MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION

OSTREM CHEMICAL CO. LTD. Phone: 780-440-1911 or 780-446-0177

2310 - 80 AVENUE In Case of Emergency Only:

EDMONTON AB T6P 1N2 phone CANUTEC at (613) 996-6666

Product name: A-50 ALUMINUM BRIGHTENER Code: A266

Other name: Distributed by:

Product use: acid brightener **Date completed:** April 01, 2014

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	%W/W	CAS number
hydrofluoric acid	7-13	7664-39-3
hydrochloric acid	30-60	7647-01-0

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.

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):

Flammable limits (%):

Lower:

Upper:

Not applicable

Not applicable

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 oxides of sodium.

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

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

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

hydrofluoric acid TLV - 3 ppm hydrochloric acid TLV - 5 ppm

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Solubility in water: 100% Liquid

Boiling point: Not available Vapour pressure: Not available **Evaporation rate:** Not available Vapour density: Not available Freezing point: Not available Odour threshold: Not available

Sp. Gravity: 1.0532 :Ha

Appearance & odour: clear, colourless liquid with pungent odour

10. STABILITY AND REACTIVITY

Stability: Stable Conditions of instability: Not available

Incompatibility: () Water (X) Oxidizers () Acid (X) Base () Other

Conditions of reactivity: Reacts with metals 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: Not available **Eve contact:** Not available Skin contact: Not applicable Skin absorption: Not applicable

Teratogenicity:

Mutagenicity:

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) No known significant effects.

No known significant effects. Reproductive toxicity: No known significant effects. No known significant effects.

Synergistic product: Not available HAZARDOUS INGREDIENTS

hydrofluoric acid 7664-39-3 LC_{50} Inhalation (rat) 275 ppm hydrochloric acid C_{50} Inhalation (rat) 3124 ppm/hour

CAS NO.

LD₅₀ Oral (rabbit) 900 mg/kg

TOXICITY DATA

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, Toxic, N.O.S.(hydrochloric acid,hydrofluoric acid); 8

(6.1);UN 2922,PG II

15. REGULATORY INFORMATION

WHMIS: E Corrosive material

D1A Very 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