: 01/02/2015 Version: 1.0

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

1.1. Product identifier

Product form : Mixture
Product name. : KOSTChill PG HD Concentrate
KOSTChill PG HD Concentrate 60/40
KOSTChill PG HD Concentrate 70/30
KOSTChill PG HD Concentrate 80/20

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

Use of the substance/mixture : Heat transfer fluid

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/eye protection
P308 + P313 - If exposed or concerned: Get medical advice/attention
P405 - Store locked up
P501 - Dispose of contents/container in accordance with local and national regulations

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

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3.2. Mixture

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
Borax decahydrate	(CAS No) 1303-96-4	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 exposed or concerned: Get medical advice/attention.
- 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 with mild soap and water.
- 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 : Drink plenty of water. Call a POISON CENTER/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 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 : Carbon dioxide. Dry powder. Foam. Water fog. Water spray.
- 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

- Fire hazard : No particular fire or explosion hazard.
- Reactivity : No dangerous reactions known.

5.3. Advice for firefighters

- 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 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 all eyes and skin contact and do not breathe vapour and mist.

6.1.1. For non-emergency personnel

- Protective equipment : Wear suitable gloves. Chemical goggles or safety glasses.
- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Wear suitable gloves. Chemical goggles or 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.
- Methods for cleaning up : Take up in non-combustible absorbent material and shove into container for disposal. Large Spills: Dike far ahead of spill for later disposal. Use a non-combustible material like cerniculite, sand, or earth to soak up the product and place into a container for later disposal.

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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 all eyes and skin contact and do not breathe vapour and mist. Prohibit all sources of sparks and ignition. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use.
- 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 only in the original container in a cool well ventilated place.
- Incompatible products : strong acids. Strong oxidizers. Strong bases.
- Incompatible materials : Direct sunlight. Heat sources.

7.3. Specific end use(s)

Heat transfer fluid.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

sodium nitrite (7632-00-0)		
ACGIH	ACGIH TWA (mg/m ³)	10 mg/m ³ as dust
OSHA	Not applicable	

Borax decahydrate (1303-96-4)		
ACGIH	Not applicable	
OSHA	Not applicable	

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. PVC. nitrile rubber gloves. neoprene gloves.
- 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
- Appearance : Free & clear.
- Colour : Pink;red;yellow;Blue;green;Orange;clear
- Odour : Odourless
- Odour threshold : No data available
- pH : 10.3 (50/50 in water)
- Relative evaporation rate (butylacetate=1) : No data available
- Melting point : No data available
- Freezing point : -60 - -50 °C
- Boiling point : > 180, 107 - 116 °C
- Flash point : >= 103 °C (PMCC)
- Self ignition temperature : 371 °C
- Decomposition temperature : No data available
- Flammability (solid, gas) : No data available
- Vapour pressure : < 0.1 mm Hg @ 20 °C

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Relative vapour density at 20 °C	: > 1
Relative density	: 1.036 - 1.064 Specific Gravity @ 20 °C
Solubility	: Soluble in water. Water: Solubility in water of component(s) of the mixture : • Dipotassium Phosphate: 63 - 65 % • Ethylene glycol: 1000 g/l
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

Keep away from sources of ignition. Heat.

10.5. Incompatible materials

Strong acids. Strong bases. Strong oxidizing agents.

10.6. Hazardous decomposition products

Carbon dioxide. Carbon monoxide. Thermal decomposition generates : Alcohols. Aldehydes. 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
Borax decahydrate (1303-96-4)	
LD50 oral rat	5666 mg/kg
LD50 dermal rabbit	> 10000 mg/kg
ATE US (oral)	5666.000 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
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 irritating.
Likely routes of exposure	: Skin and eyes contact, inhalation.

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SECTION 12: Ecological information

12.1. Toxicity

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

12.2. Persistence and degradability

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Persistence and degradability	inherently biodegradable.

12.3. Bioaccumulative potential

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Bioaccumulative potential	Does not bioaccumulate significantly.

12.4. Mobility in soil

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

12.5. Other adverse effects

Effect on ozone layer : No known ecological damage caused by this product.
Effect on the global warming : No known ecological damage caused by this product.

SECTION 13: Disposal considerations

13.1. Waste treatment 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.

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 (1303-96-4)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

15.2. International regulations

CANADA

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WHMIS Classification	Class D Division 2 Subdivision B - Toxic material causing other toxic effects

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

Disodium tetraborate, anhydrous (1303-96-4)	
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) substances.	

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Disodium tetraborate, anhydrous (1303-96-4)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances) substances.

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Classification according to Directive 67/548/EEC or 1999/45/EC

Not classified

15.2.2. National regulations

sodium nitrite (7632-00-0)

Listed on Inventory of Existing Chemical Substances (IECSC)
Listed on Taiwan National Chemical Inventory
Listed on KECI (Chemical Inventory of Korea)
Listed on the Japanese ENCS (Existing & New Chemicals Substances) inventory.
Listed on Inventory of Chemicals and Chemical Substances (PICCS)
Listed on New Zealand - Inventory of Chemicals (NZIoC)
Listed on the AICS (the Australian Inventory of Chemical Substances).
Listed on the Chinese Catalog of Hazardous Chemicals.

Disodium tetraborate, anhydrous (1303-96-4)

Listed on Inventory of Chemicals and Chemical Substances (PICCS)
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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, applications in which may raise unacceptable risks, and other applications which Kost USA, Inc. has decided not to, 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.

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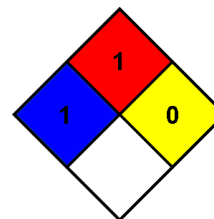
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Indication of changes	: Original Document.
Data sources	: ESIS (European chemical Substances Information System; accessed at: http://esis.jrc.ec.europa.eu/index.php?PGM=cla . ACGIH 2000. European Chemicals Agency (ECHA) Registered Substances list. 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 .
Abbreviations and acronyms	: ACGIH (American Conference of Government Industrial Hygienists). ATE: Acute Toxicity Estimate. CAS (Chemical Abstracts Service) number. CLP: Classification, Labelling, Packaging. 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. OSHA: Occupational Safety & Health Administration. 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; oxidizer
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.



SDS US (GHS HazCom 2012)

SDS Prepared by: The Redstone Group, LLC.
6397 Emerald Pkwy
Suite 200
Dublin, Ohio, USA 43016
614.923.7472
www.redstonegrp.com