

# MATERIAL SAFETY DATA SHEET

24 HR. EMERGENCY PHONE # CHEM-TREC 1-800-424-9300

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## SECTION 1 Product Identification

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**CHEMICAL NAME:** Yttrium (III) fluoride  
**CAS #:** 13709-49-4  
**FORMULA:** YF<sub>3</sub>  
**SYNONYM:** Yttrium trifluoride

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## SECTION 2 Composition and Information on Ingredients

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INGREDIENT:	CAS #	%	ACGIH (TWA)	OSHA (PEL)
Title Compound	13709-49-4	100	1mg/m <sup>3</sup> (as Y) 2.5mg/m <sup>3</sup> (as F)	1mg/m <sup>3</sup> (As Y) 2.5mg/m <sup>3</sup> (as F)

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## SECTION 3 Hazards Identification

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**EMERGENCY OVERVIEW:** Irritating to the respiratory tract, skin and eyes. May be harmful if swallowed.  
**PRIMARY ROUTES OF EXPOSURE:** Contact with skin and eyes. Inhalation of dust.  
**EYE CONTACT:** Causes irritation of the eyes.  
**SKIN CONTACT:** Causes slight to mild irritation of the skin.  
**INHALATION:** Irritating to skin, eyes and respiratory tract.  
**INGESTION:** Toxicity reduced to the extent that this compound is relatively insoluble. In large amounts may cause vomiting, abdominal pain and diarrhea.  
**CHRONIC HEALTH EFFECTS:** Prolonged exposure to hydrolysable fluorine compounds can cause deterioration of bone and tooth structure.  
**ACUTE HEALTH EFFECTS:** Irritating to skin, eyes and respiratory tract. Fluoride poisoning may cause nausea, vomiting, diarrhea, weakness, coma, and respiratory paralysis.

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## SECTION 4 First Aid Measures

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**EYE EXPOSURE:** Immediately flush the eyes with copious amounts of water for at least 15 minutes. Assure flushing under eyelids. A victim may need assistance in keeping their eyelids open. Get immediate competent medical attention.  
**SKIN EXPOSURE:** Wash affected area with water. Remove contaminated clothes if necessary. Seek medical assistance if irritation persists.  
**INHALATION:** Remove the victim to fresh air. Closely monitor the victim for signs of respiratory problems, such as difficulty in breathing, coughing, wheezing, or pain. In such cases seek immediate medical assistance.  
**INGESTION:** Seek medical assistance immediately. Keep the victim calm. Give the victim water (only if conscious). Induce vomiting only if directed by medical personnel.

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## **SECTION 5                      Firefighting Measures**

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**FLASH POINT:** not applicable  
**AUTO IGNITION TEMPERATURE:** none  
**EXPLOSION LIMITS:** none  
**EXTINGUISHING MEDIUM:** None. Material is non-flammable.  
**SPECIAL FIREFIGHTING PROCEDURES:** If involved in a fire, fire fighters should be equipped with a NIOSH approved positive pressure self-contained breathing apparatus and full protective clothing.  
**HAZARDOUS COMBUSTION AND DECOMPOSITION PRODUCTS:** none  
**UNUSUAL FIRE OR EXPLOSION HAZARDS:** No unusual fire or explosion hazards.

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## **SECTION 6                      Accidental Release Measures**

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**SPILL AND LEAK PROCEDURES:** Small spills can be mixed with powdered sodium bicarbonate, lime, or calcium carbonate and swept up.

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## **SECTION 7                      Handling and Storage**

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**HANDLING AND STORAGE:** Store solid in a tightly sealed container away from moisture. Handle under a dry atmosphere of air or nitrogen. Prolonged exposure to the atmosphere may degrade the product.

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## **SECTION 8                      Exposure Controls and Personal Protection**

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**EYE PROTECTION:** Always wear approved safety glasses w/side shields, or safety goggles, face shield when handling a chemicals substance in the laboratory.  
**SKIN PROTECTION:** Chemical-resistant.  
**VENTILATION:** If possible, handle the material in an efficient fume hood.  
**RESPIRATOR:** If in form of fine dust and ventilation is not available a respirator should be worn. The use of respirators requires a Respirator Protection Program to be in compliance with 29 CFR 19-10.134.

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## **SECTION 9                      Physical and Chemical Properties**

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**COLOR AND FORM:** white pwdr.  
**MOLECULAR WEIGHT:** 145.9  
**MELTING POINT (DEG. C.):** none  
**BOILING POINT:** no data  
**VAPOR PRESSURE:** no data  
**SPECIFIC GRAVITY:** 4.01  
**SOLUBILITY IN WATER:** insoluble

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## **SECTION 10                    Stability and Reactivity**

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**STABILITY:** hygroscopic  
**HAZARDOUS POLYMERIZATION:** no hazardous polymerization  
**CONDITIONS TO AVOID:** contact with moisture

**INCOMPATIBILITY:** active metals  
**DECOMPOSITION PRODUCTS:** none

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## **SECTION 11 Toxicological Information**

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**RTECS DATA:** Intraperitoneal (mammal-species unspecified); LD50: 10 mg/kg. Oral (rat); TDLo: 44 gm/kg/31 D-I.  
**MUTAGENIC EFFECTS:** no data  
**TETRATOGENIC EFFECTS:** no data  
**CARCINOGENIC EFFECTS:** no data

To the best of our knowledge the toxicological effects of this compound have not been fully investigated.

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## **SECTION 12 Ecological Information**

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**ECOLOGICAL INFORMATION:** No information available

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## **SECTION 13 Disposal Considerations**

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**DISPOSAL:** Dispose of in according to local state and federal regulations.

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## **SECTION 14 Transportation Information**

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Non-hazardous

Non-hazardous

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## **SECTION 15 Regulatory Information**

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**TSCA:** Listed in the TSCA inventory  
**SARA (TITLE 313):** Title compound not listed

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## **SECTION 16 Other Information**

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