

SAFETY DATA SHEET

Preparation Date: 3/20/2017

Revision Date: 3/20/2017

Revision Number: G1

1. IDENTIFICATION

Product identifier

Product code: F1098
Product Name: 2-FURANCARBOXYALDEHYDE, REAGENT, ACS

Other means of identification

Synonyms: 2-Formylfuran
 Fural
 Furfural
 2-Furfural
 Furfuraldehyde
 Furfurale (Italian)
 Furfurol
 Furfurole
 2-Furil-metanale (Italian)
 2-Furylaldehyde
 2-Furylcarboxaldehyde
 2-Furyl-methanal
 2-Furanaldehyde
 Furale
 2-Furancarbondal
 Furole
 alpha-Furole
 Pyromucic aldehyde

CAS #: 98-01-1
RTECS # LT7000000
CI#: Not available

Recommended use of the chemical and restrictions on use

Recommended use: Constituent of rubber cement. Synthetic flavoring. Extractant in the refining of lubricating oils, diesel fuels, and vegetable oils.

Uses advised against No information available

Supplier: Spectrum Chemical Mfg. Corp
 14422 South San Pedro St.
 Gardena, CA 90248
 (310) 516-8000.

Order Online At: <https://www.spectrumchemical.com>

Emergency telephone number Chemtrec 1-800-424-9300

Contact Person: Martin LaBenz (West Coast)

Contact Person: Ibad Tirmiz (East Coast)

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous according to the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Product code: F1098

Product name:
 2-FURANCARBOXYALDEHYDE,
 REAGENT, ACS

1 / 14

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Acute toxicity - Oral	Category 3
Acute toxicity - Dermal	Category 3
Acute toxicity - Inhalation (Vapors)	Category 2
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Specific target organ toxicity (repeated exposure)	Category 2
Flammable liquids	Category 3

Label elements

Danger

Hazard statements

Toxic if swallowed
Toxic in contact with skin
Fatal if inhaled
Causes skin irritation
Causes serious eye irritation
May cause damage to organs through prolonged or repeated exposure
Flammable liquid and vapor



Hazards not otherwise classified (HNOC)

Not Applicable

Other hazards

Not available

Precautionary Statements - Prevention

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
Keep away from heat/sparks/open flames/hot surfaces. — No smoking
Keep container tightly closed
Ground/bond container and receiving equipment
Use only non-sparking tools
Take precautionary measures against static discharge
Keep cool
Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

Product code: F1098

Product name:
2-FURANCARBOXYALDEHYDE,
REAGENT, ACS

2 / 14

Get medical advice/attention if you feel unwell

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

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.

If skin irritation occurs: Get medical advice/attention

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

Wash contaminated clothing before reuse

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician

Rinse mouth

Precautionary Statements - Storage

Store locked up

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

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight %
2-Furancarboxyaldehyde	98-01-1	100

4. FIRST AID MEASURES

First aid measures

General Advice:

National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. First aider needs to protect himself.

Skin Contact:

Toxic in contact with skin. Wash off immediately with soap and plenty of water removing all contaminated clothing and shoes. Get medical attention. If skin irritation persists, call a physician.

Eye Contact:

Flush eyes with water for 15 minutes. Get medical attention.

Inhalation:

Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention. **WARNING!** It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled or ingested material is toxic, infectious or corrosive. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce 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 without medical advice. Never give anything by mouth to an unconscious person. Immediate medical attention is required. Toxic if swallowed.

Most important symptoms and effects, both acute and delayed

Symptoms

Causes serious eye irritation. Causes skin irritation. May cause digestive (gastrointestinal) tract irritation. Ingestion of large amounts may cause nausea, vomiting, abdominal pain. Numbness and irritation of the mouth (tongue and lips). May cause impairment of sense of taste. Lacrimation. May cause coughing and shortness of breath. May cause pulmonary edema. May cause mydriasis (dilated pupils). May cause central nervous system effects. Ataxia. May affect behavior/central nervous system (tremor, convulsions). Dizziness. Headache. May affect the liver. It may affect the kidneys.

Product code: F1098

Product name:
2-FURANCARBOXYALDEHYDE,
REAGENT, ACS

3 / 14

Indication of any immediate medical attention and special treatment needed

Notes to Physician: Treat symptomatically.

Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media:

Use dry chemical, CO₂, water spray or "alcohol" foam. Cool affected containers with flooding quantities of water.

Unsuitable Extinguishing Media:

No information available.

Specific hazards arising from the chemical

Hazardous Combustion Products:

Carbon Dioxide, Carbon Monoxide.

Specific hazards:

Flammable in presence of open flames and sparks, of heat. When heated to decomposition it emits acrid smoke and irritating fumes. Vapor forms flammable mixture with air. Vapors may travel to source of ignition and flash back. Spontaneous ignition occurs when furfural is mixed with sodium hydrogen carbonate.

Special Protective Actions for Firefighters

Specific Methods:

No information available.

Special Protective Equipment for Firefighters:

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions: Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Remove all sources of ignition. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use spark-proof tools and explosion-proof equipment. All equipment used when handling the product must be grounded. Pay attention to flashback. Take precautionary measures against static discharges. In case of large spill, water spray or vapor suppressing foam may be used to reduce vapors, but may not prevent ignition in closed spaces.

Environmental precautions Prevent further leakage or spillage if safe to do so. Do not let this chemical enter the environment. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. Absorb spill with inert material (e.g. vermiculite, dry sand or earth). In case of large spill, dike if needed. Dike far ahead of liquid spill for later disposal.

Methods for cleaning up Use appropriate tools to put the spilled material in a suitable chemical waste disposal container. Use only non-sparking tools. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:

Provide sufficient air exchange and/or exhaust in work rooms. Keep away from open flames, hot surfaces and sources of ignition. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Keep away from incompatible materials.

Safe Handling Advice

Wear personal protective equipment. Use only in well-ventilated areas. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Do not breathe vapors or spray mist. Do not ingest. When using do not smoke. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep refrigerated. Keep at temperatures between 2 and 8 °C. Protect from light. Sensitive to light. Store in light-resistant containers. Store in a segregated and approved area. Store away from incompatible materials.

Incompatible Materials:

Oxidizing agents
Acids
Ammonia
aliphatic amines
Aromatic Amines
Bases

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Product code: F1098

Product name:
2-FURANCARBOXYALDEHYDE,
REAGENT, ACS

5 / 14

National occupational exposure limits

United States

Components	CAS-No.	OSHA	NIOSH	ACGIH	AIHA WHEEL
2-Furancarboxyaldehyde	98-01-1	5 ppm TWA 20 mg/m ³ TWA	None	= 2 ppm TWA	None

Canada

Components	CAS-No.	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - Quebec
2-Furancarboxyaldehyde	98-01-1	= 2 ppm TWA = 7.9 mg/m ³ TWA	= 2 ppm TWA	2 ppm TWA	2 ppm TWAEV 7.9 mg/m ³ TWAEV

Australia and Mexico

Components	CAS-No.	Australia	Mexico
2-Furancarboxyaldehyde	98-01-1	7.9 mg/m ³ TWA 2 ppm TWA	= 2 ppm TWA = 8 mg/m ³ TWA

Appropriate engineering controls

Engineering measures to reduce exposure:

Ensure adequate ventilation, especially in confined areas. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors and mist below their respective threshold limit value.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

- Eye protection:** Goggles
- Skin and body protection:** Long sleeved clothing
Gloves
Chemical resistant apron
- Respiratory protection:** Vapor respirator. Be sure to use an approved/certified respirator or equivalent.
- Hygiene measures:** Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:

Liquid

Appearance:

Oily.

Color:

Colorless.

Odor:

Almond-like.

Taste

distinct caramel.

Formula:C₅H₄O₂**Molecular/Formula weight:**

96.09 g/mole

Flammability:

No information available

Flashpoint (°C/°F):60°C (140°F)
68°C (154.4°F)**Flash Point Tested according to:**

Closed cup

Autoignition Temperature (°C/°F):

392°C (737.6°F)

Product code: F1098**Product name:**
2-FURANCARBOXYALDEHYDE,
REAGENT, ACS**6 / 14**

Open cup

Lower Explosion Limit (%):
2.1

Upper Explosion Limit (%):
19.3

Melting point/range(°C/°F):
-38.7°C (-37.7°F)

Decomposition temperature(°C/°F):
No information available

Boiling point/range(°C/°F):
161.8°C (323.2°F)

Bulk density:
No information available

Density (g/cm³):
No information available

Specific gravity:
1.1594

pH:
No information available

Vapor pressure @ 20°C (kPa):
0.3

Evaporation rate:
No information available

Vapor density:
3.3

VOC content (g/L):
No information available

Odor threshold (ppm):
0.078-0.4

**Partition coefficient
(n-octanol/water):**
Log kow = 0.4

Viscosity:
No information available

Miscibility:
No information available

Solubility:
Soluble in diethyl ether
Soluble in Acetone
Partially soluble in cold water
Soluble in Chloroform
Soluble in Benzene
Soluble in Ethanol
Solubility in water: 8.3% at 20°C

10. STABILITY AND REACTIVITY

Reactivity

Sensitive to light

Turns yellow to brown on exposure to light and air

An exothermic polymerization of almost explosive violence can occur upon contact with strong mineral acids, or alkalis.

Incompatible with ammonia, aliphatic amines, and aromatic amines

Many coatings and plastic are attacked by furfural.

Chemical stability

Stability: Stable under recommended storage conditions. Sensitive to light.

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to avoid: Excess Heat. Ignition sources. Exposure to light. Incompatible materials.

Incompatible Materials: Oxidizing agents
Acids
Ammonia
aliphatic amines
Aromatic Amines
Bases

Hazardous decomposition products: Carbon monoxide. Carbon dioxide.

Other Information

Corrosivity: No information available

Product code: F1098

Product name:
2-FURANCARBOXYALDEHYDE,
REAGENT, ACS

7 / 14

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure:

Skin. Ingestion. Inhalation. Eyes.

Acute Toxicity

Component Information

2-Furancarboxyaldehyde	
CAS-No.	98-01-1

LD50/oral/rat = 125 mg/kg Oral LD50 Rat (LOLI)

65 mg/kg Oral LD50 Rat (RTECS)

50-100 (EU Chemicals Bureau IUCLID dataset)

LD50/oral/mouse = 400 mg/kg Oral LD50 Mouse

LD50/dermal/rabbit = 500-1000 mg/kg

LD50/dermal/rat = No information available

LC50/inhalation/rat = 175 ppm Inhalation LC50 Rat 6 h

756 mg/m³ 1 h

LC50/inhalation/mouse = No information available

Other LD50 or LC50 information = 370 ppm Inhalation LC50 Dog 6 h

950 mg/kg Oral LD50 Dog

541 mg/kg Oral LD50 Guinea Pig

Product Information

LD50/oral/rat =

VALUE- Acute Tox Oral = 65 mg/kg

LD50/oral/mouse =

Value - Acute Tox Oral = 400 mg/kg

LD50/dermal/rabbit

VALUE-Acute Tox Dermal = 500 mg/kg

LD50/dermal/rat

VALUE -Acute Tox Dermal = No information available

LC50/inhalation/rat

VALUE-Vapor = 0.378 mg/l (4-hr)

VALUE-Gas = No information available

VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse

VALUE-Vapor = No information available

VALUE - Gas = No information available

VALUE - Dust/Mist = No information available

Symptoms

Skin Contact: Toxic in contact with skin. It can be absorbed through the skin. Causes skin

Product code: F1098

Product name:
2-FURANCARBOXYALDEHYDE,
REAGENT, ACS

8 / 14

irritation.

Eye Contact: Causes serious eye irritation.

Inhalation Fatal if inhaled. May cause dizziness and headache. May cause lightheadedness. May cause fatigue. May cause dyspnea (difficulty breathing or shortness of breath). Symptoms may include coughing and shortness of breath. It may affect behavior/central nervous system (tremors). May cause itching of the throat. May cause numbness of the tongue and mucous membranes of the mouth. May cause loss of the sense of taste. Causes lacrimation. It may cause pulmonary edema.

Ingestion Toxic if swallowed. May cause gastrointestinal tract irritation with nausea, vomiting, diarrhea. May cause abdominal pain. May affect the kidneys. May affect liver. May cause numbness of the mouth (lips and tongue). May cause loss of taste. May affect behavior/central nervous system (ataxia). May affect behavior/central nervous system (convulsions). May cause mydriasis (dilated pupils).

Aspiration hazard No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity Prolonged or repeated inhalation may affect the liver. Repeated exposure may cause loss of sense of taste, numbness of the tongue and mucous membranes of the mouth, headache, tiredness, tremors. Prolonged or repeated contact may cause skin allergy.

Sensitization: No information available.

Mutagenic Effects: Mutagenic effects in mammalian somatic cells
Experiments with bacteria and/or yeast have shown mutagenic effects

Carcinogenic effects: Not considered carcinogenic.

Components	CAS-No.	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
2-Furancarboxyaldehyde	98-01-1	Monograph 63 [1995]	A3 Confirmed Animal Carcinogen with Unknown Relevance to Humans	Not listed	Not listed	Not listed	Not listed

ACGIH (American Conference of Governmental Industrial Hygienists)

IARC (International Agency for Research on Cancer)

NTP (National Toxicology Program)

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

Reproductive toxicity No data is available

Reproductive Effects: No information available

Developmental Effects: No information available

Teratogenic Effects: No information available

Specific Target Organ Toxicity

Product code: F1098

Product name:
2-FURANCARBOXYALDEHYDE,
REAGENT, ACS

STOT - single exposure No information available.
STOT - repeated exposure May cause damage to organs through prolonged or repeated exposure.
Target Organs: Liver. Respiratory system. Skin.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: Aquatic environment.

2-Furancarboxyaldehyde - 98-01-1

Freshwater Fish Species Data: 13.4-19.3 mg/L LC50 Pimephales promelas 96 h static 1
 16.79-26.35 mg/L LC50 Pimephales promelas 96 h flow-through 1

Water Flea Data: 29 mg/L EC50 Daphnia magna 24 h

Persistence and degradability: No information available

Bioaccumulative potential: No information available.

Mobility: No information available.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:

Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:

Empty containers should be taken for local recycling, recovery or waste disposal

Components	CAS-No.	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
2-Furancarboxyaldehyde	98-01-1	None	None	None	U125 Ignitable waste

14. TRANSPORT INFORMATION

DOT

UN-No: UN1199
Proper Shipping Name: Furaldehydes
Hazard Class: 6.1
Subsidiary Class: 3
Packing group: II
Emergency Response Guide Number: 132P
Marine Pollutant: No data available
DOT RQ (lbs): No information available
Special Provisions: IB2, T7, TP2
Symbol(s): [DOT]: (R5) - Identifies a material that is a hazardous substance that has a reportable quantity (RQ) of 5000 pounds (2270 Kilograms).
Description: UN1199, FURALDEHYDES, 6.1 (3), II

TDG (Canada)

UN-No: UN1199

Product code: F1098

Product name:
 2-FURANCARBOXYALDEHYDE,
 REAGENT, ACS

Proper Shipping Name: Furaldehydes
Hazard Class: 6.1
Subsidiary Risk: (3)
Packing Group: II
Marine Pollutant Description: No Information available
 UN1199, FURALDEHYDES, 6.1 (3), II

ADR

UN-No: UN1199
Proper Shipping Name: Furaldehydes
Hazard Class: 6.1
Packing Group: II
Subsidiary Risk: 3
Description: UN1199, FURALDEHYDES, 6.1 (3), II

IMO / IMDG

UN-No: UN1199
Proper Shipping Name: Furaldehydes
Hazard Class: 6.1
Subsidiary Risk: 3
Packing Group: II
Marine Pollutant Description: No information available
EMS: F-E
Description: UN1199, FURALDEHYDES, 6.1 (3), II

RID

UN-No: UN1199
Proper Shipping Name: Furaldehydes
Hazard Class: 6.1
Subsidiary Risk: 3
Packing Group: II
Description: UN1199, FURALDEHYDES, 6.1 (3), II

ICAO

UN-No: UN1199
Proper Shipping Name: Furaldehydes
Hazard Class: 6.1
Subsidiary Risk: 3
Packing Group: II
Description: UN1199, FURALDEHYDES, 6.1 (3), II

IATA

UN-No: UN1199
Proper Shipping Name: Furaldehydes
Hazard Class: 6.1
Subsidiary Risk: 3
Packing Group: II
ERG Code: 6F
Special Provisions Description: No information available
 UN1199, FURALDEHYDES, 6.1 (3), II

15. REGULATORY INFORMATION

International Inventories

Components	CAS-No.	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.

Product code: F1098

Product name:
 2-FURANCARBOXYALDEHYDE,
 REAGENT, ACS

2-Furancarboxyaldehy de	98-01-1	Present	Present KE-17310	Present	Present (5)-40	Present	Present	Present 202-627-7
----------------------------	---------	---------	---------------------	---------	----------------	---------	---------	----------------------

U.S. Regulations

2-Furancarboxyaldehyde

- Massachusetts RTK: Present
- New Jersey RTK Hazardous Substance List: 0953
- New Jersey - Discharge Prevention - List of Hazardous Substances: Present
- Pennsylvania RTK: Environmental hazard
- Pennsylvania RTK - Environmental Hazard List Present
- Pennsylvania RTK - Special Hazardous Substances Present
- Minnesota - Hazardous Substance List: Present
- New York Release Reporting - List of Hazardous Substances:
= 1 lb RQ
- Louisiana Reportable Quantity List for Pollutants: Listed
- California Directors List of Hazardous Substances: Present

FDA - 21 CFR - Total Food Additives 175.105

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Components	CAS-No.	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
2-Furancarboxyaldehyde	98-01-1	Not Listed	Not Listed	Not Listed	Not Listed

CERCLA/SARA

Components	CAS-No.	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting de minimis
2-Furancarboxyalde hyde	98-01-1	= 5000 lb final RQ	None	None	None	None

U.S. TSCA

Components	CAS-No.	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
2-Furancarboxyaldehyde	98-01-1	Not Applicable	06/01/1987 06/01/1997

Canada

WHMIS hazard class:

- B3 Combustible liquid
- D1B Toxic materials
- D2B Toxic materials

Components

2-Furancarboxyaldehyde

WHIMHAZ

B3 D1B D2B

Canada Controlled Products Regulation:

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

Components	WHMIS Ingredient Disclosure List -
------------	------------------------------------

Product code: F1098

Product name:
2-FURANCARBOXYALDEHYDE,
REAGENT, ACS

12 / 14

2-Furancarboxyaldehyde	1 %
------------------------	-----

Inventory

Components	CAS-No.	Canada (DSL)	Canada (NDSL)
2-Furancarboxyaldehyde	98-01-1	Present	Not Listed

Components	CAS-No.	CEPA Schedule I - Toxic Substances
2-Furancarboxyaldehyde	98-01-1	Not listed
Components	CAS-No.	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
2-Furancarboxyaldehyde	98-01-1	Not listed

EU Classification

R-phrase(s)

R21 - Harmful in contact with skin.
R40 - Limited evidence of a carcinogenic effect
R23/25 - Toxic by inhalation and if swallowed.
R36/37/38 - Irritating to eyes, respiratory system and skin.

S -phrase(s)

S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S 1/2 - Keep locked up and out of the reach of children.
S36/37 - Wear suitable protective clothing and gloves.

Components	CAS-No.	Classification	Concentration Limits:	Safety Phrases
2-Furancarboxyaldehyde	98-01-1	Xn; R21 T; R23/25 Xi; R36/37/38 Carc.Cat.3; R40	25%≤C: T; R21-23/25-36/37-40 20%≤C<25%: T; R23/25-36/37-40 5%≤C<20%: T; R23/25-40 1%≤C<5%: Xn; R20/22-40	S1/2 S26 S36/37 S45

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:

T - Toxic
Xn - Harmful.
Xi - Irritant.

Xi



T



Xn



16. OTHER INFORMATION

Preparation Date: 3/20/2017
Revision Date: 3/20/2017
Prepared by: Sonia Owen

Disclaimer:

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product

Product code: F1098

Product name:
2-FURANCARBOXYALDEHYDE,
REAGENT, ACS

13 / 14

is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet