

SAFETY DATA SHEET COPPER FLUOBORATE

SECTION 1 : CHEMICAL PRODUCT AND COMPANY IDENTIFICATION		
Product Name	Copper Fluoborate	
Synonyms	Copper Tetrafluoborate	
Use	As an electrolyte for metal plating, Laboratory chemicals, Manufacture of substances	
UN Number	3289	
Proper Shipping Name	TOXIC LIQUID, CORROSIVE, INORGANIC, N.O.S.	
Dangerous Goods Class	6.1	
Subsidiary risk	8	
Packing Group	II	
Contact Information	OFFICE : Madras Fluorine Private Ltd No.71, 4 th Main Road Gandhi Nagar, Adyar Chennai 600 020, India E-mail : exim@mfplfluorine.com	FACTORY Madras Fluorine Private Ltd Express Highway Manali Chennai – 600 068, India
Emergency Telephone No:	+91 44 2442 6830 / 2442 0654 MON – FRI : 9.30 AM – 6.00 PM	+91 44 3290 0358 / 2901 1768 MON – SAT : 9.00 AM – 5.30 PM

SECTION 2 : HAZARDS IDENTIFICATION

Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Skin corrosion (Category 1B), H314

For the full text of the H-Statements mentioned in this Section, see Section 16.

Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal word

Danger

Hazard statement(s)

H314 Causes severe skin burns and eye damage.



MADRAS FLUORINE PRIVATE LTD



Precautionary statement(s)

P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor.
Supplemental Hazard Statements	None

Other hazards

Weak hydrogen fluoride-releaser

SECTION 3 : COMPOSITION / INFORMATION ON INGREDIENTS

SUBSTANCE NAME	Proportion	CAS Number
Copper Fluoroborate	43.3%	38465-60-0
Fluoroboric Acid (HBF ₄)	3.8 - 5.2%	16872-11-0
Boric Acid	1.3%	10043-35-3
Hydrofluoric Acid (released from HBF ₄ in solution)	>0.5%	7664-39-3
Water	Balance	7732-18-5

SECTION 4 : FIRST AID MEASURES

Swallowed:

If swallowed, DO NOT induce vomiting. Seek urgent medical assistance.

Eye:

If material is splashed into eyes, flush with plenty of water for at least 15 minutes, ensuring eye lids are held open. Immediately transport to hospital or doctor.

Skin:

If material is splashed onto the skin, remove any contaminated clothing and wash skin thoroughly with water and soap if available. Urgently transport to hospital or doctor.

Inhaled:

Remove victim to fresh air. Apply resuscitation if victim is not breathing - DO NOT USE DIRECT MOUTH - TO - MOUTH METHOD if victim ingested or inhaled substance; use alternative respiratory method or proper respiratory device - Administer oxygen if breathing is difficult.

Eye wash fountain, safety shower and normal wash room facilities.

Advice to Doctor:

Treat symptomatically. Symptoms of fluoride overexposure may include salivation, nausea, vomiting, abdominal pain, fever, laboured breathing. Fluoride ion can reduce serum calcium levels possibly causing fatal hypocalcemia. Prolonged exposure to fluoride dusts, vapours or mists results in perforation of the nasal septum. Chronic effects include excessive calcium precipitation by the fluoride ion in the bones, ligaments and tendons.



MADRAS FLUORINE PRIVATE LTD



SECTION 5 : FIRE-FIGHTING MEASURES

Fire/Explosion Hazard

Extinguishing Media: Use dry chemical, carbon dioxide, foam or water spray.

Special Fire Fighting Procedures: Self-contained breathing apparatus (SCBA) required for fire-fighting personnel.

Flammability

Material does not burn. Containers may explode when heated. Runoff may pollute waterways. Fire will produce irritating, toxic and / or corrosive gases

SECTION 6 : ACCIDENTAL RELEASE MEASURES

Emergency Action:

Keep unnecessary people away; Isolate hazard area and deny entry. Stay upwind; Keep out of low areas. Isolate for 100 m in all directions if tank, rail car or tanker truck is involved in fire.

Spill Or Leak Procedure:

No flares, smoking or flames in hazard area. Stop leak if you can do it without risk. Stop leak if you can do it without risk.

Small Spills:

Neutralize with lime, soda ash or crushed limestone. Take up with sand, dirt or vermiculite. Place into labelled drum(s) for later disposal.

Large Spills: Notify Emergency Services (Police or Fire Brigade). Tell them location, nature and any information that would be helpful. Contain spill. Safely stop flow of spill. Bund area. Trained personnel should wear Personal Protective equipment as highlighted in this MSDS. Consult an expert regarding disposal of this product.

SECTION 7 : HANDLING AND STORAGE

Store in a cool place and out of direct sunlight. Store away from sources of heat or flames, strong alkalis, acids and oxidizing agents. Store in original packages as approved by manufacturer. Check all fittings, valves, reticulation (piping) and any ancillary equipment for leaks. A supplied air respirator or a Self-Contained Breathing Apparatus (SCBA) for emergencies should be available and checked regularly. For further information please refer to the Engineering Controls of this MSDS.



MADRAS FLUORINE PRIVATE LTD



SECTION 8 : EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use (EN 143) respirator cartridges as a backup to engineering controls. If th full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Do not let product enter drains.

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear, blue solution with essentially no odour.
Boiling Point / Melting Point	Not Available
Vapour Pressure:	Not Available
Specific Gravity:	1.55 approx.
Flash Point:	Not Applicable
Flammability Limits:	Not Applicable
pH:	2 approx.
Molecular Formula:	Cu(BF ₄) ₂ (Copper Fluoroborate ingredient)
Molecular Weight:	237.0 (Copper Fluoroborate ingredient)
Solubility in Water:	Complete, the product is an Aqueous Solution.



MADRAS FLUORINE PRIVATE LTD



SECTION 10 : STABILITY AND REACTIVITY

Stability:

Stable under normal conditions of use. In dilute solution, some hydrolysis to hydrofluoric acid may occur.

Hazardous Decomposition Products:

At high temperatures the solution releases a hazardous mist of the ingredients. Emits acrid smoke and fumes when heated to decomposition and may release tin oxides, borates, copper fluoride, boron trifluoride (speculative), fluoride compounds, and may form hydrogen fluoride in contact with strong acids.

Hazardous Polymerization:

Will not occur.

Incompatibilities:

Copper Fluoborate is acidic and will react with acid incompatible materials, eg bases, sulfides, cyanides. It may react vigorously with strong oxidizing agents. Corrosive to aluminium.

Conditions To Avoid:

Heat, flames and incompatibles.

SECTION 11 : TOXICOLOGICAL INFORMATION

Product:

Acute Oral Toxicity (rat): 20-50 mg/kg (Liquid, Packing Group II toxicity range & Hazardous Substances Toxic Range)

Chronic Effects: Target organs - liver, kidney, lungs, eyes, skin, bones.

SECTION 12 : ECOLOGICAL INFORMATION

This substance may cause adverse effects in the environment. Avoid contaminating waterways.

SECTION 13 : DISPOSAL CONSIDERATIONS

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste by an approved waste agency. Processing, use or contamination of this product may change the waste management options. The waste should be neutralised with lime in order to immobilise the fluoride as Calcium Fluoride.

Dispose of container and unused contents in accordance with federal, state and local requirements. Advise toxic, corrosive nature. Must be chemically treated to an inert material prior to disposal in landfill.



MADRAS FLUORINE PRIVATE LTD



SECTION 14 : TRANSPORT INFORMATION

UN Number: 3289

Proper Shipping Name: TOXIC LIQUID, CORROSIVE, INORGANIC, N.O.S

Dangerous Goods Class: 6.1

Subsidiary risk: 8

Packing Group: II

Hazchem Code: 2X

EmS-No F-A, S-B

Emergency information(Transport):

Dangerous Goods - Initial Emergency Response Guide (SAA/SNZ HB76:1997)

For TOXIC AND/OR CORROSIVE SUBSTANCES - Guide No: 37

SECTION 15 : REGULATORY INFORMATION

Workplace Hazardous Substance

HAZARD CATEGORY: TOXIC, CORROSIVE

RISK PHRASES

R25 Toxic if swallowed.

R34 Causes burns.

SAFETY PHRASES

S1/2 Keep locked up and out of reach of children.

S53 Avoid exposure - obtain special instructions before use.

S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S28 After contact with skin wash immediately with plenty of water and apply calcium gluconate gel to the affected area.

S27 Take off immediately all contaminated clothing.

S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label whenever possible).

Poison Schedule: S6

Scheduled due to >0.5% HF



MADRAS FLUORINE PRIVATE LTD



SECTION 16 : OTHER INFORMATION

Creation Date : 18.9.2000

Disclaimer:

Madras Fluorine Private Ltd. provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. Madras Fluorine Private Ltd **MAKES NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE INFORMATION SET FORTH HEREIN OR THE PRODUCT TO WHICH THE INFORMATION REFERS. ACCORDINGLY, MADRAS FLUORINE PRIVATE LTD WILL NOT BE RESPONSIBLE FOR DAMAGES RESULTING FROM USE OF OR RELIANCE UPON THIS INFORMATION**

REVISION : 3

10/04/2016