SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product Description: Furfuryl alcohol
Cat No.: 119790000; 119790010; 119790025; 119790100; 119792500
Synonyms
2-Furanmethanol
CAS-No. 98-00-0
EC-No. 202-626-1
Molecular Formula C5 H6 O2
Reach Registration Number 01-2119493965-18

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended Use Laboratory chemicals
Sector of use SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites
Product category PC21 - Laboratory chemicals
Process categories PROC15 - Use as a laboratory reagent
Environmental release category ERC6a - Industrial use resulting in manufacture of another substance (use of intermediates)
Uses advised against No Information available

1.3. Details of the supplier of the safety data sheet

Company Acros Organics BVBA
Janssen Pharmaceuticaal 3a
2440 Geel, Belgium
E-mail address begel.sdsdesk@thermofisher.com

1.4. Emergency telephone number

For information US call: 001-800-ACROS-01 / 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

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture
# SECTION 2: HAZARDS IDENTIFICATION

## CLP Classification - Regulation (EC) No 1272/2008

### Physical hazards
Based on available data, the classification criteria are not met

### Health hazards

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute oral toxicity</td>
<td>3</td>
</tr>
<tr>
<td>Acute dermal toxicity</td>
<td>3</td>
</tr>
<tr>
<td>Acute Inhalation Toxicity - Vapors</td>
<td>2</td>
</tr>
<tr>
<td>Skin Corrosion/irritation</td>
<td>2</td>
</tr>
<tr>
<td>Serious Eye Damage/Eye Irritation</td>
<td>2</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>2</td>
</tr>
<tr>
<td>Specific target organ toxicity - (single exposure)</td>
<td>3</td>
</tr>
<tr>
<td>Specific target organ toxicity - (repeated exposure)</td>
<td>2</td>
</tr>
</tbody>
</table>

### Environmental hazards
Based on available data, the classification criteria are not met

## Classification according to EU Directives 67/548/EEC or 1999/45/EC

<table>
<thead>
<tr>
<th>Symbol(s)</th>
<th>R-phrase(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>T - Toxic</td>
<td>R23 - Toxic by inhalation</td>
</tr>
<tr>
<td></td>
<td>R40 - Limited evidence of a carcinogenic effect</td>
</tr>
<tr>
<td></td>
<td>R21/22 - Harmful in contact with skin and if swallowed</td>
</tr>
<tr>
<td></td>
<td>R36/37 - Irritating to eyes and respiratory system</td>
</tr>
<tr>
<td></td>
<td>R48/20 - Harmful: danger of serious damage to health by prolonged exposure through inhalation</td>
</tr>
</tbody>
</table>

*For the full text of the R-phrases and H-Statements mentioned in this Section, see Section 16*

### 2.2. Label elements

#### Signal Word
**Danger**

#### Hazard Statements
- H319 - Causes serious eye irritation
- H315 - Causes skin irritation
- H335 - May cause respiratory irritation
- H301 - Toxic if swallowed
- H311 - Toxic in contact with skin
- H330 - Fatal if inhaled
- H373 - May cause damage to organs through prolonged or repeated exposure if inhaled
- H351 - Suspected of causing cancer if inhaled

#### Precautionary Statements
SAFETY DATA SHEET

P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing
P310 - Immediately call a POISON CENTER or doctor/ physician
P362 - Take off contaminated clothing and wash before reuse
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

2.3. Other hazards

Substance is not considered persistent, bioaccumulative and toxic (PBT) / very persistent and very bioaccumulative (vPvB)
No information available.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>EC-No.</th>
<th>Weight %</th>
<th>CLP Classification - Regulation (EC) No 1272/2008</th>
<th>DSD Classification - 67/548/EEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Furfuryl alcohol</td>
<td>98-00-0</td>
<td>EEC No. 202-626-1</td>
<td>&gt;95</td>
<td>Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 2 (H330) Eye Irrit. 2 (H319) Skin Irrit. 2 (H315) Carc. 2 (H351) STOT SE 3 (H335) STOT RE 2 (H373)</td>
<td>Xn; R21/22-48/20 T; R23 Xi; R36/37 Carc.Cat.3; R40</td>
</tr>
</tbody>
</table>

Reach Registration Number 01-2119493965-18

For the full text of the R-phrases and H-Statements mentioned in this Section, see Section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

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

Eye Contact  
Rinse 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.

Ingestion  
Do not induce vomiting. Call a physician or Poison Control Center immediately.

Inhalation  
Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device. Immediate medical attention is required.

Protection of First-aiders  
Use personal protective equipment.

4.2. Most important symptoms and effects, both acute and delayed

Breathing difficulties. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

4.3. Indication of any immediate medical attention and special treatment needed

Notes to Physician  
Treat symptomatically.
SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Cool closed containers exposed to fire with water spray.

Extinguishing media which must not be used for safety reasons
No information available.

5.2. Special hazards arising from the substance or mixture

Combustible material. Containers may explode when heated. Keep product and empty container away from heat and sources of ignition. Risk of ignition.

Hazardous Combustion Products
Carbon monoxide (CO), Carbon dioxide (CO₂).

5.3. Advice 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.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas. Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges.

6.2. Environmental precautions

Should not be released into the environment. Do not flush into surface water or sanitary sewer system.

6.3. Methods and material for containment and cleaning up

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Remove all sources of ignition.

6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Use only under a chemical fume hood. Wear personal protective equipment. Do not get in eyes, on skin, or on clothing. Do not ingest. Do not breathe vapors or spray mist. Keep away from open flames, hot surfaces and sources of ignition.

7.2. Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition. Keep under nitrogen.

7.3. Specific end use(s)

Use in laboratories

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters
Exposure limits
List source(s):

<table>
<thead>
<tr>
<th>Component</th>
<th>European Union</th>
<th>The United Kingdom</th>
<th>France</th>
<th>Belgium</th>
<th>Spain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Furfuryl alcohol</td>
<td>TWA / VME: 10 ppm (8 heures). TWA / VME: 40 mg/m³ (8 heures). Peau</td>
<td>TWA: 10 ppm 8 uren TWA: 41 mg/m³ 8 uren STEL: 15 ppm 15 minuten STEL: 61 mg/m³ 15 minuten Huid</td>
<td>TWA / VLA-EC: 15 ppm (15 minutes). STEL / VLA-EC: 61 mg/m³ (15 minutes). TWA / VLA-ED: 5 ppm (8 hours) TWA / VLA-ED: 20 mg/m³ (8 hours) Piel</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>Italy</th>
<th>Germany</th>
<th>Portugal</th>
<th>The Netherlands</th>
<th>Finland</th>
</tr>
</thead>
<tbody>
<tr>
<td>Furfuryl alcohol</td>
<td>TWA: 10 ppm (8 Stunden). AGW - exposure factor 1 TWA: 41 mg/m³ (8 Stunden). AGW - exposure factor 1 TWA: 10 ppm (8 Stunden). MAK TWA: 41 mg/m³ (8 Stunden). MAK Haut</td>
<td>STEL: 15 ppm 15 minutos TWA: 10 ppm 8 horas Pele</td>
<td>STEL: 15 ppm 15 minutos TWA: 10 ppm 8 horas Pele</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>Austria</th>
<th>Denmark</th>
<th>Switzerland</th>
<th>Poland</th>
<th>Norway</th>
</tr>
</thead>
<tbody>
<tr>
<td>Furfuryl alcohol</td>
<td>Skin TWA: 5 ppm 8 timer TWA: 20 mg/m³ 8 timer Skin</td>
<td>Skin STEL: 10 ppm 15 Minuten STEL: 40 mg/m³ 15 Minuten MAK: 10 ppm 8 Stunden MAK: 40 mg/m³ 8 Stunden</td>
<td>NDSCI: 60 mg/m³ 15 minutach TWA: 30 mg/m³ 8 godzinach Skóra</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>Bulgaria</th>
<th>Croatia</th>
<th>Ireland</th>
<th>Cyprus</th>
<th>Czech Republic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Furfuryl alcohol</td>
<td>Skin Notation TWA: 10 ppm 8 satima, TWA: 40 mg/m³ 8 satima.</td>
<td>TWA: 5 ppm 8 hr. TWA: 20 mg/m³ 8 hr. STEL: 15 ppm 15 min STEL: 60 mg/m³ 15 min Skin</td>
<td>TWA: 5 ppm 8 timer TWA: 20 mg/m³ 8 timer STEL: 10 ppm 15 minutter. STEL: 30 mg/m³ 15 minutter. Skin</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>Estonia</th>
<th>Gibraltar</th>
<th>Greece</th>
<th>Hungary</th>
<th>Iceland</th>
</tr>
</thead>
<tbody>
<tr>
<td>Furfuryl alcohol</td>
<td>Skin notation TWA: 5 ppm 8 tundides. TWA: 20 mg/m³ 8 tundides. STEL: 10 ppm 15 minutites. STEL: 40 mg/m³ 15 minutites.</td>
<td>skin - potential for cutaneous absorption STEL: 15 ppm STEL: 60 mg/m³ STEL: 10 ppm TWA: 40 mg/m³</td>
<td>STEL: 40 mg/m³ 15 percekben. TWA: 40 mg/m³ 8 órában. potential for cutaneous absorption</td>
<td>TWA: 5 ppm 8 klukkustundum. TWA: 20 mg/m³ 8 klukkustundum. Skóra Skóra Notation Ceiling: 10 ppm Ceiling: 40 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>Latvia</th>
<th>Lithuania</th>
<th>Luxembourg</th>
<th>Malta</th>
<th>Romania</th>
</tr>
</thead>
<tbody>
<tr>
<td>Furfuryl alcohol</td>
<td>TWA: 0.5 mg/m³</td>
<td>TWA: 5 ppm TWA: 20 mg/m³ Skin notation STEL: 10 ppm STEL: 40 mg/m³</td>
<td></td>
<td></td>
<td>TWA: 12.5 ppm 6 ore TWA: 50 mg/m³ 8 ore STEL: 25 ppm 15 minute STEL: 100 mg/m³ 15 minute</td>
</tr>
</tbody>
</table>
Biological limit values
This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Monitoring methods
BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.
MDHS70 General methods for sampling airborne gases and vapours

Derived No Effect Level (DNEL)  Workers

<table>
<thead>
<tr>
<th>Route of exposure</th>
<th>Acute effects (local)</th>
<th>Acute effects (systemic)</th>
<th>Chronic effects (local)</th>
<th>Chronic effects (systemic)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inhalation</td>
<td>8 mg/m³</td>
<td>143 mg/m³</td>
<td>8 mg/m³</td>
<td>31 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Predicted No Effect Concentration (PNEC)  No information available.

<table>
<thead>
<tr>
<th>Route of exposure</th>
<th>Breakthrough time</th>
<th>Glove thickness</th>
<th>EU standard</th>
<th>Glove comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fresh water</td>
<td>0.17 mg/L</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fresh water sediment</td>
<td>0.861 mg/kg</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marine water</td>
<td>0.017 mg/L</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marine water sediment</td>
<td>0.08641 mg/kg</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water Intermittent</td>
<td>1.7 mg/L</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food chain</td>
<td>35.3 mg/kg</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soil (Agriculture)</td>
<td>0.0724 mg/kg</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8.2. Exposure controls

Engineering Measures
Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location. Use explosion-proof electrical/ventilating/lighting/equipment. Ensure adequate ventilation, especially in confined areas.
Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source.

Personal protective equipment

Eye Protection  Goggles (European standard - EN 166)
Hand Protection  Protective gloves

Skin and body protection  Long sleeved clothing
Inspect gloves before use.
Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)
Ensure gloves are suitable for the task: Chemical compatibility, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.
Remove gloves with care avoiding skin contamination.

**Respiratory Protection**
When workers are facing concentrations above the exposure limit they must use appropriate certified respirators
To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly.

**Large scale/emergency use**
Use a NIOSH/MSHA or European Standard EN 136 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.

**Small scale/Laboratory use**
Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.
**Recommended half mask:** Valve filtering: EN405 or Half mask: EN140 plus filter, EN 141 When RPE is used a face piece Fit Test should be conducted.

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

**Environmental exposure controls**
Prevent product from entering drains.

### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Yellow</td>
</tr>
<tr>
<td>Physical State</td>
<td>Liquid.</td>
</tr>
<tr>
<td>Odor</td>
<td>No information available</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td><strong>pH</strong></td>
<td>4-5</td>
</tr>
<tr>
<td>Melting Point/Range</td>
<td>-29°C / -20.2°F</td>
</tr>
<tr>
<td>Softening Point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>170°C / 338°F</td>
</tr>
<tr>
<td>Flash Point</td>
<td>65°C / 149°F</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Explosion Limits</td>
<td><strong>Lower</strong> 1.8 vol%</td>
</tr>
<tr>
<td></td>
<td><strong>Upper</strong> 16.3 vol%</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>0.53 mbar @ 20°C</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>No data available</td>
</tr>
<tr>
<td>Specific Gravity / Density</td>
<td>1.13</td>
</tr>
<tr>
<td>Bulk Density</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>Liquid</td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>No information available</td>
</tr>
<tr>
<td>Partition Coefficient (n-octanol/water)</td>
<td>Furfuryl alcohol</td>
</tr>
<tr>
<td></td>
<td><strong>Log Pow</strong> 0.28</td>
</tr>
</tbody>
</table>

ACR11979
SAFETY DATA SHEET

Molecular Formula: C5 H6 O2
Molecular Weight: 98.10

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity
None known, based on information available.

10.2. Chemical stability
Stable under normal conditions. Air sensitive.

10.3. Possibility of hazardous reactions

Hazardous Polymerization: Hazardous polymerization does not occur.

Hazardous Reactions: None under normal processing.

10.4. Conditions to avoid
Incompatible products, Excess heat, Keep away from open flames, hot surfaces and sources of ignition, Exposure to air.

10.5. Incompatible materials
Strong oxidizing agents.

10.6. Hazardous decomposition products
Carbon monoxide (CO), Carbon dioxide (CO2).

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Product Information

(a) acute toxicity;
   Oral Category 3
   Dermal Category 3
   Inhalation Category 2

<table>
<thead>
<tr>
<th>Component</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Furfuryl alcohol</td>
<td>177 mg/kg (Rat)</td>
<td>3825 mg/kg (Rat)</td>
<td>233 ppm (Rat) 4 h</td>
</tr>
<tr>
<td></td>
<td></td>
<td>400 mg/kg (Rabbit)</td>
<td></td>
</tr>
</tbody>
</table>

(b) skin corrosion/irritation;
Category 2

(c) serious eye damage/irritation;
Category 2

(d) respiratory or skin sensitization;
   Respiratory Based on available data, the classification criteria are not met
   Skin 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

Limited evidence of a carcinogenic effect

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

<table>
<thead>
<tr>
<th>Component</th>
<th>EU</th>
<th>UK</th>
<th>Germany</th>
<th>IARC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Furfuryl alcohol</td>
<td>Cat. 3B</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

(h) STOT-single exposure; Category 3

(i) STOT-repeated exposure; Category 2

Target Organs: Eyes, Skin, Respiratory system, Central nervous system (CNS).

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

Other Adverse Effects:

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

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity effects: Do not empty into drains. Contains a substance which is: Harmful to aquatic organisms. The product contains following substances which are hazardous for the environment.

<table>
<thead>
<tr>
<th>Component</th>
<th>Freshwater Fish</th>
<th>Water Flea</th>
<th>Freshwater Algae</th>
<th>Microtox</th>
</tr>
</thead>
<tbody>
<tr>
<td>Furfuryl alcohol</td>
<td>32 mg/L LC50 96 h</td>
<td>EC50 = 328 mg/L 24h</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability

Degradation in sewage treatment plant: Contains substances known to be hazardous to the environment or not degradable in waste water treatment plants.

12.3. Bioaccumulative potential

No information available.

<table>
<thead>
<tr>
<th>Component</th>
<th>log Pow</th>
<th>Bioconcentration factor (BCF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Furfuryl alcohol</td>
<td>0.28</td>
<td>No data available</td>
</tr>
</tbody>
</table>

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

Substance is not considered persistent, bioaccumulative and toxic (PBT) / very persistent and very bioaccumulative (vPvB).

12.6. Other adverse effects

Endocrine Disruptor Information: This product does not contain any known or suspected endocrine disruptors

<table>
<thead>
<tr>
<th>Component</th>
<th>EU - Endocrine Disrupters Candidate List</th>
<th>EU - Endocrine Disruptors - Evaluated Substances</th>
<th>Japan - Endocrine Disruptor Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Furfuryl alcohol</td>
<td>Group III Chemical</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Persistent Organic Pollutant: This product does not contain any known or suspected substance

Ozone Depletion Potential: This product does not contain any known or suspected substance

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods
Waste from Residues / Unused Products
Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.

Contaminated Packaging
Dispose of this container to hazardous or special waste collection point.

European Waste Catalogue (EWC)
According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.

Other Information
Do not dispose of waste into sewer. Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains.

SECTION 14: TRANSPORT INFORMATION

IMDG/IMO
14.1. UN number
UN2874
14.2. UN proper shipping name
Furfuryl alcohol
14.3. Transport hazard class(es)
6.1
14.4. Packing group
III

ADR
14.1. UN number
UN2874
14.2. UN proper shipping name
Furfuryl alcohol
14.3. Transport hazard class(es)
6.1
14.4. Packing group
III

IATA
14.1. UN number
UN2874
14.2. UN proper shipping name
Furfuryl alcohol
14.3. Transport hazard class(es)
6.1
14.4. Packing group
III
14.5. Environmental hazards
No hazards identified
14.6. Special precautions for user
No special precautions required
14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
Not applicable, packaged goods

SECTION 15: REGULATORY INFORMATION

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

International Inventories

<table>
<thead>
<tr>
<th>Component</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>NLP</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
<th>PICCS</th>
<th>ENCS</th>
<th>CHINA</th>
<th>AICS</th>
<th>KECL</th>
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<tbody>
<tr>
<td>Furfuryl alcohol</td>
<td>202-626-1</td>
<td>-</td>
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<td>-</td>
<td>X</td>
<td>X</td>
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</tbody>
</table>

National Regulations

<table>
<thead>
<tr>
<th>Component</th>
<th>Germany - Water Classification (VwVwS)</th>
<th>Germany - TA-Luft Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Furfuryl alcohol</td>
<td>WGR 1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>France - INRS (Tables of occupational diseases)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Furfuryl alcohol</td>
<td>Tableaux des maladies professionnelles (1MP) - RG 74 RG 84</td>
</tr>
</tbody>
</table>

Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment
Take note of Dir 94/33/EC on the protection of young people at work
15.2. Chemical safety assessment

A Chemical Safety Assessment/Report (CSA/CSR) has not been conducted

SECTION 16: OTHER INFORMATION

Full text of R-phrases referred to under sections 2 and 3
R40 - Limited evidence of a carcinogenic effect
R23 - Toxic by inhalation
R36/37 - Irritating to eyes and respiratory system
R21/22 - Harmful in contact with skin and if swallowed
R48/20 - Harmful: danger of serious damage to health by prolonged exposure through inhalation

Full text of H-Statements referred to under sections 2 and 3
H301 - Toxic if swallowed
H311 - Toxic in contact with skin
H330 - Fatal if inhaled
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H351 - Suspected of causing cancer
H335 - May cause respiratory irritation
H373 - May cause damage to organs through prolonged or repeated exposure

Legend

CAS - Chemical Abstracts Service
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Existing and Evaluated Chemical Substances
WEL - Workplace Exposure Limit
ACGIH - American Conference of Industrial Hygiene
DNEL - Derived No Effect Level
RPE - Respiratory Protective Equipment
LC50 - Lethal Concentration 50%
NOEC - No Observed Effect Concentration
PBT - Persistent, Bioaccumulative, Toxic
ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road
IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code
OECD - Organisation for Economic Co-operation and Development
BCF - Bioconcentration factor
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
ENCS - Japan Existing and New Chemical Substances
AICS - Australian Inventory of Chemical Substances
NZIoC - New Zealand Inventory of Chemicals
TWA - Time Weighted Average
IARC - International Agency for Research on Cancer
PNEC - Predicted No Effect Concentration
POW - Partition coefficient Octanol:Water
EC50 - Effective Concentration 50%
vPvB - very Persistent, very Bioaccumulative
IARC - International Agency for Research on Cancer
MARPOL - International Convention for the Prevention of Pollution from Ships
ATE - Acute Toxicity Estimate
VOC - Volatile Organic Compounds

Key literature references and sources for data
Suppliers safety data sheet,
Chemadvisor - LOLI,
Merck index,
RTECS

Training Advice
Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.
Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.
First aid for chemical exposure, including the use of eye wash and safety showers.

Creation Date 11-Feb-2010
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ACR11979
(M)SDS sections updated, 2, 8, 9.

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer
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End of Safety Data Sheet