

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. 45 CORROSION INHIBITOR

Code: S748

Other name:

Distributed by:

Product use: boiler water treatment

Date completed: April 01, 2014

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	%W/W	CAS number
Cyclohexylamine	7-13	108-91-8
Morpholine	3-7	110-91-8

3. HAZARDS IDENTIFICATION

Corrosive liquid. Causes burns. Harmful if swallowed. Combustible liquid.

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 for at least 30 minutes. Seek immediate medical attention.

5. FIRE - FIGHTING MEASURES

Flash point (test method): 48C

Flammable limits (%): Non-flammable

Lower: Not applicable

Upper: Not applicable

Fire extinguishing substances: Use extinguishing media appropriate for surrounding fire.

Autoignition temperatures: Not applicable

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

Explosion data:

Sensitivity to mechanical impact: Not applicable

Sensitivity to static discharge: Not applicable

Special firefighting procedures: As for surrounding fire. Fire fighters should wear full protective clothing and self contained breathing equipment.

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: If exposure exceeds occupational exposure limits, use an appropriate NIOSH approved respirator
Eye protection: Chemical goggles. Wear a face shield if splashing hazards exists.
Other protection: Wear protective clothing as necessary to prevent skin contact.

Exposure limits:

INGREDIENT	ACGIH	OSHA	Other
Cyclohexylamine	TLV 10 ppm	Not available	
Morpholine	TLV (skin) 20 ppm		

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: Not available	Odour threshold: Not available
Sp. Gravity: 0.987	pH: alkaline
Appearance & odour: clear, pale liquid with amine odour	

10. STABILITY AND REACTIVITY

Stability: Stable
Conditions of instability: Not available
Incompatibility: () Water (X) Oxidizers (X) Acid () Base (X) Other: copper and copper alloys, lead.
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: Corrosive to eyes. Causes severe burns.
Skin contact: Corrosive to skin. Causes severe burns.
Skin absorption: Not applicable

POTENTIAL CHRONIC HEALTH EFFECTS:

Inhalation: Repeat or prolonged exposure may cause damage to lungs.
Ingestion: Perforation of the esophagus and stomach lining may occur.
Eye contact: Prolonged contact may lead to cataracts, glaucoma and permanent blindness.
Skin contact: Repeated skin exposure may produce local skin destruction or dermatitis.
Skin absorption: Not applicable

Irritancy of product: See WHMIS criteria
Sensitization of product: Not available
Carcinogenicity: IARC (1, 2A or 2B) No known significant effects.

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.

Not available

HAZARDOUS INGREDIENTS

Cyclohexylamine

CAS NO.

108-91-8

TOXICITY DATA

LD₅₀ Oral (rat) 11-300 mg/kg

LD₅₀ Dermal (rabbit) 277 mg/kg

Morpholine

110-91-8

LD₅₀ Oral (rat) 1050 mg/kg

LC₅₀ Inhalation (rat) 4000 ppm

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, FLAMMABLE, N.O.S. (CYCLOHEXYLAMINE, MORPHOLINE); Class 8 (3); UN 2920; PG II

15. REGULATORY INFORMATION

WHMIS:

E

Corrosive material

B3

Combustible material

D1B

Toxic Material

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