

MATERIAL SAFETY DATA SHEET

This Material Safety Data Sheet conforms to the requirements of ANSI Z400.1.
THIS MSDS COMPLIES WITH 29 CFR 1910.1200 (HAZARD COMMUNICATION STANDARD)
IMPORTANT: Read this MSDS before handling & disposing of this product.
Pass this information on to employees, customers, & users of this product.

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

PRODUCT IDENTITY: FURFURAL
COMPANY IDENTITY: SOLVCHEM, INC.
COMPANY ADDRESS: 4704 SHANK ROAD
COMPANY CITY: PEARLAND, TX 77581
COMPANY PHONE: 1-281-485-5377
CHEMTREC PHONE: 1-800-424-9300

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

SUBSTANCE	CAS Number	PERCENT	ACGIH TLV-TWA	OSHA PEL-TWA
Furfural	98-01-1	95 - 100%	2 ppm	5 ppm (S)

SECTION 3. HAZARDS IDENTIFICATION

Hazard Overview

May cause eye, skin, and respiratory irritation. May cause headache, dizziness, and other central nervous system effects. May be fatal if swallowed. May be fatal if inhaled. May be absorbed through the skin. May cause allergic skin reaction. Flammable.

SECTION 4. FIRST AID MEASURES

Inhalation: If inhaled, remove to fresh air. If not breathing give artificial respiration, preferably mouth-to-mouth. If breathing is difficult give oxygen. Get medical attention.

Skin: In case of contact, immediately flush skin with plenty of soap and water for at least 15 minutes. Get medical attention. Remove contaminated clothing and launder before reuse.

Eyes: In case of contact, or suspected contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention immediately after flushing.

Ingestion: Do not induce vomiting. Slowly dilute with 1-2 glasses of water or milk and seek medical attention. Never give anything by mouth to an unconscious person.

Notes to Physician: Not Applicable

SECTION 5. FIRE FIGHTING MEASURES

Flash Point/Range (F):	137
Flash Point/Range (C):	58
Flash Point Method:	Not Determined
Autoignition Temperature (F):	600
Autoignition Temperature (C):	315

Flammability Limits in Air - Lower (%): 2.1
Flammability Limits in Air - Upper (%): 19.3

Fire Extinguishing Media Water fog, carbon dioxide, foam, dry chemical.

Special Exposure Hazards Decomposition in fire may produce toxic gases.
Special Protective Equipment for Fire-Fighters: Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.

NFPA Ratings: Health 3, Flammability 2, Reactivity 0
HMIS Ratings: Flammability 2, Reactivity 0, Health 3

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautionary Measures: Use appropriate protective equipment. Wear self-contained breathing apparatus in enclosed areas.

Environmental Precautionary Measures: Prevent from entering sewers, waterways, or low areas.

Procedure for Cleaning / Absorption: Isolate spill and stop leak where safe. Remove ignition sources and work with nonsparking tools. Contain spill with sand or other inert materials. Scoop up and remove.

SECTION 7. HANDLING AND STORAGE

Handling Precautions: Avoid contact with eyes, skin, or clothing. Avoid breathing vapors. Do NOT consume food, drink, or tobacco in contaminated areas. Wash hands after use. Launder contaminated clothing before reuse.

Storage Information: Store away from oxidizers. Keep from heat, sparks, and open flames. Keep container closed when not in use.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

Engineering Controls Use in a well ventilated area. Local exhaust ventilation should be used in areas without good cross ventilation.

Respiratory Protection Organic vapor respirator. In high concentrations, supplied air respirator or a self-contained breathing apparatus.

Hand Protection Impervious rubber gloves.

Skin Protection Rubber apron.

Eye Protection Chemical goggles; also wear a face shield if splashing hazard exists.

Other Precautions Eyewash fountains and safety showers must be easily accessible.

SECTION 9. PHYSICAL DATA

Physical State: Liquid
Color: Clear yellow to amber
Odor: Almond

pH:	Not Determined
Specific Gravity @ 20 C (Water=1):	1.15
Density @ 20 C (lbs./gallon):	9.65
Bulk Density @ 20 C (lbs/ft3):	Not Determined
Boiling Point/Range (F):	323
Boiling Point/Range (C):	161
Freezing Point/Range (F):	Not Determined
Freezing Point/Range (C):	Not Determined
Vapor Pressure @ 20 C (mmHg):	1.7
Vapor Density (Air=1):	Not Determined
Percent Volatiles:	100
Evaporation Rate (Butyl Acetate=1):	Not Determined
Solubility in Water (g/100ml):	8.3
Solubility in Solvents (g/100ml):	Not Determined
VOCs (lbs./gallon):	Not Determined
Viscosity, Dynamic @ 20 C (centipoise):	Not Determined
Viscosity, Kinematic @ 20 C (centistokes):	Not Determined
Partition Coefficient/n-Octanol/Water:	Not Determined
Molecular Weight (g/mole):	96.1

SECTION 10. STABILITY & REACTIVITY

Stability Data: Stable

Hazardous Polymerization: Will Not Occur

Conditions to Avoid Keep away from heat, sparks and flame.

Incompatibility (Materials to Avoid) Strong oxidizers. Strong acids. Strong alkalis.

Hazardous Decomposition Products Carbon monoxide and carbon dioxide.

Additional Guidelines Not Applicable

SECTION 11. TOXICOLOGICAL INFORMATION

Principle Route of Exposure Eye or skin contact, inhalation.

Inhalation May cause respiratory irritation. May cause central nervous system depression including headache, dizziness, drowsiness, incoordination, slowed reaction time, slurred speech, giddiness and unconsciousness. May cause lungs to fill with fluids.

Skin Contact May cause skin irritation. May be absorbed through the skin and produce effects similar to those caused by inhalation and/or ingestion. May cause an allergic skin reaction.

Eye Contact May cause severe eye irritation.

Ingestion May be fatal if swallowed. May cause abdominal pain, vomiting, nausea, and diarrhea. May produce nervous system effects such as feeling of weakness, unsteady walk, and dilation of blood vessels.

Aggravated Medical Conditions Skin disorders. Eye ailments.

Chronic Effects/Carcinogenicity Effects of prolonged or repeated exposure are not well established.

Other Information None known.

Toxicity Tests

Oral Toxicity: Not determined
Dermal Toxicity: Not determined
Inhalation Toxicity: Not determined

Primary Irritation Effect: Not determined

Carcinogenicity Not determined

Genotoxicity: Not determined

Reproductive / Developmental Toxicity: Not determined

SECTION 12. ECOLOGICAL INFORMATION

Mobility (Water/Soil/Air) Not determined

Persistence/Degradability Slowly biodegradable

Bio-accumulation Not Determined

Ecotoxicological Information

Acute Fish Toxicity: Not determined
Acute Crustaceans Toxicity: Not determined
Acute Algae Toxicity: Not determined
Chemical Fate Information Not determined
Other Information Not applicable

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Method Disposal should be made in accordance with federal, state, and local regulations.

Contaminated Packaging Follow all applicable national or local regulations.

SECTION 14. TRANSPORT INFORMATION

Land Transportation

DOT Furaldehydes, 6.1, (3), UN1199, II, (58.3 C) NAERG 132

Canadian TDG Furaldehydes, 6.1, (3), UN1199, II, (58.3 C)

ADR UN1199, Furaldehydes, 6.1, (3), II

Air Transportation ICAO/IATA UN1199, Furaldehydes, 6.1, (3), II

Sea Transportation IMDG UN1199, Furaldehydes, 6.1, (3), II, (58.3 C) EmS F-E, S-D

Other Shipping Information **Labels:** Flammable Liquid Toxic

SECTION 15. REGULATORY INFORMATION

US Regulations

US TSCA Inventory All components listed on inventory.

EPA SARA Title III Extremely Hazardous Substances Not applicable

EPA SARA (311,312) Hazard Class Acute Health Hazard Fire Hazard

EPA SARA (313) Chemicals This product does not contain a toxic chemical for routine annual "Toxic Chemical Release Reporting" under Section 313 (40 CFR 372).

EPA CERCLA/Superfund Reportable Spill Quantity For This Product EPA Reportable Spill Quantity is 5000 pounds based on Furfural (CAS: 98-01-1).

EPA RCRA Hazardous Waste Classification If product becomes a waste, it does meet the criteria of a hazardous waste as defined by the US EPA, because of: Ignitability D001 Listed Waste U125

California Proposition 65 All components listed do not apply to the California Proposition 65 Regulation.

MA Right-to-Know Law One or more components listed.

NJ Right-to-Know Law One or more components listed.

PA Right-to-Know Law One or more components listed.

Canadian Regulations

Canadian DSL Inventory All components listed on inventory.

WHMIS Hazard Class B3 Combustible Liquids D1A Very Toxic Materials D1B Toxic Materials

SECTION 16. OTHER INFORMATION

HAZARD RATINGS:

HEALTH (NFPA): 3

HEALTH (HMIS): 3

FLAMMABILITY: 2

REACTIVITY: 0

This information is intended solely for the use of individuals trained in the NFPA & HMIS hazard rating systems.

EMPLOYEE TRAINING:

Employees should be made aware of all hazards of this material (as stated in this MSDS) before handling it.

NOTICE

The supplier disclaims all expressed or implied warranties of merchantability or fitness for a specific use, with respect to the product or the information provided herein, except for conformation to contracted specifications. All information appearing herein is based upon data obtained from manufacturers and/or recognized technical sources. While the information is believed to be accurate, we make no representations as to its accuracy or sufficiency. Conditions of use are beyond our control, and therefore users are responsible for verifying the data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product. Users also assume all risks in regards to the publication or use of, or reliance upon, information contained herein.

This information relates only to the product designated herein, and does not relate to its use in combination with any other material or process. This MSDS expires 3/1/2011 unless modified.