

# Material Safety Data Sheet

# 2-Furaldehyde (High Purity)

May be used to comply with OSHA's Hazard Communication Standard, 29CFR 1910.1200. Standard must be consulted for specific requirements

Quick Identifier

QO<sup>®</sup> 2-Furaldehyde (High Purity)

Common Name (used on label and list):

---

## Section I

Manufacturer's Name and Address  
Penn Specialty Chemicals, Inc.  
3324 Chelsea Avenue  
Memphis, TN 38108

Emergency Telephone Number

**901-320-4092**

For Emergency Medical Information

**Hazard Information Services: 800-228-5635**

For Product Information and Other Calls:

**Penn Specialty Chemicals, Inc.: 877-895-7366**

**Effective: July 15, 2003**

**Supersedes: October 30, 2000**

---

## Section II - Hazardous Ingredients/Identity Information

Hazardous Component(s) Chemical & Common Name(s)	OSHA PEL	ACGIH TLV	CAS NO.	%
2-Furaldehyde (High Purity)	5 ppm (skin)	2 ppm (skin), A3	98-01-1	
Furfural				

---

## Section III - Physical/Chemical Characteristics

<b>Boiling Point</b> 323°F, 162°C	<b>Vapor Density (Air=1)</b> 3.3	<b>Specific Gravity (H<sub>2</sub>O = 1)</b> 1.16	<b>Vapor Pressure (mm Hg)</b> 1.0 @ 65.3°F, 18.5°C
--------------------------------------	-------------------------------------	--	---

**Solubility in Water**  
Moderate

**Reactivity in Water**  
None

**Appearance and Color**  
Clear, yellowish to dark amber, mobile liquid.  
Pungent, almond-like odor.

**Melting Point/Freezing Point**  
-34°F, -37°C

---

## Section IV - Fire and Explosion Hazard Data

<b>Flash Point</b> 140°F, 60°C	<b>Method Used</b> TCC	<b>Flammable Limits in Air, % Volume</b>	<b>LEL Lower</b> 2.1	<b>UEL Upper</b> 19.3
-----------------------------------	---------------------------	--	-------------------------	--------------------------

**Auto-Ignition temperature**  
600°F, 315°C

**Extinguisher Media**  
Water spray, dry chemical, "alcohol" foam, carbon dioxide

### Special Fire Fighting Procedures

Firefighters should have eye protection and wear self-contained breathing apparatus.  
Use water spray to cool containers exposed to fire.

### Unusual Fire and Explosion Hazards

See Section V.

---

## Section V - Physical Hazards/Reactivity Data

---

### Stability

Unstable  
Stable X

### Conditions to Avoid

Normally stable; see warnings below

### Incompatibility (Materials to Avoid)

Oxidizers. Acids. Bases

### Hazardous Decomposition Products

Combustion produces carbon dioxide and carbon monoxide

### Hazardous Polymerization

May Occur  
Will Not Occur X

### Conditions to Avoid

Hazardous polymerization may occur as concentration of acids or bases increases. Elevated temperature will speed this process

---

## Section VI - Health Hazards

---

### Chemical Listed as Carcinogen or Potential Carcinogen

#### National Toxicology

Yes  
No X\*

#### IARC Monographs

Yes  
No X

#### OSHA Regulated

Yes  
No X

\*NTP study TR 382, NIH publication 90-2837 reports evidence of carcinogenic activity in mice and rats chronically exposed to 2-Furaldehyde (High Purity) by gavage for two years.

### Signs and Symptoms

#### Exposure

Detectable odor

#### Acute Overexposure

Strong odor. Headache. Irritation of skin, eyes and respiratory tract. Staining of skin. Unconsciousness.

#### Chronic Overexposure

May cause dermatitis, sensitization of skin. Loss of taste, numbness of the tongue.

---

### Emergency and First Aid Procedures for Overexposure - Obtain prompt medical attention.

#### Inhalation

Move to fresh air. If necessary, restore and support breathing. Get medical attention.

#### Eyes

Immediately flush with water for 15 minutes while lifting eyelids and rolling eyes.  
Get immediate medical attention.

#### Skin

Wash promptly with large volumes of soap and water for 15 minutes. If irritation occurs get medical help.

#### Ingestion

Get medical help. If conscious and medical help not readily available, give 1 to 2 glasses of water.

---

---

## **Section VII - Special Precautions and Spill/Leak Procedures**

---

### **Precautions to be taken in Handling and Storage**

Store in a cool, dry, well-ventilated location away from ignition sources. Outside or detached storage is preferred. Separate from acids, bases and oxidizers.

### **Other Precautions**

Avoid acid and base contamination and skin contact. Keep containers tightly closed. No smoking or eating in handling area. Store under nitrogen to reduce fire hazard and for product quality.

### **Steps to be taken in case Material is Released or Spilled**

Shut off sources of ignition. Pick up spill on sand, earth or other non-combustible, absorbent material. Flush area with water to remove last traces. Place in covered containers for disposal.

### **Waste Disposal Methods (Consult Federal, State and Local Regulations)**

Dispose of as EPA hazardous waste (#U125) in accord with regulations. Reportable quantity is 5,000 lbs. Dispose of in accord with regulations.

---

## **Section VIII - Special Protection and Control Measures**

---

### **Respiratory Protection (Specify Type)**

NIOSH approved organic vapor air purifying respirator where TLV exceeded  
Ventilation and local exhaust required; keep below TLV.

### **Eye Protection**

Chemical goggles and full face shield.

### **Protective Gloves**

Neoprene/natural rubber.

### **Other Protective Clothing or Equipment**

Eye fountain and safety shower.

### **Work Hygiene Practices**

Avoid direct with 2-Furaldehyde (High Purity).

### **Transport Information**

DOT: Furaldehydes, 6.1, UN1199, PGII, Subsidiary Risk 3, RQ. (Reportable quantity applies only to shipments in bulk packages).

Label: Toxic, subsidiary Flammable liquid

### **Revision**

Change 2-Furaldehyde to Furaldehydes under DOT

---

The data contained herein is based on information currently available to Penn Specialty Chemicals, Inc., and believed to be factual and the opinions expressed to be those of qualified experts; however, this data is not to be taken as a warranty or representation for which Penn Specialty Chemicals, Inc. assumes legal responsibility.

---