

MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION

OSTREM CHEMICAL CO. LTD.
2310 - 80 AVENUE
EDMONTON AB T6P 1N2

Phone: 780-440-1911 or 780-446-0177
In Case of Emergency Only:
phone CANUTEC at (613) 996-6666

Product name: NO. 10 BOILER COMPOUND

Code: S762

Other name:

Distributed by:

Product use: boiler water treatment

Date completed: May 15, 2015

2. COMPOSITION/INFORMATION ON INGREDIENTS

| Ingredient | %W/W | CAS number |
|-----------------------------------------------------------------|-------|------------|
| ethylene glycol | 15-40 | 107-21-1 |
| potassium hydroxide (45%) | 10-30 | 1310-58-3 |
| methylene phosphonic acid, sodium salt | 1-5 | 20592-85-2 |
| tetrasodium salt of ethylene diamine tetraacetic acid (EDTA) | 5-10 | 64-02-8 |

3. HAZARDS IDENTIFICATION

Corrosive liquid. Causes burns. Harmful if swallowed.

4. FIRST AID MEASURES

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion: Induce vomiting only on the direct advice of a poison control centre. Drink 1-2 glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

Eye contact: Flush with plenty of water for at least 15 minutes. Get medical attention.

Skin contact: Remove contaminated clothing and flush with plenty of water.

5. FIRE - FIGHTING MEASURES

Flash point (test method): Not applicable

Flammable limits (%): Not applicable

Lower: Not applicable

Upper: Not applicable

Fire extinguishing substances: Use dry chemicals, carbon dioxide, water spray or foam.

Autoignition temperatures: Not applicable

Hazardous combustion products: May liberate carbon monoxide, carbon dioxide, and sulphur dioxide.

Explosion data:

Sensitivity to mechanical impact: Not applicable

Sensitivity to static discharge: Not applicable

Special firefighting procedures: As for surrounding fire.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Wear appropriate protective equipment.

Environmental precautions: Prevent from entering sewers, waterways or low areas.

Methods for cleaning up: Isolate hazard area and restrict access. Small spills: soak up with inert absorbent material and scoop into containers. Large spills: prevent contamination of waterways. Dike and pump into suitable containers. Clean up residual with absorbent material, place in appropriate container and flush with water.

7. HANDLING AND STORAGE

Handling: Do not ingest. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.
Storage: Keep out of reach of children. Keep container tightly closed. Store in a cool, dry area.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls: Provide exhaust ventilation to keep airborne levels below recommended exposure limits.
Respiratory protection: Not normally necessary. An N95 NIOSH respirator may be worn.
Eye protection: Chemical goggles. Wear a face shield if splashing hazards exists.
Other protection: Not normally necessary.

Exposure limits:

| INGREDIENT | ACGIH | OSHA | Other |
|-----------------------------------------------------------------|----------------------------|------|-------|
| ethylene glycol | TLV CEIL: 100mg/m3 8 hours | | |
| potassium hydroxide (45%) | 2 mg/m3 Ceil. | | |
| methylene phosphonic acid, sodium salt | Not available | | |
| tetrasodium salt of ethylene diamine tetraacetic acid (EDTA) | Not available | | |

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|--------------------------------------|-------------------------------------------------------------|
| Physical state: Liquid | Solubility in water: Complete |
| Boiling point: Not available | Vapour pressure: Not available |
| Vapour density: Not available | Evaporation rate: Not available |
| Freezing point: -45C | Odour threshold: Not available |
| Sp. Gravity: 1.176 | pH: 13+ |
| Appearance & odour: | clear, light to dark brown liquid with slight ammonia odour |

10. STABILITY AND REACTIVITY

Stability: Stable
Conditions of instability: Not available
Incompatibility: () Water (X) Oxidizers (X) Acid () Base (X) Other: chlorinated hydrocarbons, aluminum, tin, lead, zinc, copper.
Conditions of reactivity: Not available
Hazardous decomposition products: Not available

11. TOXICOLOGICAL PROPERTIES

POTENTIAL ACUTE HEALTH EFFECTS

Inhalation: Corrosive to respiratory system.
Ingestion: Harmful if swallowed. Causes burns to mouth, throat and stomach.
Eye contact: Causes burns.
Skin contact: Causes burns.
Skin absorption: Not available

POTENTIAL CHRONIC HEALTH EFFECTS:

Inhalation: Repeat or prolonged exposure may cause damage to lungs.
Ingestion: Not available
Eye contact: Not available
Skin contact: Not available
Skin absorption: Not available

Irritancy of product: See WHMIS criteria
Sensitization of product: Not available

Carcinogenicity: IARC (1, 2A or 2B)
ACGIH: (A1, A2 or A3)
Reproductive toxicity:
Teratogenicity:
Mutagenicity:
Synergistic product:

No known significant effects.
No known significant effects.
No known significant effects.
No known significant effects.
No known significant effects.
Not available

| HAZARDOUS INGREDIENTS | CAS NO. | TOXICITY DATA |
|-----------------------------------------------------------------|------------|----------------------------------------------------------------------------------------|
| ethylene glycol | 107-21-1 | LD50 oral rat: 4700 mg/kg LD50 dermal rabbit: 9530 mg/kg |
| potassium hydroxide (45%) | 1310-58-3 | LD ₅₀ oral (rat) 273 mg/kg |
| methylene phosphonic acid, sodium salt | 20592-85-2 | LD ₅₀ Oral (rat) 2910 mg/kg LD ₅₀ Dermal (rabbit) >6310 mg/kg |
| tetrasodium salt of ethylene diamine tetraacetic acid (EDTA) | 64-02-8 | LD50 Oral (rat) >2000 mg/kg LD50 Dermal (rabbit) 1350 mg/kg |

12. ECOLOGICAL INFORMATION

Ecotoxicological information: Not available
Other information:

13. DISPOSAL CONSIDERATIONS

Waste disposal: Disposal of all waste must be done according to local, provincial and federal regulations.

14. TRANSPORT INFORMATION

TDG classification: CORROSIVE LIQUID, N.O.S. (POTASSIUM HYDROXIDE); Class 8; UN 1760; PG II

15. REGULATORY INFORMATION

WHMIS: E Corrosive Material
D2B Material Causing Other Toxic Effects

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

16. PREPARATION INFORMATION

Prepared by: Technical Services Department, Ostrem Chemical Co. Ltd., Ph: (780) 440-1911