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

1.1 Product identifier

- Trade name: OptiShield Corrosion Inhibitor
- Other product identifiers: OTS

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

- Application of the substance / the mixture: Water treatment

1.3 Details of the supplier of the Safety Data Sheet

- Manufacturer/Supplier:
  Opti Temp
  1500 International Drive
  Traverse City, MI 49686
  Tel: (231) 946.2931
  E-mail: Information@OptiTemp.com

1.4 Emergency telephone number: (231) 946-2931

 SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

- Classification according to Regulation (EC) No 1272/2008
  Classifications listed are applicable to the OSHA GHS Hazard Communication Standard (29CFR1910.1200).
  - Skin Irrit. 2 H315 Causes skin irritation.
  - Eye Irrit. 2 H319 Causes serious eye irritation.

2.2 Label elements

- Labelling according to Regulation (EC) No 1272/2008
  The product is classified and labelled according to the CLP regulation.
- Hazard pictograms

GHS07

Signal word Warning

Hazard-determining components of labelling:
- 6-methylbenzotriazole
- trisodium orthophosphate
- sodium nitrate

Hazard statements
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.

Precautionary statements
- P264 Wash thoroughly after handling.
- P280 Wear protective gloves / eye protection.

(Cont'd. on page 2)
Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and OSHA
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- 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 on this label).
- P302+P352 IF ON SKIN: Wash with plenty of water.
- 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
There are no other hazards not otherwise classified that have been identified.

Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components:

- CAS: 136-85-6
- EINECS: 205-265-8
- 6-methylbenzotriazole
- Acute Tox. 4, H302
- <2,5%

- CAS: 7601-54-9
- EINECS: 231-509-8
- Triisodium orthophosphate
- Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335
- <2,2%

- CAS: 7631-95-0
- EINECS: 231-551-7
- Sodium molybdate
- Substance with a Community workplace exposure limit
- 1-2%

- CAS: 7631-99-4
- EINECS: 231-554-3
- Sodium nitrate
- Ox. Sol. 2, H272
- Eye Irrit. 2, H319
- <1%

Additional information:
For the wording of the listed Hazard Statements refer to section 16.
For the listed ingredient(s), the identity and/or exact percentages are being withheld as a trade secret.

SECTION 4: First aid measures

4.1 Description of first aid measures

- After inhalation:
  Supply fresh air; consult doctor in case of complaints.
  Provide oxygen treatment if affected person has difficulty breathing.
- After skin contact:
  Immediately remove any clothing soiled by the product.
  Immediately rinse with water.
  If skin irritation continues, consult a doctor.
- After eye contact:
  Remove contact lenses if worn.
  Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- After swallowing:
  Rinse out mouth and then drink plenty of water.

(Cont'd. on page 3)
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Do not induce vomiting; call for medical help immediately.

4.2 Most important symptoms and effects, both acute and delayed
Methaemoglobinaemia
Dizziness
Gastric or intestinal disorders.
Irritant to skin and mucous membranes.
Causes eye irritation.

Hazards:
Danger of disturbed cardiac rhythm.
Danger of circulatory collapse.

4.3 Indication of any immediate medical attention and special treatment needed
Monitor circulation.
Medical supervision for at least 48 hours.
Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing agents:
The product is not flammable.
Use fire extinguishing methods suitable to surrounding conditions.
For safety reasons unsuitable extinguishing agents: None.

5.2 Special hazards arising from the substance or mixture
Formation of toxic gases is possible during heating or in case of fire.

5.3 Advice for firefighters
Protective equipment:
Wear self-contained respiratory protective device.
Wear fully protective suit.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Wear protective equipment. Keep unprotected persons away.
Particular danger of slipping on leaked/spilled product.
Ensure adequate ventilation

6.2 Environmental precautions
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

6.3 Methods and material for containment and cleaning up
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Clean the affected area carefully; suitable cleaners are:
Warm water and cleansing agent

6.4 Reference to other sections
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
Trade name: OptiShield Corrosion Inhibitor

See Section 13 for disposal information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Ensure good ventilation/exhaustion at the workplace.
Avoid breathing mist/vapours/spray.
Avoid contact with the eyes and skin.

Information about fire - and explosion protection: No special measures required.

7.2 Conditions for safe storage, including any incompatibilities

Storage:
Requirements to be met by storerooms and receptacles:
Use only receptacles specifically permitted for this substance/product.

Information about storage in one common storage facility:
Store away from foodstuffs.
Do not store together with acids.

Further information about storage conditions: Store in cool, dry conditions in well sealed receptacles.

7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:
7601-54-9 trisodium orthophosphate
WEEL (USA) | Short-term value: 5 mg/m³
7631-95-0 Sodium molybdate
PEL (USA) | Long-term value: 5 mg/m³ as Mo
TLV (USA) | Long-term value: 0.5 mg/m³ as Mo; respirable fraction

8.2 Exposure controls

Personal protective equipment:
General protective and hygienic measures:
The usual precautionary measures are to be adhered to when handling chemicals.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.

Respiratory protection:
Not necessary if room is well-ventilated.
Use suitable respiratory protective device in case of insufficient ventilation.
Trade name: OptiShield Corrosion Inhibitor

- Protection of hands:
  
  Protective gloves

  The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

- Material of gloves: Rubber gloves

- Eye protection:
  
  Safety glasses

  Follow relevant national guidelines concerning the use of protective eyewear.

- Body protection: Protective work clothing

SECTION 9: Physical and chemical properties

- 9.1 Information on basic physical and chemical properties

  - Appearance
    
    Form: Liquid
    Colour: Light yellow
    Odour: Mild
    Odour threshold: Not determined.

  - pH-value: 11 - 12
  - Melting point/freezing point: Not determined.
  - Initial boiling point and boiling range: Not determined.

  - Flash point: Not applicable.
  - Flammability (solid, gas): Not applicable.
  - Auto/Self-ignition temperature: Not established
  - Decomposition temperature: Not determined.
  - Explosive properties: Product does not present an explosion hazard.

  - Explosion limits
    Lower: Not determined.
    Upper: Not determined.

  - Vapour pressure: Not determined.

  - Density:
    Relative density: 1.03
    Vapour density: Not determined.
    Evaporation rate: Not determined.

  - Solubility in / Miscibility with water: Soluble.
Trade name: OptiShield Corrosion Inhibitor

**SECTION 10: Stability and reactivity**

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
  - Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** Reacts with acids.
- **10.4 Conditions to avoid** Avoid acids.
- **10.5 Incompatible materials** Strong acids.
- **10.6 Hazardous decomposition products** Possible in traces.
  - Carbon monoxide and carbon dioxide
  - Nitrogen oxides
  - Phosphorus oxides (e.g. P2O5)

**SECTION 11: Toxicological information**

- **11.1 Information on toxicological effects**
  - Acute toxicity: Based on available data, the classification criteria are not met.

**LD/LC50 values relevant for classification:**

<table>
<thead>
<tr>
<th>Route</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral LD50</td>
<td>1600 mg/kg (rat)</td>
</tr>
<tr>
<td>Oral LC50</td>
<td>136-85-6 6-methylbenzotriazole</td>
</tr>
</tbody>
</table>

- **Primary irritant effect**
  - Skin corrosion/irritation: Causes skin irritation.
  - Serious eye damage/irritation: Causes serious eye irritation.
  - Respiratory or skin sensitisation: Based on available data, the classification criteria are not met.

- **Carcinogenic categories**
  - IARC (International Agency for Research on Cancer): None of the ingredients are listed.
  - NTP (National Toxicology Program): None of the ingredients are listed.
Trade name: OptiShield Corrosion Inhibitor

OSHA-Ca (Occupational Safety & Health Administration):
None of the ingredients are listed.

Probable routes of exposure:
- Ingestion.
- Inhalation
- Eye contact.
- Skin contact.

Germ cell mutagenicity: Based on available data, the classification criteria are not met.
Carcinogenicity: Based on available data, the classification criteria are not met.
Reproductive toxicity: Based on available data, the classification criteria are not met.
STOT-single exposure: Based on available data, the classification criteria are not met.
Aspiration hazard: Based on available data, the classification criteria are not met.

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SECTION 12: Ecological information

12.1 Toxicity
- Aquatic toxicity: No further relevant information available.

12.2 Persistence and degradability
No further relevant information available.

12.3 Bioaccumulative potential
Non significant accumulation in organisms

12.4 Mobility in soil
No further relevant information available.

Additional ecological information:
General notes:
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

12.5 Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable.

12.6 Other adverse effects
No further relevant information available.

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SECTION 13: Disposal considerations

13.1 Waste treatment methods
Recommendation
Small amounts may be diluted with plenty of water and washed away. Dispose of larger amounts in accordance with Local Authority requirements.
The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.

Uncleaned packaging:
Recommendation: Disposal must be made according to official regulations.
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Recommended cleansing agents: Water, if necessary together with cleansing agents.

SECTION 14: Transport information

14.1 UN-Number
   DOT, ADR, IMDG, IATA: Not Regulated

14.2 UN proper shipping name
   DOT, ADR, IMDG, IATA: Not Regulated

14.3 Transport hazard class(es)
   DOT, ADR, IMDG, IATA: Not Regulated

14.4 Packing group
   DOT, ADR, IMDG, IATA: Not Regulated

14.5 Environmental hazards:
   Marine pollutant: No

14.6 Special precautions for user
   Not applicable.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code
   Not applicable.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
   United States (USA)
   SARA

   Section 355 (extremely hazardous substances):
   None of the ingredients are listed.

   Section 313 (Specific toxic chemical listings):
   7601-54-9 trisodium orthophosphate

   TSCA (Toxic Substances Control Act):
   All ingredients are listed.

   Proposition 65 (California):
   Chemicals known to cause cancer:
   None of the ingredients are listed.

   Chemicals known to cause reproductive toxicity for females:
   None of the ingredients are listed.
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according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and OSHA
GHS

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· Chemicals known to cause reproductive toxicity for males:
  None of the ingredients are listed.

· Chemicals known to cause developmental toxicity:
  None of the ingredients are listed.

· Carcinogenic Categories
  - EPA (Environmental Protection Agency)
    None of the ingredients are listed.
  - IARC (International Agency for Research on Cancer)
    None of the ingredients are listed.
  - NIOSH-Ca (National Institute for Occupational Safety and Health)
    None of the ingredients are listed.
  - Canadian Domestic Substances List (DSL)
    All ingredients are listed.

· Other regulations, limitations and prohibitive regulations
  - Substances of very high concern (SVHC) according to REACH, Article 57
    None of the ingredients are listed.

· 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Relevant phrases
  H272 May intensify fire; oxidiser.
  H302 Harmful if swallowed.
  H315 Causes skin irritation.
  H319 Causes serious eye irritation.
  H335 May cause respiratory irritation.

· Abbreviations and acronyms:
  ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
  IMDG: International Maritime Code for Dangerous Goods
  DOT: US Department of Transportation
  IATA: International Air Transport Association
  GHS: Globally Harmonised System of Classification and Labelling of Chemicals
  EINECS: European Inventory of Existing Commercial Chemical Substances
  ELINCS: European List of Notified Chemical Substances
  CAS: Chemical Abstracts Service (division of the American Chemical Society)
  LC50: Lethal concentration, 50 percent
  LD50: Lethal dose, 50 percent
  PBT: Persistent, Bioaccumulative and Toxic
  SVHC: Substances of Very High Concern
  vPvB: very Persistent and very Bioaccumulative
  NIOSH: National Institute for Occupational Safety
  OSHA: Occupational Safety & Health
  LDLo: Lowest Lethal Dose Observed
Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and OSHA
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Ox. Sol. 2: Oxidizing solids – Category 2
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

Sources
Website, European Chemicals Agency (echa.europa.eu)
Website, US EPA Substance Registry Services (ofmpub.epa.gov/sor internet/registry/substreg/home/overview/home.do)
Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)
Safety Data Sheets, Individual Manufacturers

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