





Material Safety Data Sheet

NFPA	HMIS	Personal Protective Equipment						
	<table><tr><td>Health Hazard</td><td>2</td></tr><tr><td>Fire Hazard</td><td>0</td></tr><tr><td>Reactivity</td><td>0</td></tr></table>	Health Hazard	2	Fire Hazard	0	Reactivity	0	<div></div> <div>See Section 15.</div>
Health Hazard	2							
Fire Hazard	0							
Reactivity	0							

Section 1. Chemical Product and Company Identification			Page Number: 1	
Common Name/ Trade Name	Yttrium Fluoride		Catalog Number(s).	YY572, Y1062
			CAS#	13709-49-4
Manufacturer	SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248		RTECS	ZG3417500
			TSCA	TSCA 8(b) inventory: Yttrium Fluoride
Commercial Name(s)	Not available.		CI#	Not available.
Synonym	Yttrium trifluoride		<u>IN CASE OF EMERGENCY</u> <u>CHEMTREC (24hr) 800-424-9300</u> CALL (310) 516-8000	
Chemical Name	Yttrium (III) Fluoride			
Chemical Family	Not available.			
Chemical Formula	YF3			
Supplier	SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248			

Section 2. Composition and Information on Ingredients					
		Exposure Limits			
Name	CAS #	TWA (mg/m ³)	STEL (mg/m ³)	CEIL (mg/m ³)	% by Weight
1) Yttrium Fluoride	13709-49-4				100
Toxicological Data on Ingredients	Yttrium Fluoride LD50: Not available. LC50: Not available.				

Section 3. Hazards Identification	
Potential Acute Health Effects	Hazardous in case of skin contact (irritant), of eye contact (irritant). Slightly hazardous in case of ingestion, of inhalation.
Potential Chronic Health Effects	CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to kidneys, skin, eyes, central nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage.

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Section 4. First Aid Measures

Eye Contact	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.
Skin Contact	In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.
Serious Skin Contact	Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.
Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Serious Inhalation	Not available.
Ingestion	Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.
Serious Ingestion	Not available.

Section 5. Fire and Explosion Data

Flammability of the Product	Non-flammable.
Auto-Ignition Temperature	Not applicable.
Flash Points	Not applicable.
Flammable Limits	Not applicable.
Products of Combustion	Not available.
Fire Hazards in Presence of Various Substances	Not applicable.
Explosion Hazards in Presence of Various Substances	Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.
Fire Fighting Media and Instructions	Not applicable.
Special Remarks on Fire Hazards	When heated to decomposition it emits highly toxic fumes of hydrogen fluoride and fluorine gas.
Special Remarks on Explosion Hazards	Not available.

Section 6. Accidental Release Measures

Small Spill	Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.
Large Spill	Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

Section 7. Handling and Storage

Precautions	Do not breathe dust. Wear suitable protective clothing. If you feel unwell, seek medical attention and show the label when possible. Avoid contact with skin and eyes. Keep away from incompatibles such as acids.
Storage	Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8. Exposure Controls/Personal Protection

Engineering Controls	Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.
Personal Protection	Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.
Personal Protection in Case of a Large Spill	Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.
Exposure Limits	Not available.

Section 9. Physical and Chemical Properties

Physical state and appearance	Solid.	Odor	Odorless.
Molecular Weight	145.9 g/mole	Taste	Not available.
pH (1% soln/water)	Not applicable.	Color	White.
Boiling Point	Not available.		
Melting Point	1387°C (2528.6°F)		
Critical Temperature	Not available.		
Specific Gravity	4.01 (Water = 1)		
Vapor Pressure	Not applicable.		
Vapor Density	Not available.		
Volatility	Not available.		
Odor Threshold	Not available.		
Water/Oil Dist. Coeff.	Not available.		
Ionicity (in Water)	Not available.		
Dispersion Properties	Not available.		
Solubility	Insoluble in cold water, hot water. Soluble in dilute acids.		

Section 10. Stability and Reactivity Data

Stability	The product is stable.
Instability Temperature	Not available.
Conditions of Instability	Incompatible materials, moisture.
Incompatibility with various substances	Reactive with acids.
Corrosivity	Not available.

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Special Remarks on Reactivity	Contact with acid or acid fumes emits highly toxic fluoride fumes, hydrogen fluoride vapors and fluorine gas.
Special Remarks on Corrosivity	Not available.
Polymerization	Will not occur.

Section 11. Toxicological Information

Routes of Entry	Absorbed through skin. Inhalation. Ingestion.
Toxicity to Animals	LD50: Not available. LC50: Not available.
Chronic Effects on Humans	May cause damage to the following organs: kidneys, skin, eyes, central nervous system (CNS).
Other Toxic Effects on Humans	Hazardous in case of skin contact (irritant). Slightly hazardous in case of ingestion, of inhalation.
Special Remarks on Toxicity to Animals	Not available.
Special Remarks on Chronic Effects on Humans	Not available.
Special Remarks on other Toxic Effects on Humans	Acute Potential Health Effects: Skin: Causes skin irritation. Eyes: Dust cause eye irritation. Inhalation: Dust can cause respiratory tract irritation. Ingestion: Symptoms of toxicity may include writhing, ataxia (lack of coordination), labored breathing, sedation, nausea, abdominal pain/cramps, vomiting, diarrhea, anorexia, anemia, dental defects. Inorganic fluorides Chronic Potential Health Effects: Ingestion: May cause Fluorine poisoning "fluorosis." Symptoms may include calcification of ligaments, mottled teeth, osteosclerosis, osteomalacia, nervous complaints, labored breathing, sedation. Nausea, vomiting, anorexia, anemia, dental defects.

Section 12. Ecological Information

Ecotoxicity	Not available.
BOD5 and COD	Not available.
Products of Biodegradation	Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
Toxicity of the Products of Biodegradation	The product itself and its products of degradation are not toxic.
Special Remarks on the Products of Biodegradation	Not available.

Section 13. Disposal Considerations

Waste Disposal	Waste must be disposed of in accordance with federal, state and local environmental control regulations.
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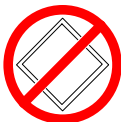
Section 14. Transport Information

DOT Classification Not a DOT controlled material (United States).

Identification Not applicable.

Special Provisions for Transport Not applicable.

DOT (Pictograms)

**Section 15. Other Regulatory Information and Pictograms**

Federal and State Regulations TSCA 8(b) inventory: Yttrium Fluoride

California Proposition 65 Warnings California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: No products were found.
California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: No products were found.

Other Regulations OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).
EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications

WHMIS (Canada) CLASS D-2B: Material causing other toxic effects (TOXIC).

DSCL (EEC) R36/38- Irritating to eyes and skin. S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S37- Wear suitable gloves.

HMIS (U.S.A.)

Health Hazard	2
Fire Hazard	0
Reactivity	0
Personal Protection	E

National Fire Protection Association (U.S.A.)

Health	2	0	Flammability
	0	0	Reactivity
			Specific hazard

WHMIS (Canada) (Pictograms)



DSCL (Europe) (Pictograms)



TDG (Canada) (Pictograms)



ADR (Europe) (Pictograms)



Protective Equipment

Gloves.



Lab coat.



Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.



Splash goggles.

Section 16. Other Information**MSDS Code** Y0006**References** Not available.**Other Special Considerations** Not available.

Validated by Sonia Owen on 9/13/2007.

Verified by Sonia Owen.

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CALL (310) 516-8000

Notice to Reader

All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, Spectrum Quality Products, Inc. assumes no responsibility for the completeness or accuracy of the information contained herein.