SECTION 1: Identification

1.1. Identification
Product form: Mixture
Product name: KOSTChill HD Inhibitor

1.2. Recommended use and restrictions on use
Use of the substance/mixture: Corrosion inhibitors
Restrictions on use: No additional information available

1.3. Supplier
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: Hazard(s) identification

2.1. Classification of the substance or mixture
GHS-US classification
Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2A H319 Causes serious eye irritation.
Full text of hazard classes and H-statements: see section 16

2.2. GHS Label elements, including precautionary statements
GHS US labelling
Hazard pictograms (GHS US):

Signal word (GHS US): Warning
Hazard statements (GHS US):
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
Precautionary statements (GHS US):
P264 - Wash hands thoroughly after handling.
P280 - Wear eye protection, protective gloves.
P302+P352 - If on skin: Wash with plenty of water/...
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P321 - Specific treatment (see First aid measures on this label)
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.

2.3. Other hazards which do not result in classification
No additional information available

2.4. Unknown acute toxicity (GHS US)
2.8% of the mixture consists of ingredient(s) of unknown acute toxicity (Oral)
2.8% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal)
2.8% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))

SECTION 3: Composition/information on ingredients

3.1. Substances
Not applicable

3.2. Mixtures
KOSTChill HD Inhibitor
Safety Data Sheet

Name | Product identifier | % | GHS-US classification
---|---|---|---
sodium nitrite | (CAS-No.) 7632-00-0 | 5 - 9 | Ox. Sol. 3, H272
Acute Tox. 3 (Oral), H301
Aquatic Acute 1, H400
Potassium borate | (CAS-No.) 12712-38-8 | 1 – 5 | Skin Irrit. 2, H315
Eye Irrit. 2A, H319
STOT SE 3, H335
sodium tolyltriazole | (CAS-No.) 64665-57-2 | 1 - <3 | Acute Tox. 4 (Oral), H302
Skin Corr. 1B, H314
Eye Dam. 1, H318
Aquatic Chronic 2, H411

*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. Take off contaminated clothing and wash it 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. Immediately call a POISON CENTER/doctor.
First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Get medical advice/attention if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)
Symptoms/effects after skin contact : Causes skin irritation.
Symptoms/effects after eye contact : Causes serious eye irritation.

4.3. Immediate medical attention and special treatment, if necessary
All treatments should be based on observed signs and symptoms of distress in the patient.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media
Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire.
Unsuitable extinguishing media : None known.

5.2. Specific hazards arising from the chemical
Fire hazard : No specific fire or explosion hazard.
Explosion hazard : Product is not explosive.
Reactivity : No dangerous reactions known. Thermal decomposition generates : Corrosive vapours.

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 : Do not get in eyes, on skin, or on clothing. Do not breathe vapour. Do not breathe aerosol.

6.1.1. For non-emergency personnel
Protective equipment : Chemical goggles or safety glasses. Wear suitable gloves. Face shield.
Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders
Protective equipment : Wear suitable gloves. Chemical goggles or safety glasses. face shield.
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.

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: Do not get in eyes, on skin, or on clothing. Do not breathe vapours. Wear personal protective equipment. Use only outdoors or in a well-ventilated area.

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.


SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>ACGIH TWA (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>sodium tolyltriazole (64665-57-2)</td>
<td>Not applicable</td>
<td></td>
</tr>
<tr>
<td>Potassium borate (12712-38-8)</td>
<td>Not applicable</td>
<td></td>
</tr>
<tr>
<td>sodium nitrite (7632-00-0)</td>
<td></td>
<td>10 mg/m³ as dust</td>
</tr>
</tbody>
</table>

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 should be available in the immediate vicinity of any potential exposure.

Environmental exposure controls: Prevent contaminated water run-off.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure.

Hand protection:
Use rubber gloves.

Eye protection:
Chemical goggles or safety glasses

Skin and body protection:
Wear suitable protective clothing

Respiratory protection:
Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. 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**: Colourless light amber

**Odour**: Characteristic

**Odour threshold**: No data available

**pH**: 10.5

**Melting point**: No data available

**Freezing point**: -13 °C

**Boiling point**: > 197 °C

**Flash point**: > 100 °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**: 1.281 @ 20 °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 additional information available

### SECTION 10: Stability and reactivity

**10.1. Reactivity**

No dangerous reactions known. Thermal decomposition generates: Corrosive vapours.

**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 incompatible materials.

**10.5. Incompatible materials**


**10.6. Hazardous decomposition products**


### SECTION 11: Toxicological information

**11.1. Information on toxicological effects**

<table>
<thead>
<tr>
<th>Effect</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity (oral)</td>
<td>Not classified</td>
</tr>
<tr>
<td>Acute toxicity (dermal)</td>
<td>Not classified</td>
</tr>
<tr>
<td>Acute toxicity (inhalation)</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

**Unknown acute toxicity (GHS US)**

2.8% of the mixture consists of ingredient(s) of unknown acute toxicity (oral)

2.8% of the mixture consists of ingredient(s) of unknown acute toxicity (dermal)

2.8% of the mixture consists of ingredient(s) of unknown acute toxicity (inhalation (Dust/Mist))

**sodium tolyltriazole (64665-57-2)**

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>735 mg/kg bodyweight</td>
</tr>
<tr>
<td>LD50 dermal rabbit</td>
<td>&gt; 2000 mg/kg bodyweight</td>
</tr>
<tr>
<td>ATE US (oral)</td>
<td>735 mg/kg bodyweight</td>
</tr>
</tbody>
</table>
KOSTChill HD Inhibitor
Safety Data Sheet

sodium nitrite (7632-00-0)

- LD50 oral rat: 180 mg/kg
- ATE US (oral): 180 mg/kg bodyweight
- Skin corrosion/irritation: Causes skin irritation.
- Serious eye damage/irritation: Causes serious eye irritation.
- Respiratory or skin sensitisation: Not classified
- Germ cell mutagenicity: Not classified
- Carcinogenicity: Not classified
- Reproductive toxicity: Not classified
- STOT-single exposure: Not classified

Potassium borate (12712-38-8)

- STOT-single exposure: May cause respiratory irritation.

- STOT-repeated exposure: Not classified
- Aspiration hazard: Not classified
- Viscosity, kinematic: No data available
- Likely routes of exposure: Inhalation. Skin and eye contact.
- Symptoms/effects after skin contact: Causes skin irritation.
- Symptoms/effects after eye contact: Causes serious eye irritation.

SECTION 12: Ecological information

12.1. Toxicity
Ecology - general: Harmful to aquatic life with long lasting effects.

sodium tolyltriazole (64665-57-2)

- LC50 fish 1: 55 mg/l
- EC50 crustacea: 15.8 mg/l

sodium nitrite (7632-00-0)

- LC50 fish 1: 0.11 mg/l

12.2. Persistence and degradability

KOSTChill HD Inhibitor
Persistence and degradability: Not established.

sodium tolyltriazole (64665-57-2)

Biodegradation: 4 % O2 consumption; 28 days

12.3. Bioaccumulative potential

KOSTChill HD Inhibitor
Bioaccumulative potential: Not established.

sodium tolyltriazole (64665-57-2)

Log Pow: 1.083

12.4. Mobility in soil

KOSTChill HD Inhibitor
Ecology - soil: Not established.

12.5. Other adverse effects
Other information: No additional information 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**

Department of Transportation (DOT)
In accordance with DOT
Not regulated.

Transport by sea
Not regulated.

Air transport
Not regulated.

**SECTION 15: Regulatory information**

**15.1. US Federal regulations**

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Contains chemical(s) subject to TSCA 12b export notification if product is shipped outside the U.S

<table>
<thead>
<tr>
<th>Chemical</th>
<th>CAS-No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>sodium nitrite</td>
<td>7632-00-0</td>
<td>5 - 9%</td>
</tr>
</tbody>
</table>

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

<table>
<thead>
<tr>
<th>Chemical</th>
<th>CAS-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>sodium nitrite</td>
<td>7632-00-0</td>
</tr>
</tbody>
</table>

**15.2. International regulations**

**CANADA**

<table>
<thead>
<tr>
<th>Chemical</th>
<th>CAS-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>sodium tolyltriazole (64665-57-2)</td>
<td>Listed on the Canadian DSL (Domestic Substances List) inventory.</td>
</tr>
<tr>
<td>Potassium borate (12712-38-8)</td>
<td>Listed on the Canadian NDSL (Non-Domestic Substances List)</td>
</tr>
<tr>
<td>sodium nitrite (7632-00-0)</td>
<td>Listed on the Canadian DSL (Domestic Substances List) inventory.</td>
</tr>
</tbody>
</table>

**EU-Regulations**

<table>
<thead>
<tr>
<th>Chemical</th>
<th>CAS-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>sodium tolyltriazole (64665-57-2)</td>
<td>Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)</td>
</tr>
<tr>
<td>sodium nitrite (7632-00-0)</td>
<td>Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)</td>
</tr>
</tbody>
</table>

**National regulations**

<table>
<thead>
<tr>
<th>Chemical</th>
<th>CAS-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>sodium tolyltriazole (64665-57-2)</td>
<td>Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)</td>
</tr>
<tr>
<td></td>
<td>Listed on the Japanese ENCS (Existing &amp; New Chemical Substances) inventory</td>
</tr>
<tr>
<td></td>
<td>Listed on KECI (Korean Existing Chemicals Inventory)</td>
</tr>
<tr>
<td></td>
<td>Listed on Taiwan National Chemical Inventory</td>
</tr>
<tr>
<td></td>
<td>Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)</td>
</tr>
<tr>
<td></td>
<td>Listed on NZIoC (New Zealand Inventory of Chemicals)</td>
</tr>
<tr>
<td></td>
<td>Listed on the AICS (Australian Inventory of Chemical Substances)</td>
</tr>
</tbody>
</table>
**KOSTChill HD Inhibitor**

**Safety Data Sheet**

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

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**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.

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**15.3. US State regulations**

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

---

<table>
<thead>
<tr>
<th>Component</th>
<th>State or local regulations</th>
</tr>
</thead>
<tbody>
<tr>
<td>sodium nitrite(7632-00-0)</td>
<td>U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances; U.S. - Pennsylvania - RTK (Right to Know) List</td>
</tr>
</tbody>
</table>

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**SECTION 16: Other information**

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

Revision date : 08/16/2019


Other information : None.

Full text of H-statements:

<table>
<thead>
<tr>
<th>Acute Tox. 3 (Oral)</th>
<th>Acute toxicity (oral), Category 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Tox. 4 (Oral)</td>
<td>Acute toxicity (oral), Category 4</td>
</tr>
<tr>
<td>Aquatic Acute 1</td>
<td>Hazardous to the aquatic environment — Acute Hazard, Category 1</td>
</tr>
<tr>
<td>Aquatic Chronic 2</td>
<td>Hazardous to the aquatic environment — Chronic Hazard, Category 2</td>
</tr>
<tr>
<td>Eye Dam. 1</td>
<td>Serious eye damage/eye irritation, Category 1</td>
</tr>
<tr>
<td>Eye Irrit. 2A</td>
<td>Serious eye damage/eye irritation, Category 2A</td>
</tr>
<tr>
<td>Ox. Sol. 3</td>
<td>Oxidising Solids, Category 3</td>
</tr>
<tr>
<td>Skin Corr. 1B</td>
<td>Skin corrosion/irritation, Category 1B</td>
</tr>
<tr>
<td>Skin Irrit. 2</td>
<td>Skin corrosion/irritation, Category 2</td>
</tr>
<tr>
<td>STOT SE 3</td>
<td>Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation</td>
</tr>
<tr>
<td>H272</td>
<td>May intensify fire; oxidiser.</td>
</tr>
<tr>
<td>H301</td>
<td>Toxic if swallowed.</td>
</tr>
<tr>
<td>H302</td>
<td>Harmful if swallowed.</td>
</tr>
<tr>
<td>H314</td>
<td>Causes severe skin burns and eye damage.</td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation.</td>
</tr>
<tr>
<td>H318</td>
<td>Causes serious eye damage.</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation.</td>
</tr>
<tr>
<td>H335</td>
<td>May cause respiratory irritation.</td>
</tr>
<tr>
<td>H400</td>
<td>Very toxic to aquatic life.</td>
</tr>
<tr>
<td>H411</td>
<td>Toxic to aquatic life with long lasting effects.</td>
</tr>
</tbody>
</table>

---

Abbreviations and acronyms:

08/16/2019 EN (English) 7/8
NFPA health hazard : 1 - Materials that, under emergency conditions, can cause significant irritation.

NFPA fire hazard : 1 - Materials that must be preheated before ignition can occur.

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

Indication of changes:
Composition/information on ingredients. GHS classification.

SDS Prepared by: The Redstone Group
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www.redstonegrp.com

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