

### SECTION 1: Identification

#### 1.1. Identification

Product form	: Mixture
Trade name	: Poly(furfuryl alcohol)
Product code	: 15794
Formula	: (C <sub>5</sub> H <sub>4</sub> O) <sub>x</sub>
Synonyms	: 2-Furanmethanol, homopolymer

#### 1.2. Recommended use and restrictions on use

Recommended use	: Scientific research and development, Use as laboratory reagent, Manufacture of substances
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#### 1.3. Supplier

##### Supplier

Polysciences  
400 Valley Road  
Warrington, PA 18976 - United States  
T +1 215 343 6484 - F +1 215 343 0214  
[info@polysciences.com](mailto:info@polysciences.com) - [www.polysciences.com](http://www.polysciences.com)

#### 1.4. Emergency telephone number

Emergency number	: 24-hour emergency phone number ChemTel 1-800-255-3924
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### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### GHS US classification

Acute toxicity (inhalation) Category 4	Harmful if inhaled
Skin corrosion/irritation Category 2	Causes skin irritation
Serious eye damage/eye irritation Category 2B	Causes eye irritation

#### 2.2. GHS Label elements, including precautionary statements

##### GHS US labeling

Hazard pictograms (GHS US)	: 
Signal word (GHS US)	: Warning
Hazard statements (GHS US)	: Causes skin irritation Causes eye irritation Harmful if inhaled
Precautionary statements (GHS US)	: Avoid breathing dust/fume/gas/mist/vapors/spray. Wash hands, forearms and face thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. If on skin: Wash with plenty of water. If inhaled: Remove person to fresh air and keep comfortable for breathing.

#### 2.3. Other hazards which do not result in classification

No additional information available

#### 2.4. Unknown acute toxicity (GHS US)

Not applicable

### SECTION 3: Composition/Information on ingredients

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

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Name	Product identifier	%	GHS US classification
2-Furanmethanol, homopolymer	(CAS-No.) 25212-86-6	90 – 95	Not classified
Furfuryl Alcohol	(CAS-No.) 98-00-0	5 – 10	Flam. Liq. 4, H227 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 Eye Irrit. 2, H319 Carc. 2, H351 STOT SE 3, H335 STOT RE 2, H373 Aquatic Acute 3, H402

Full text of hazard classes and H-statements : see section 16

### SECTION 4: First-aid measures

#### 4.1. Description of first aid measures

- First-aid measures general : IF exposed or concerned: Get medical advice/attention. Call a poison center/doctor/physician if you feel unwell.
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Get medical advice/attention. Call a poison center/doctor/physician if you feel unwell.
- First-aid measures after skin contact : After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water. Wash contaminated clothing before reuse. Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.
- First-aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention if you feel unwell. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- First-aid measures after ingestion : Rinse mouth out with water. Do not induce vomiting. Give nothing or a little water to drink. Call a poison center/doctor/physician if you feel unwell. Rinse mouth.

#### 4.2. Most important symptoms and effects (acute and delayed)

- Symptoms/effects after skin contact : Irritation.
- Symptoms/effects after eye contact : Eye irritation. Mild eye irritation.

#### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

### SECTION 5: Fire-fighting measures

#### 5.1. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

#### 5.2. Specific hazards arising from the chemical

- Fire hazard : Combustible liquid.
- Hazardous decomposition products in case of fire : Toxic fumes may be released.

#### 5.3. Special protective equipment and precautions for fire-fighters

- Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

##### 6.1.1. For non-emergency personnel

- Emergency procedures : Ventilate spillage area. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes. No open flames, no sparks, and no smoking.

##### 6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
- Emergency procedures : Do not touch spilled material. Ventilate area. Keep away from combustible material.

#### 6.2. Environmental precautions

Avoid release to the environment.

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### 6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.
- Other information : Dispose of materials or solid residues at an authorized site.

### 6.4. Reference to other sections

For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes. Use only outdoors or in a well-ventilated area. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Wash contaminated clothing before reuse.

### 7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store at room temp. Store locked up. Store in a well-ventilated place. Keep cool.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

<b>Poly(furfuryl alcohol)</b>	
No additional information available	
<b>Furfuryl Alcohol (98-00-0)</b>	
<b>USA - ACGIH - Occupational Exposure Limits</b>	
ACGIH TWA (ppm)	0.2 ppm
ACGIH chemical category	Skin - potential significant contribution to overall exposure by the cutaneous route, Confirmed Animal Carcinogen with Unknown Relevance to Humans
<b>USA - OSHA - Occupational Exposure Limits</b>	
OSHA PEL (TWA) (mg/m <sup>3</sup> )	200 mg/m <sup>3</sup>
OSHA PEL (TWA) (ppm)	50 ppm
<b>USA - IDLH - Occupational Exposure Limits</b>	
US IDLH (ppm)	75 ppm
<b>USA - NIOSH - Occupational Exposure Limits</b>	
NIOSH REL (TWA) (mg/m <sup>3</sup> )	40 mg/m <sup>3</sup>
NIOSH REL TWA [ppm]	10 ppm
NIOSH REL (STEL) (mg/m <sup>3</sup> )	60 mg/m <sup>3</sup>
NIOSH REL STEL [ppm]	15 ppm
US-NIOSH chemical category	Potential for dermal absorption
<b>2-Furanmethanol, homopolymer (25212-86-6)</b>	
No additional information available	

### 8.2. Appropriate engineering controls

- Appropriate engineering controls : Ensure good ventilation of the work station.
- Environmental exposure controls : Avoid release to the environment.

### 8.3. Individual protection measures/Personal protective equipment

#### Hand protection:

Protective gloves

#### Eye protection:

Safety glasses

#### Skin and body protection:

Wear suitable protective clothing

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### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. [In case of inadequate ventilation] wear respiratory protection.

### Personal protective equipment symbol(s):



## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: dark reddish-brown viscous liquid.
Color	: Mixture contains one or more component(s) which have the following colour(s): clear red brown
Odor	: There may be no odour warning properties, odour is subjective and inadequate to warn of overexposure. Mixture contains one or more component(s) which have the following odour: burning
Odor threshold	: No data available
pH	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: no data
Flash point	: >
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: no data
Relative vapor density at 20°C	: no data
Relative density	: No data available
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7). Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

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### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified  
Acute toxicity (dermal) : Not classified  
Acute toxicity (inhalation) : Harmful if inhaled.

ATE US (gases)	4500 ppmV/4h
ATE US (vapors)	11 mg/l/4h
ATE US (dust, mist)	1.5 mg/l/4h

#### Furfuryl Alcohol (98-00-0)

LD50 oral rat	110 mg/kg
LD50 dermal rabbit	657 mg/kg
LC50 Inhalation - Rat [ppm]	233 ppm/4h

Skin corrosion/irritation : Causes skin irritation.  
Serious eye damage/irritation : Causes eye irritation.  
Respiratory or skin sensitization : Not classified  
Germ cell mutagenicity : Not classified  
Carcinogenicity : Not classified

#### Furfuryl Alcohol (98-00-0)

IARC group	2B - Possibly carcinogenic to humans
National Toxicity Program (NTP) Status	Evidence of Carcinogenicity

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

#### Furfuryl Alcohol (98-00-0)

STOT-single exposure	May cause respiratory irritation.
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STOT-repeated exposure : Not classified

#### Furfuryl Alcohol (98-00-0)

STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
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Aspiration hazard : Not classified  
Viscosity, kinematic : No data available  
Symptoms/effects after skin contact : Irritation.  
Symptoms/effects after eye contact : Eye irritation. Mild eye irritation.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

#### Furfuryl Alcohol (98-00-0)

LC50 fish 1	32 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
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### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

No additional information available

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### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

## SECTION 14: Transport information

### Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN2874 Furfuryl alcohol, 6.1, III  
UN-No.(DOT) : UN2874  
Proper Shipping Name (DOT) : Furfuryl alcohol  
Class (DOT) : 6.1 - Class 6.1 - Poisonous materials 49 CFR 173.132  
Packing group (DOT) : III - Minor Danger  
Hazard labels (DOT) : 6.1 - Poison



DOT Packaging Non Bulk (49 CFR 173.xxx) : 203  
DOT Packaging Bulk (49 CFR 173.xxx) : 241  
DOT Special Provisions (49 CFR 172.102) : IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).  
T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3)  
TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling =  $97 / 1 + a (tr - tf)$  Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.  
DOT Packaging Exceptions (49 CFR 173.xxx) : 153  
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 60 L  
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 220 L  
DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.  
DOT Vessel Stowage Other : 52 - Stow "separated from" acids,74 - Stow "separated from" oxidizers  
Emergency Response Guide (ERG) Number : 153  
Other information : No supplementary information available.

### Transportation of Dangerous Goods

Not regulated

### Transport by sea

Transport document description (IMDG) : UN 2874 FURFURYL ALCOHOL, 6.1, III  
UN-No. (IMDG) : 2874  
Proper Shipping Name (IMDG) : FURFURYL ALCOHOL  
Class (IMDG) : 6.1 - Toxic substances

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Packing group (IMDG) : III - substances presenting low danger  
Limited quantities (IMDG) : 5 L

### Air transport

Transport document description (IATA) : UN 2874 Furfuryl alcohol, 6.1, III  
UN-No. (IATA) : 2874  
Proper Shipping Name (IATA) : Furfuryl alcohol  
Class (IATA) : 6.1 - Toxic Substances  
Packing group (IATA) : III - Low danger

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

<b>Furfuryl Alcohol (98-00-0)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>2-Furanmethanol, homopolymer (25212-86-6)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
EPA TSCA Regulatory Flag	XU - XU - indicates a substance exempt from reporting under the Chemical Data Reporting Rule, (40 CFR 711).

### 15.2. International regulations

#### CANADA

<b>Furfuryl Alcohol (98-00-0)</b>	
Listed on the Canadian DSL (Domestic Substances List)	
<b>2-Furanmethanol, homopolymer (25212-86-6)</b>	
Listed on the Canadian DSL (Domestic Substances List)	

#### EU-Regulations

<b>Furfuryl Alcohol (98-00-0)</b>	
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)	

#### National regulations

<b>Furfuryl Alcohol (98-00-0)</b>	
Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on the Japanese ISHL (Industrial Safety and Health Law) Listed on KECL/KECI (Korean Existing Chemicals Inventory) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed on INSQ (Mexican National Inventory of Chemical Substances) Listed on CICR (Turkish Inventory and Control of Chemicals) Listed on the TCSI (Taiwan Chemical Substance Inventory)	
<b>2-Furanmethanol, homopolymer (25212-86-6)</b>	
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on the Japanese ISHL (Industrial Safety and Health Law) Listed on KECL/KECI (Korean Existing Chemicals Inventory) Listed on the TCSI (Taiwan Chemical Substance Inventory)	

### 15.3. US State regulations

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Furfuryl Alcohol (98-00-0)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No		

Component	State or local regulations
Furfuryl Alcohol(98-00-0)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List

### SECTION 16: Other information

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SDS US (GHS HazCom 2012)

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