



# MATERIAL SAFETY DATA SHEET

## 1. Product and Company Identification

**Material name** 2,2',2''-TERPYRIDINE  
**Catalog #** 177  
**Version #** 02  
**Revision date** 13-Aug-2009  
**CAS #** 1148-79-4  
**Synonym(s)** TRIPYRIDYL \* TERPYRIDYL \* 2,2',2-TRIPYRIDINE \* 2,2':6',2''-Terpyridine  
**Manufacturer information** GFS Chemicals, Inc.  
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## 2. Hazards Identification

**Emergency overview** DANGER  
May be fatal if swallowed. May be fatal if absorbed through skin. Exposure to powder or dusts may be irritating to eyes, nose and throat.

**OSHA regulatory status** This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).

**Potential health effects**

**Routes of exposure** Inhalation. Ingestion. Skin contact. Eye contact.

**Eyes** Very toxic in contact with eyes. Dust or powder may irritate eye tissue. Avoid contact with eyes.

**Skin** Very toxic in contact with skin. Avoid contact with the skin.

**Inhalation** Inhalation of dusts may cause respiratory irritation. Avoid breathing dust/fume/gas/mist/vapors/spray.

**Ingestion** Very toxic if swallowed. Do not ingest.

**Potential environmental effects** Ecological injuries are not known or expected under normal use.

## 3. Composition / Information on Ingredients

Components	CAS #	Percent
2,2',2''-TERPYRIDINE	1148-79-4	90 - 100

## 4. First Aid Measures

**First aid procedures**

**Eye contact** Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

**Skin contact** Remove and isolate contaminated clothing and shoes. Immediately flush skin with plenty of water. Get medical attention immediately. For minor skin contact, avoid spreading material on unaffected skin. Wash clothing separately before reuse.

**Inhalation** If gas/fume/vapor/dust/mist from the material is inhaled, remove the affected person immediately to fresh air. Call a physician if symptoms develop or persist.

## **Ingestion**

Never give anything by mouth to a victim who is unconscious or is having convulsions. Do not induce vomiting without advice from poison control center. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth thoroughly. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

## **Notes to physician**

In case of shortness of breath, give oxygen. Keep victim warm. Symptoms may be delayed.

## **General advice**

Take off contaminated clothing and shoes immediately. In case of shortness of breath, give oxygen. Keep victim warm. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

## **5. Fire Fighting Measures**

### **Flammable properties**

The product is not flammable. Will burn if involved in a fire. Dust may form explosive mixture with air.

### **Extinguishing media**

#### **Suitable extinguishing media**

Water. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO<sub>2</sub>).

### **Protection of firefighters**

#### **Protective equipment and precautions for firefighters**

In the event of fire, cool tanks with water spray. Use water spray to cool unopened containers. Cool containers exposed to flames with water until well after the fire is out.

### **Specific methods**

In the event of fire, cool tanks with water spray. Use water spray to cool unopened containers.

## **6. Accidental Release Measures**

### **Personal precautions**

Keep unnecessary personnel away. Local authorities should be advised if significant spillages cannot be contained. Keep upwind. Keep out of low areas. Keep people away from and upwind of spill/leak. Ventilate closed spaces before entering them. Ensure adequate ventilation. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid inhalation of dust from the spilled material. Wear a dust mask if dust is generated above exposure limits.

### **Environmental precautions**

Prevent further leakage or spillage if safe to do so.

### **Methods for containment**

If sweeping of a contaminated area is necessary use a dust suppressant agent which does not react with the product. Prevent entry into waterways, sewer, basements or confined areas.

### **Methods for cleaning up**

Collect dust using a vacuum cleaner equipped with HEPA filter. Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation. Following product recovery, flush area with water.

## **7. Handling and Storage**

### **Handling**

Keep formation of airborne dusts to a minimum. Provide appropriate exhaust ventilation at places where dust is formed. Do not breathe dust. Do not get this material in contact with eyes. Do not get this material in contact with skin. Do not get this material on clothing. Wear personal protective equipment. In case of insufficient ventilation, wear suitable respiratory equipment. Wash thoroughly after handling. Handle and open container with care.

### **Storage**

Store locked up. Store in a well-ventilated place. Keep container tightly closed. Guard against dust accumulation of this material. Keep out of the reach of children.

## **8. Exposure Controls / Personal Protection**

### **Engineering controls**

Ventilation should be sufficient to effectively remove and prevent buildup of any dusts or fumes that may be generated during handling or thermal processing. Ensure adequate ventilation, especially in confined areas.

### **Personal protective equipment**

#### **Respiratory protection**

Wear respirator with dust filter.

#### **Hand protection**

Wear protective gloves.

#### **Eye / face protection**

Use tight fitting goggles if dust is generated.

#### **Skin protection**

Wear chemical protective equipment that is specifically recommended by the manufacturer. Wear suitable protective clothing. Chemical resistant gloves.

**General hygiene considerations**

Do not breathe dust. Do not get in eyes. Do not get this material in contact with skin. Do not get this material on clothing. Wash hands after handling and before eating. Keep away from food and drink. Handle in accordance with good industrial hygiene and safety practice.

**9. Physical & Chemical Properties**

<b>Appearance</b>	Powder.
<b>Color</b>	Light yellow to tan.
<b>Odor</b>	Odorless.
<b>Odor threshold</b>	Not available.
<b>Physical state</b>	Solid.
<b>Form</b>	Powder.
<b>pH</b>	Not available.
<b>Melting point</b>	190.4 - 192.2 °F (88 - 89 °C)
<b>Freezing point</b>	Not available.
<b>Boiling point</b>	Not available.
<b>Flash point</b>	Not available.
<b>Evaporation rate</b>	Not available.
<b>Flammability</b>	Not available.
<b>Flammability limits in air, upper, % by volume</b>	Not available.
<b>Flammability limits in air, lower, % by volume</b>	Not available.
<b>Vapor pressure</b>	Not available.
<b>Vapor density</b>	Not available.
<b>Specific gravity</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility (water)</b>	Insoluble.
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Molecular weight</b>	233.2700 g/mol
<b>Molecular formula</b>	C15H11N3

**10. Chemical Stability & Reactivity Information**

<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Incompatible materials</b>	Strong oxidizing agents.
<b>Hazardous decomposition products</b>	Upon decomposition, this product may yield gaseous nitrogen oxides, carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.

**11. Toxicological Information****Toxicology data for the preparation**

Acute LD50: 1.99 mg/kg, Rat, Oral

Acute LD50: 4.62 mg/kg, Rabbit, Dermal

**Local effects** Inhalation of dusts may cause respiratory irritation.

**Carcinogenicity** This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

**12. Ecological Information**

**Ecotoxicity** This product has no known eco-toxicological effects.

**Persistence and degradability** Not available.

### 13. Disposal Considerations

**Disposal instructions** This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste. Dispose in accordance with all applicable regulations.

**Waste from residues / unused products** Not applicable.

### 14. Transport Information

#### DOT

**Basic shipping requirements:**

**Proper shipping name** Toxic solids, organic, n.o.s.  
**Hazard class** 6.1  
**UN number** UN2811  
**Packing group** I

**Additional information:**

**Special provisions** IB7, T6, TP33  
**Packaging exceptions** None  
**Packaging non bulk** 211  
**Packaging bulk** 242  
**ERG number** 154



### 15. Regulatory Information

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.  
All components are on the U.S. EPA TSCA Inventory List.

CERCLA/SARA Hazardous Substances - Not applicable.

#### CERCLA (Superfund) reportable quantity

None

#### Superfund Amendments and Reauthorization Act of 1986 (SARA)

**Hazard categories** Immediate Hazard - Yes  
Delayed Hazard - No  
Fire Hazard - No  
Pressure Hazard - No  
Reactivity Hazard - No

**Section 302 extremely hazardous substance** No

**Section 311 hazardous chemical** Yes

## Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of New and Existing Chemicals (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

## State regulations

This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

## 16. Other Information

### Further information

HMIS® is a registered trade and service mark of the NPCA.

### HMIS® ratings

Health: 4  
Flammability: 0  
Physical hazard: 0

### NFPA ratings

Health: 4  
Flammability: 0  
Instability: 0

### Disclaimer

The information in the sheet was written based on the best knowledge and experience currently available. The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

### Issue date

13-Aug-2009

### This data sheet contains changes from the previous version in section(s):

This document has undergone significant changes and should be reviewed in its entirety.