

### Hefei TNJ Chemical Industry Co.,Ltd.

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# Material Safety Data Sheet

# **Tetrahydrofurfuryl Alcohol**

# Section 1: Chemical Product and Company Identification

Product Name: Tetrahydrofurfuryl Alcohol

Catalog Codes: SLT4108

**CAS#**: 97-99-4 **RTECS**: LU2450000

**TSCA:** TSCA 8(b) inventory: Tetrahydrofurfuryl Alcohol

CI#: Not available.

Synonym: THFA; Tetrahydro-2-furanmenthanol; Tetrahydro-2-furancarbinol; Tetrahydro-2-furylmethanol

Chemical Name: 2-Furanmethanol, tetrahydro-

Chemical Formula: C5-H10-O2

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# Section 2: Composition and Information on Ingredients

Composition:

NameCAS #% by WeightTetrahydrofurfuryl Alcohol97-99-4100

Toxicological Data on Ingredients: Tetrahydrofurfuryl Alcohol: ORAL (LD50): Acute: 1600 mg/kg [Rat]. 2300

mg/kg [Mouse]. 800 mg/kg [Rabbit]. DERMAL (LD50): Acute: 5000 mg/kg [Rabbit].

### Section 3: Hazards Identification

#### **Potential Acute Health Effects:**

Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (permeator).

#### **Potential Chronic Health Effects:**

CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available.

DEVELOPMENTAL TOXICITY: Not available. Repeated or prolonged exposure is not known to aggravate medical condition.

### **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. Cold water may be used. 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. Cold water may be used. 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 immediate 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: Combustible.

**Auto-Ignition Temperature:** 282.22°C (540°F)

Flash Points: CLOSED CUP: 165°C (329°F). OPEN CUP: 75°C (167°F).

Flammable Limits: LOWER: 1.5% UPPER: 9.7%

Products of Combustion: These products are carbon oxides (CO, CO2).

Fire Hazards in Presence of Various Substances:

Flammable in presence of open flames and sparks, of heat. Non-flammable in presence of shocks.

#### **Explosion Hazards in Presence of Various Substances:**

Risks of explosion of the product in presence of mechanical impact: Not available. Slightly explosive in presence of open flames and sparks.

### Fire Fighting Media and Instructions:

SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards: COMBUSTIBLE.

Special Remarks on Explosion Hazards: Explosive in the form of vapor when exposed to heat or flame

#### **Section 6: Accidental Release Measures**

# Small Spill:

Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

#### Large Spill:

Combustible material. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

#### Section 7: Handling and Storage

#### Precautions:

Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents.

#### Storage:

Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).

#### Section 8: Exposure Controls/Personal Protection

### **Engineering Controls:**

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

#### **Personal Protection:**

Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

# Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Vapor 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:**

TWA: 2 from AIHA TWA: 8.4 (mg/m3) from AIHA Consult local authorities for acceptable exposure limits.

# **Section 9: Physical and Chemical Properties**

Physical state and appearance: Liquid.

Odor: Mild

Taste: Not available.

Molecular Weight: 102.13 g/mole

Color: Colorless.

pH (1% soln/water): Not available.

Boiling Point: 178°C (352.4°F)

Melting Point: <-80°C (-112°F)

Critical Temperature: Not available.

Specific Gravity: 1.0544 (Water = 1)

Vapor Pressure: 0.1 kPa (@ 20°C)

**Vapor Density:** 3.522 (Air = 1)

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available. Ionicity (in Water): Not available.

**Dispersion Properties:** See solubility in water, diethyl ether, acetone.

olubility:

Soluble in cold water, hot water, diethyl ether, acetone. Miscible with alcohol, chloroform, and benzene.

### Section 10: Stability and Reactivity Data

Stability: The product is stable.

**Instability Temperature:** Not available.

Conditions of Instability: Heat, ignition sources, incompatible materials, moisture

Incompatibility with various substances: Reactive with oxidizing agents.

Corrosivity: Not available.

Special Remarks on Reactivity: Violent or explosive reaction with 3-nitro-N-bromophthalimide.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

# Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Eye contact. Inhalation.

### **Toxicity to Animals:**

Acute oral toxicity (LD50): 800 mg/kg [Rabbit]. Acute dermal toxicity (LD50): 5000 mg/kg [Rabbit].

Chronic Effects on Humans: Not available.

#### Other Toxic Effects on Humans:

Hazardous in case of skin contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (permeator).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: May cause adverse reproductive effects based on animal test data

#### **Special Remarks on other Toxic Effects on Humans:**

Acute Potential Health Effects: Skin: Moderately irritating to skin. Eyes: Moderately irritating to eyes. Inhalation: Irritating

to respiratory tract and mucous membranes. Ingestion: May cause gastrointestinal tract irritation with nausea, vomiting, and diarrhea. May affect behavior/central nervous system (dizziness, somnolence, incoordination, convulsions, general anesthetic), liver, blood, and metabolism (weight loss).

# **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 products of degradation are less toxic than the product itself

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.

# Section 14: Transport Information

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

Identification: Not applicable.

Special Provisions for Transport: Not applicable.

# Section 15: Other Regulatory Information

# Federal and State Regulations:

Pennsylvania RTK: Tetrahydrofurfuryl Alcohol Massachusetts RTK: Tetrahydrofurfuryl Alcohol Massachusetts spill list:

Tetrahydrofurfuryl Alcohol TSCA 8(b) inventory: Tetrahydrofurfuryl Alcohol

**Other Regulations:** EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

### Other Classifications:

# WHMIS (Canada):

CLASS B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F). CLASS D-2B: Material causing other toxic effects (TOXIC).

### DSCL (EEC):

R36- Irritating to eyes. S39- Wear eye/face protection.

# HMIS (U.S.A.):

Health Hazard: 2 Fire Hazard: 2 Reactivity: 0

Personal Protection: h

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

Health: 2

Flammability: 1
Reactivity: 0
Specific hazard:

### **Protective Equipment:**

Gloves. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

# Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

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