Material Safety Data Sheet
Furfurylamine, 99+% 

MSDS# 05097

Section 1 - Chemical Product and Company Identification

MSDS Name: Furfurylamine, 99+%  
Catalog Numbers: AC119800000, AC119800010, AC119800050, AC119802500, CC02013CB, CC02013DA  
Synonyms: 2-Furanmethylamine; (2-Furylmethyl) amine; Methylamine, 1-(2-furyl)-

Company Identification:  
Acros Organics BVBA  
Janssen Pharmaceuticaalaan 3a  
2440 Geel, Belgium  
Acros Organics  
One Reagent Lane  
Fair Lawn, NJ 07410  
For information in the USA, call: 800-ACROS-01  
For information in Europe, call: +32 14 57 52 11  
Emergency Number, Europe: +32 14 57 52 99  
CHEMTREC Phone Number, US: 201-796-7100  
CHEMTREC Phone Number, Europe: 703-527-3887

Section 2 - Composition, Information on Ingredients

<table>
<thead>
<tr>
<th>CAS#:</th>
<th>617-89-0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical Name:</td>
<td>Furfurylamine</td>
</tr>
<tr>
<td>%:</td>
<td>99</td>
</tr>
<tr>
<td>EINECS#:</td>
<td>210-536-9</td>
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</tbody>
</table>

Hazard Symbols: XI F

Risk Phrases: 10 36/37/38

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Warning! Flammable liquid and vapor. The toxicological properties of this material have not been fully investigated. Causes eye, skin, and respiratory tract irritation. Target Organs: Respiratory system, eyes, skin.

Potential Health Effects

Eye: Vapors cause eye irritation.

Skin: Causes skin irritation.

Ingestion: May cause irritation of the digestive tract.

Inhalation: Causes respiratory tract irritation. Inhalation of vapors causes irritation of the mucous membranes.

Chronic: No information found.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.
Skin: Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion: Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Notes to Physician:

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors can travel to a source of ignition and flash back. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Flammable liquid and vapor. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas.

Extinguishing Media: Do NOT use water directly on fire. Use dry chemical, carbon dioxide, or alcohol-resistant foam.

Autoignition Temperature: 350 deg C (662.00 deg F)
Flash Point: 37 deg C (98.60 deg F)
Explosion Limits: Lower: Not available
Explosion Limits: Upper: Not available
NFPA Rating: 2 - health, 3 - flammability, 0 - instability

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Wash area with soap and water. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Use spark-proof tools and explosion proof equipment. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep away from heat, sparks and flame. Avoid ingestion and inhalation. Use only in a chemical fume hood. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

Storage: Keep away from sources of ignition. Keep container closed when not in use. Store in a cool, dry, well-ventilated area away from incompatible substances. Flammables-area.

Section 8 - Exposure Controls, Personal Protection

OSHA Vacated PELs: Furfurylamine: None listed

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use only under a chemical fume hood.

Exposure Limits

Personal Protective Equipment

Eyes: 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: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.
Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a Respirators: NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Liquid
Color: colorless to straw colored
Odor: None reported.
pH: Not available
Vapor Pressure: 4 mbar @ 20 C
Vapor Density: 3.35
Evaporation Rate: Not available
Viscosity: Not available
Boiling Point: 146 deg C @ 760.00mm Hg (294.80°F)
Freezing/Melting Point: -70 deg C (-94.00°F)
Decomposition Temperature: Not available
Solubility in water: Miscible
Specific Gravity/Density: 1.0502 @ 25C
Molecular Formula: C5H7NO
Molecular Weight: 97.12

Section 10 - Stability and Reactivity

Chemical Stability: Absorbs carbon dioxide from the air.
Conditions to Avoid: Incompatible materials.
Incompatibilities with Other Materials: Strong oxidizing agents, acids, acid chlorides, acid anhydrides.
Hazardous Decomposition Products: Nitrogen oxides, carbon monoxide, carbon monoxide, carbon dioxide.
Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#: CAS# 617-89-0: LU9275000
LD50/LC50: RTECS: Not available.
Carcinogenicity: Furfurylamine - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Other: See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Not available

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

US DOT
Shipping Name: FURFURYLAMINE
Hazard Class: 3
UN Number: UN2526
Packing Group: III
Canada TDG
Shipping Name: Not available
Hazard Class:
UN Number:
Packing Group:

Section 15 - Regulatory Information

European/International Regulations
European Labeling in Accordance with EC Directives
Hazard Symbols: XI F
Risk Phrases:
   R 10 Flammable.
   R 36/37/38 Irritating to eyes, respiratory system and skin.

Safety Phrases:
   S 16 Keep away from sources of ignition - No smoking,
   S 23 Do not inhale gas/fumes/vapour/spray.
   S 24/25 Avoid contact with skin and eyes.
   S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
   S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

WGK (Water Danger/Protection)
   CAS# 617-89-0: 1

Canada
   CAS# 617-89-0 is listed on Canada's NDSL List
   Canadian WHMIS Classifications: Not available
   This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations
   and the MSDS contains all of the information required by those regulations.
   CAS# 617-89-0 is not listed on Canada's Ingredient Disclosure List.

US Federal
   TSCA
   CAS# 617-89-0 is listed on the TSCA
   Inventory.

Section 16 - Other Information
MSDS Creation Date: 3/04/1998
Revision #5 Date 7/20/2009

The information above is believed to be accurate and represents the best information currently available

the company has been advised of the possibility of such damages.

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