



MATERIAL SAFETY DATA SHEET

1. CHEMICAL IDENTIFICATION AND COMPANY INFORMATION

PRODUCT NAME: Trifluralin
SYNONYMS: α,α,α -Trifluoro-2,6-dinitro-N,N-dipropyl-p-toluidine
PRODUCT NUMBER: T828
CAS NO: 1582-09-8
NIOSH/RTECS NO: XU9275000
COMPANY INFO: *Phyto* Technology Laboratories
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2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	CAS Number	Percent	Hazardous
Trifluralin	1582-09-8	>99 %	No exposure limits established by OSHA or ACGIH

3. PHYSICAL & CHEMICAL PROPERTIES

Product Description: Trifluralin
Formula: $C_{13}H_{16}F_3N_3O_4$
Molecular Weight: 335.28
Storage Temperature: RT
pH (0.001 g/L): Under Development (5.25 – 6.25 suspected range) (solvent dependant)
Vapor Density: N/A
Melting Point: 47-49 C
Specific Gravity: 1.294
Solubility: Soluble in DMSO or EtOH
Appearance: Yellow to orange powder
Odor: Odorless

4. HAZARDS IDENTIFICATION

Label Hazard Warnings: May cause sensitization by skin contact. Irritating to eyes. Toxic to aquatic organisms.
Label Precautionary Statements: Avoid contact with skin and eyes. Wear suitable protective clothing and gloves. Avoid release to the environment.
Laboratory Protective Equipment: Safety glasses, protective gloves, and lab coat

HMIS Rating:	Health	Flammability	Reactivity	Personal Protection Equipment
	N/A	N/A	N/A	N/A
NFPA Rating:	Health	Flammability	Reactivity	Special Hazards
	N/A	N/A	N/A	N/A

Storage and Handling Precautions: Store in a tightly sealed container in a cool, dry place. Product may be sensitive to light. Do not breathe dust. Wash thoroughly after handling.

5. POTENTIAL HEALTH HAZARDS/ TOXICOLOGICAL INFORMATION

Toxicity:	LD ₅₀ (Oral-Rat)(mg/Kg):	1930
	LD ₅₀ (IP-Mouse)(mg/Kg):	4600
	LD ₅₀ (Oral-Mouse)(mg/Kg):	3197
Carcinogenicity:	NTP:	No
	IARC:	Suspected Grp. 3 – Insufficient data
	Z List:	No
	OSHA Reg:	No

*This product is an EPA class C carcinogen

Effects of Overexposure:	Irritation, nausea, fever, muscle aches, liver and kidney damage, effect on reproduction, cancer
Target Organs:	Liver, kidneys, lungs
Medical Conditions Aggravated By Exposure:	Pre-existing breathing disorders
Routes of Entry:	Inhalation, ingestion, skin or eye contact

6. EMERGENCY AND FIRST AID

Route of Entry	Symptoms	First Aid Procedures
Ingestion	May cause irritation if swallowed	If swallowed, wash out mouth with water. Never give anything by mouth to an unconscious person. Get medical attention.
Inhalation	May cause irritation to respiratory tract	Safely remove victim to fresh air. If not breathing, institute cardiopulmonary resuscitation (CPR). If breathing is difficult, ensure clear airway and give oxygen. Get medical attention.
Eye Contact	Direct contact may cause irritation. May cause redness, tearing, or blurred vision.	Flush immediately with large amounts of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Get medical attention if irritation persists.
Skin Contact	Irritating. May cause reddening, itching or inflammation.	Wash area thoroughly with soap and water. Remove and wash contaminated clothing. Get medical attention if irritation persists.

7. FIRE HAZARDS & FIRE FIGHTING MEASURES

Flash Point (Closed Cup):	N/A
Flammable Limits:	Upper – N/A % Lower – N/A %
Fire Extinguishing Media:	Water spray, carbon dioxide, dry chemical powder, or appropriate foam. Use extinguishing media suitable for surrounding fire.
Special Fire-Fighting Procedures:	In the event of a fire, wear full protective clothing and NIOSH approved self-contained breathing apparatus. Evacuate the area and fight fire from a safe distance.
Unusual Fire & Explosion Hazards:	May emit toxic fumes under fire conditions.
Toxic Gases Produced:	Carbon monoxide, carbon dioxide, nitrogen oxides, hydrogen fluoride

8. REACTIVITY & CONDITIONS TO AVOID

Stability:	Stable under normal conditions of use. Solutions may be flammable.
Hazardous Polymerization:	Will not occur
Conditions to Avoid:	Light, incompatibles
Incompatibles:	Strong oxidizing agents
Hazardous Decomposition Products:	Carbon monoxide, carbon dioxide, nitrogen oxides, hydrogen fluoride

9. SPECIAL PRECAUTIONS/PROTECTIVE EQUIPMENT

Ventilation:	Ventilation hood
Respiratory Protection:	A NIOSH/MSHA approved air purifying respirator is recommended where airborne concentrations are expected to exceed exposure limits. Protection provided by purifying respirators is limited.
Eye/Skin Protection:	Have eye-washing facilities readily available where eye contact can occur. Wear chemical safety goggles. Use appropriate chemical protective gloves when handling. Showering and changing into street clothes after work is recommended.

10. SPILLS & LEAKS

Spill or Discharge:	Wear suitable protective clothing and a self-contained breathing apparatus if available. Carefully sweep up and remove. Place material in a dry container and cover. Remove from the area. Flush spill area with water.
Disposal Procedure:	Dispose in accordance with all applicable federal, state, and local environmental regulations.
EPA Hazardous Waste Number:	N/A

11. TRANSPORTATION DATA

Domestic (D.O.T.):	Proper Shipping Name:	CHEMICALS, N.O.S. (NON-REGULATED)
	Hazard Class:	N/A
	UN/NA:	N/A
	Labels:	N/A
International (I.M.O.):	Proper Shipping Name:	CHEMICALS, N.O.S. (NON-REGULATED)
	Hazard Class:	N/A
	UN/NA:	N/A
	Labels:	N/A

12. REGULATORY INFORMATION

U.S. Federal Regulatory Information

TSCA:	Yes
SARA TITLE III:	
Section 302 (EHS) Ingredients:	No
Section 313 Ingredients:	No
Section 304 (EHS/CERCLA) Ingredients:	Yes

SARA TITLE III NOTIFICATION INFORMATION

Acute Health Hazard: Yes
Chronic Health Hazard: No
Fire Hazard: No
Sudden Release of Pressure Hazard: No

International Regulatory Information

Risk Phrases: 36 – Irritating to eyes
43 – May cause sensitization by skin contact
51 – Toxic to aquatic organisms

Safety Phrases: 24/25 – Avoid contact with skin and eyes
36/37 – Wear suitable protective clothing and gloves
61 – Avoid release to the environment

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