

SAFETY DATA SHEET

Creation Date 11-Feb-2010 Revision Date 18-Dec-2025 **Revision Number** 6

This safety data sheet was created pursuant to the requirements of: US OSHA Hazard Communication Standard 2024 (29 CFR 1910.1200)

1. Identification

Product Name Furfurvl alcohol

Cat No.: AC119790000; AC119790010; AC119790025; AC119790100;

AC119792500

CAS No 98-00-0

Synonyms 2-Furanmethanol

Recommended Use Laboratory chemicals.

Uses advised against Food, drug, pesticide or biocidal product use.

Details of the supplier of the safety data sheet

Company

Acros Organics Fisher Scientific Company One Reagent Lane One Reagent Lane Fair Lawn, NJ 07410 Fair Lawn, NJ 07410

Tel: (201) 796-7100

Emergency Telephone Number

For information US call: 001-800-227-6701 / Europe call: +32 14 57 52 11 Emergency Number US:001-201-796-7100 / Europe: +32 14 57 52 99 CHEMTREC Tel. No. US:001-800-424-9300 / Europe:001-703-527-3887

2. Hazard(s) identification

Classification

This chemical is considered hazardous according to [US] OSHA (29 CFR 1910.1200, 2024)

Flammable liquids Category 4 Acute oral toxicity Category 3 Acute dermal toxicity Category 3 Acute Inhalation Toxicity - Vapors Category 2 Skin Corrosion/Irritation Category 2 Serious Eye Damage/Eye Irritation Category 2 Carcinogenicity Category 2 Specific target organ toxicity (single exposure) Category 3 Target Organs - Respiratory system. Specific target organ toxicity - (repeated exposure) Category 2

Target Organs - Nasal Cavities.

Label Elements

Signal Word

Danger

Hazard Statements

Combustible liquid

Causes skin irritation

Causes serious eye irritation

Fatal if inhaled

May cause respiratory irritation

Suspected of causing cancer

May cause damage to organs through prolonged or repeated exposure

Toxic if swallowed or in contact with skin



Precautionary Statements

Prevention

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking Keep cool

Obtain an airlinetin

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Do not breathe dust/fume/gas/mist/vapors/spray

Use only outdoors or in a well-ventilated area

Wear respiratory protection

Wear eye/face protection

Wear protective gloves/protective clothing/eye protection/face protection

Response

IF exposed or concerned: Get medical attention/advice

Inhalation

IF INHALED: Remove person to fresh air and keep comfortable for breathing

Immediately call a POISON CENTER or doctor

Skin

IF ON SKIN: Wash with plenty of soap and water

Call a POISON CENTER or doctor if you feel unwell

Take off immediately all contaminated clothing

Take off contaminated clothing and wash before reuse

If skin irritation occurs: Get medical advice/attention

Eyes

IF IN EYES: 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

Ingestion

IF SWALLOWED: Immediately call a POISON CENTER or doctor

Rinse mouth

Fire

In case of fire: Use CO2, dry chemical, or foam to extinguish

Storage

Store locked up

Store in a well-ventilated place. Keep container tightly closed

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

None identified

Hazards classified under paragraph (d)(1)(ii) of 1910.1200

No information available

WARNING. Cancer - https://www.p65warnings.ca.gov/.

3. Composition/information on Ingredients

| Component | CAS No | Weight % |
|------------------|---------|----------|
| Furfuryl alcohol | 98-00-0 | >95 |

4. First-aid measures

General Advice Show this safety data sheet to the doctor in attendance. Immediate medical attention is

required.

Eye ContactRinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. In

the case of contact with eyes, rinse immediately with plenty of water and seek medical

advice.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes. Immediate medical

attention is required.

Inhalation Remove to fresh air. If not breathing, give artificial respiration. Do not use mouth-to-mouth

method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Immediate medical attention is required.

Ingestion Do NOT induce vomiting. Call a physician or poison control center immediately.

Most important symptoms and

effects

Notes to Physician

None reasonably foreseeable. Symptoms of overexposure may be headache, dizziness,

tiredness, nausea and vomiting

Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media Water spray, carbon dioxide (CO2), dry chemical, alcohol-resistant foam. Water mist may

be used to cool closed containers.

Unsuitable Extinguishing Media No information available

Flash Point 65 °C / 149 °F

Method - No information available

Autoignition Temperature 391 °C / 735.8 °F

Explosion Limits

Upper No data available
Lower No data available
Sensitivity to Mechanical Impact No information available
Sensitivity to Static Discharge No information available

Specific Hazards Arising from the Chemical

Very toxic by inhalation. Combustible material. Risk of ignition. Containers may explode when heated. Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.

Hazardous Combustion Products

Carbon monoxide (CO). Carbon dioxide (CO2).

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

NFPA

HealthFlammabilityInstabilityPhysical hazards421N/A

6. Accidental release measures

Personal Precautions Ensure adequate ventilation. Use personal protective equipment as required. Keep people

away from and upwind of spill/leak. Remove all sources of ignition. Evacuate personnel to

safe areas. Take precautionary measures against static discharges.

Environmental Precautions Should not be released into the environment. Do not flush into surface water or sanitary

sewer system.

Methods for Containment and Clean Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. **Up**Remove all sources of ignition.

7. Handling and Storage

Handling Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on

clothing. Use only under a chemical fume hood. Do not breathe mist/vapors/spray. Do not ingest. If swallowed then seek immediate medical assistance. Keep away from open

flames, hot surfaces and sources of ignition.

Storage. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from

heat, sparks and flame. Keep under nitrogen. Incompatible Materials. Strong oxidizing

agents.

8. Exposure controls / personal protection

Exposure Guidelines

| Component | ACGIH TLV | OSHA PEL | NIOSH | Mexico OEL (TWA) |
|------------------|--------------|--------------------------------------|---|------------------|
| Furfuryl alcohol | TWA: 0.2 ppm | (Vacated) TWA: 10 ppm | IDLH: 75 ppm | TWA: 10 ppm |
| | Skin | (Vacated) TWA: 40 mg/m ³ | REL = 10 ppm (TWA) | STEL: 15 ppm |
| | | (Vacated) STEL: 15 ppm | $REL = 40 \text{ mg/m}^3 \text{ (TWA)}$ | |
| | | (Vacated) STEL: 60 mg/m ³ | STEL: 15 ppm | |
| | | Skin | STEL: 60 mg/m ³ | |
| | | TWA: 50 ppm | _ | |
| | | TWA: 200 mg/m ³ | | |

Legend

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH: NIOSH - National Institute for Occupational Safety and Health

Engineering MeasuresUse only under a chemical fume hood. Use explosion-proof electrical/ventilating/lighting

equipment. Ensure that eyewash stations and safety showers are close to the workstation

location. Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment

Eye/face Protection Wear appropriate protective eyeglasses or chemical safety goggles as described by

OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard

EN166.

Skin and body protectionWear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard

EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Recommended Filter type: Organic gases and vapours filter. Type A. Brown. conforming to EN14387.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

<u>Appearance</u>

Physical State Liquid Color Yellow

Odor No information available Odor Threshold No information available

Property Values Remarks • Method

Melting Point/Range -29 °C / -20.2 °F Softening Point No data available

Boiling Point/Range 170 °C / 338 °F @ 760 mmHg

Flash Point 65 °C / 149 °F Method - No information available

Flammability (liquid) Combustible liquid On basis of test data

Flammability (solid,gas) Not applicable Liquid

Explosion Limits Lower 1.8 vol% Upper 16.3 vol%

Autoignition Temperature 391 - °C / 735.8 - °F

Decomposition Temperature No data available

pH No information available 30% aq.sol

Viscosity 5 cP @ 25°C

Water Solubility
Solubility in other solvents
No information available
No information available

Partition Coefficient (n-octanol/water)

Componentlog PowFurfuryl alcohol0.28

Vapor Pressure 0.53 mbar @ 20°C

Density / Specific Gravity 1.13

Bulk DensityNot applicableLiquidVapor DensityNo data available(Air = 1.0)

Particle characteristics Not applicable (liquid)

Other Information

Molecular Formula C5 H6 O2 Molecular Weight 98.10

Explosive Properties explosive air/vapour mixtures possible

10. Stability and reactivity

Reactive Hazard None known, based on information available

Stability Stable under normal conditions. Air sensitive.

Conditions to Avoid Keep away from open flames, hot surfaces and sources of ignition. Incompatible products.

Excess heat. Exposure to air.

Incompatible Materials Strong oxidizing agents

Hazardous Decomposition Products Carbon monoxide (CO), Carbon dioxide (CO2)

Hazardous Polymerization Hazardous polymerization does not occur.

Hazardous Reactions None under normal processing.

11. Toxicological information

Information on expected route of exposure

InhalationNot an expected route of exposure.IngestionMay be harmful if swallowed.

Eyes Avoid contact with eyes. Irritating to eyes.

Skin Avoid contact with skin. May cause irritation. Harmful in contact with skin.

Toxicology data for the components

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|------------------|------------------------|-----------------------------|--|
| Furfuryl alcohol | LD50 = 110 mg/kg (Rat) | LD50 = 657 mg/kg (Rabbit) | LC50 = 1.18 mg/L (Rat) 4 h LC50 = 1.48 mg/L (Rat) 4 h |

Toxicologically Synergistic

Products

No information available

(b) skin corrosion/irritation; Category 2

(c) serious eye damage/irritation; Category 2

(d) respiratory or skin sensitization;

RespiratorySkin
Based on available data, the classification criteria are not met Based on available data, the classification criteria are not met

(e) germ cell mutagenicity; Based on available data, the classification criteria are not met

(f) carcinogenicity; Category 2

The table below indicates whether each agency has listed any ingredient as a carcinogen

| Component | CAS No | IARC | NTP | ACGIH | OSHA | Mexico |
|------------------|---------|----------|------------|-------|------|------------|
| Furfuryl alcohol | 98-00-0 | Group 2B | Not listed | A3 | X | Not listed |

IARC (International Agency for Research on Cancer)

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 2A - Probably Carcinogenic to Humans Group 2B - Possibly Carcinogenic to Humans

ACGIH: (American Conference of Governmental Industrial

Hygienists)

A1 - Known Human Carcinogen A2 - Suspected Human Carcinogen

A3 - Animal Carcinogen

ACGIH: (American Conference of Governmental Industrial Hygienists)

(g) reproductive toxicity; Based on available data, the classification criteria are not met

(h) STOT-single exposure; Category 3

Results / Target organs Respiratory system.

(i) STOT-repeated exposure; Category 2

Target Organs Nasal Cavities.

(j) aspiration hazard; Based on available data, the classification criteria are not met

Symptoms / effects,both acute and Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

delayed

Other Adverse Effects The toxicological properties have not been fully investigated.

Endocrine Disrupting Properties This product does not contain any known or suspected endocrine disruptors.

12. Ecological information

Ecotoxicity

The product contains following substances which are hazardous for the environment. Contains a substance which is:. Harmful to aquatic organisms.

| Component | Freshwater Algae | Freshwater Fish | Microtox | Water Flea |
|------------------|------------------|-----------------------------|------------|---------------------|
| Furfuryl alcohol | Not listed | LC50: = 32 mg/L, 96h static | Not listed | EC50 = 328 mg/L 24h |
| | | (Pimephales promelas) | | |

Persistence and Degradability Persistence is unlikely

Bioaccumulation/ Accumulation No information available.

Mobility .

| Component | log Pow |
|------------------|---------|
| Furfuryl alcohol | 0.28 |

13. Disposal considerations

Waste Disposal Methods

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. Transport information

DOT

UN-No UN2874

Proper Shipping Name FURFURYL ALCOHOL

Hazard Class 6.1 Packing Group III

TDG

UN-No UN2874

Proper Shipping Name FURFURYL ALCOHOL

Hazard Class 6.1 Packing Group III

<u>IATA</u>

UN-No UN2874
Proper Shipping Name Furfuryl alcohol

Hazard Class 6.1 Packing Group III

IMDG/IMO UN-No UN2874

Proper Shipping Name Furfuryl alcohol Hazard Class 6.1 Packing Group III

15. Regulatory Information

United States of America Inventory

| Component | CAS No | TSCA | TSCA Inventory notification - Active-Inactive | TSCA - EPA Regulatory Flags |
|------------------|---------|------|---|--------------------------------|
| Furfuryl alcohol | 98-00-0 | Х | ACTIVE | - |

Legend:

TSCA US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

'-' - Not Listed

TSCA - Per 40 CFR 751, Regulation of Certain Chemical Substances & Mixtures, Under TSCA Section 6(h) (PBT)

Not applicable

TSCA 12(b) - Notices of Export

Not applicable

International Inventories

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

| Component | CAS No | DSL | NDSL | EINECS | PICCS | ENCS | ISHL | AICS | IECSC | KECL |
|------------------|---------|-----|------|-----------|-------|------|------|------|-------|----------|
| Furfuryl alcohol | 98-00-0 | Х | - | 202-626-1 | Х | Χ | Х | Х | Х | KE-17364 |

KECL - NIER number or KE number (http://ncis.nier.go.kr/en/main.do)

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act) Not applicable

Clean Air Act Not applicable

OSHA - Occupational Safety and

Health Administration

Not applicable

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

California Proposition 65

This product contains the following Proposition 65 chemicals.

| Component | CAS No | California Prop. 65 | Prop 65 NSRL | Category |
|------------------|---------|---------------------|--------------|------------|
| Furfuryl alcohol | 98-00-0 | Carcinogen | - | Carcinogen |

U.S. State Right-to-Know

Regulations

| Component Massachusetts New Jersey Pennsylvania Illinois Rhode Island |
|---|
|---|

| Furfuryl alcohol | X | X | Х | = | X |
|------------------|---|---|---|---|---|

U.S. Department of Transportation

Reportable Quantity (RQ): N
DOT Marine Pollutant N
DOT Severe Marine Pollutant N

U.S. Department of Homeland

Security

This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade Moderate risk, Grade 2

Authorisation/Restrictions according to EU REACH

| Component | CAS No | REACH (1907/2006) - Annex XIV - Substances Subject to Authorization | REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances | REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC) |
|------------------|---------|---|--|---|
| Furfuryl alcohol | 98-00-0 | - | Use restricted. See entry 75. (see link for restriction details) | - |

REACH links

https://echa.europa.eu/substances-restricted-under-reach

Safety, health and environmental regulations/legislation specific for the substance or mixture

| Component | CAS No | OECD HPV | Persistent Organic Pollutant | Ozone Depletion Potential | Restriction of Hazardous |
|------------------|---------|----------|---------------------------------|------------------------------|-----------------------------|
| | | | | | Substances (RoHS) |
| Furfuryl alcohol | 98-00-0 | Listed | Not applicable | Not applicable | Not applicable |

Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?

Not applicable

Other International Regulations

| | Component | CAS No | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements | Rotterdam Convention (PIC) | Basel Convention (Hazardous Waste) |
|---|------------------|---------|---|--|-------------------------------|---------------------------------------|
| L | Furfuryl alcohol | 98-00-0 | Not applicable | Not applicable | Not applicable | Not applicable |

16. Other Information

Prepared By Product stewardship (Regulatory Affairs)

Thermo Fisher Scientific

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 18-Dec-2025

Revision Summary

Updated to the U.S. Department of Labor's Occupational Safety and Health Administration (OSHA) which published its Final Rule in the Federal Register revising the Hazard Communication Standard (HCS/HazCom), 29 CFR 1910.1200 (2024) (HCS §1910.1200, 2024), May 20, 2024, effective July 19, 2024.

Disclaimer

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

End of SDS