Material Safety Data Sheet (Salicylaldehyde)

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifiers

Product name: Salicylaldehyde
CAS-No.: 90-02-8

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

Identified uses: Intermediate for medicine, dye and perfume

1.3 Details of the supplier of the safety data sheet

Company: HUNAN ASTAR BIO-CHEMICAL TECHNOLOGY CO., LTD.
No.008, Longgang Road, New Industrial Zone, JinShi City, Hunan Province, China
Telephone: 0086-21-58319740
Fax: 0086-58319810
E-mail address: marcoding@astarchem.com

1.4 Emergency telephone number

Emergency Phone #: 0086-21-58319740

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]
Acute toxicity, Oral (Category 4)
Acute toxicity, Dermal (Category 3)
Skin irritation (Category 2)
Eye irritation (Category 2)

Classification according to EU Directives 67/548/EEC or 1999/45/EC
Harmful in contact with skin and if swallowed. Irritating to eyes and skin.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008 [CLP]

Pictogram

Signal word: Warning
Hazard statement(s)
H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
Precautionary statement(s)
P280 Wear protective gloves/ protective clothing/eye protection/face protection.

Response:
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.

www.salicylaldehyde.com
P321: Specific treatment (see on this label)
P362: Take off contaminated clothing and wash before reuse

Supplemental Hazard Statements


Hazard symbol(s)
R-phrase(s)
R21/22 Harmful in contact with skin and if swallowed.
R36/38 Irritating to eyes and skin.
R52 Harmful to aquatic organisms.

S-phrase(s)
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36/37 Wear suitable protective clothing and gloves.

2.3 Other hazards none

3. COMPOSITION/INFORMATION ON INGREDIENTS
3.1 Substances

Synonyms: 2-Hydroxybenzaldehyde
Formula: C7H6O2

<table>
<thead>
<tr>
<th>Component</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salicylaldehyde</td>
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<tr>
<td>CAS No.</td>
<td>90-02-8</td>
</tr>
<tr>
<td>EC No.</td>
<td>201-961-0</td>
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<tr>
<td>Phenol</td>
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<tr>
<td>CAS No.</td>
<td>108-95-2</td>
</tr>
<tr>
<td>EC No.</td>
<td>203-632-7</td>
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<tr>
<td>Index No.</td>
<td>604-001-00-2</td>
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</table>

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice
Symptoms of poisoning may occur even after several hours; therefore medical observation is suggested for at least 48 hours after the accident.
Take affected persons out of danger area and lay them down.
Immediately remove any clothing soiled by the product.

If inhaled
Supply fresh air and call for a doctor.
In case of unconsciousness, place patients on their side in a stable position for transportation.

In case of skin contact
Immediately wash with water and soap and rinse thoroughly.
If available apply polyethylenglycol (PEG 400) and let it remain on the skin for several minutes.
Do not use solvents or thinners.
See a doctor.

In case of eye contact
Rinse opened eye for several minutes under running water. See a doctor. 
**If swallowed**
Rinse out mouth and then drink plenty of water. Administer medicinal carbon
Never give anything by mouth to a unconscious person.
Whether vomiting should be induced or not has to be decided by a doctor. Call for a doctor immediately.

4.2 **Most important symptoms and effects, both acute and delayed**
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

4.3 **Indication of any immediate medical attention and special treatment needed**
no data available

5. **FIRE-FIGHTING MEASURES**
5.1 **Extinguishing media**
**Suitable extinguishing media**
Use fire fighting measures that suit the environment. CO2, extinguishing powder or water spray.
Fight larger fires with water spray or alcohol resistant foam

5.2 **Special hazards arising from the substance or mixture**
Carbon oxides

5.3 **Advice for firefighters**
Wear self contained breathing apparatus for fire fighting if necessary.

5.4 **Further information**
Use water spray to cool unopened containers.

6. **ACCIDENTAL RELEASE MEASURES**
6.1 **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation
Use respiratory protective device against the effects of fumes/dust/aerosol.

6.2 **Environmental precautions**
Do not allow product to reach sewage system or any water course. Inform respective authorities in case of seepage into water course or sewage system. Do not allow to penetrate the ground/soil. In case of seepage into the ground, inform responsible authorities.

6.3 **Methods and materials for containment and cleaning up**
Absorb with non-combustible material like sand, soil or diatomite. Send for recovery or disposal in suitable places.

7. **HANDLING AND STORAGE**
7.1 **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace. Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air). Avoid inhalation of vapours. Avoid contact with eyes and skin. Keep away from heat and direct sunlight.

7.2 **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke. Protect against electrostatic charges.
Fumes can combine with air to form an explosive mixture.

7.3 · Storage

- **Requirements to be met by storerooms and containers:**
  Store container tightly sealed at a cool and dry place with sufficient ventilation.
  Observe national regulations for storage of flammable liquids.
  Prevent any seepage into the ground.

- **Information about storage in one common storage facility:**
  Store away from foodstuffs.
  Store away from feed.

- **Further information about storage conditions:**
  Protect from heat and direct sunlight.
  Store in a cool place.
  Protect from frost.
  Store in dry conditions.

- **Recommended storage temperature:** < 10°C
- **Storage class** 3B Flammable Liquids

8. **EXPOSURE CONTROLS/PERSONAL PROTECTION**

8.1 **Additional information about design of technical systems:**
  Install appropriate mechanical ventilation.
  Keep away from open flames and other ignition sources.
  Protect against electrostatic charges.

- **Components with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists that were valid during the creation were used as basis.

- **Personal protective equipment**
- **General protective and hygienic measures:**
  Keep away from foodstuffs, beverages and feed.
  Do not inhale gases / fumes / aerosols.
  Immediately remove all soiled and contaminated clothing.
  Wash hands before breaks and at the end of work.
  Do not eat or drink while working.
  Avoid contact with the eyes and skin.
  Provide eye bath.
  If larger quantities are handled provide emergency showers.

8.2 **Exposure controls**

- **Appropriate engineering controls**
  Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

- **Personal protective equipment**
  **Eye/face protection**
  Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

  **Skin protection**
  The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.
  Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique
(without touching glove’s outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

**Body Protection**

Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

### 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 Form</td>
<td>Liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>Clear Colorless or pale yellow</td>
</tr>
<tr>
<td>Odour</td>
<td>Bitter almond like</td>
</tr>
<tr>
<td>Melting point/Melting range</td>
<td>-7°C</td>
</tr>
<tr>
<td>Boiling point/Boiling range</td>
<td>196.5°C</td>
</tr>
<tr>
<td>Flash point</td>
<td>78°C</td>
</tr>
<tr>
<td>Danger of explosion</td>
<td>Product is not explosive. However, formation of explosive air/vapour mixtures are possible.</td>
</tr>
<tr>
<td>Density at 25°C</td>
<td>1.153 g/cm³</td>
</tr>
<tr>
<td>Solubility in / Miscibility with</td>
<td></td>
</tr>
<tr>
<td>Water at 20°C</td>
<td>14 g/l</td>
</tr>
<tr>
<td>Additional information</td>
<td>Soluble in ethanol</td>
</tr>
</tbody>
</table>

### 10. STABILITY AND REACTIVITY

#### 10.1 Thermal decomposition / conditions to be avoided:

No decomposition if used and stored according to specifications. To avoid thermal decomposition do not overheat. Stable at ambient temperature

#### 10.2 Materials to be avoided:

- Oxidants
- Strong bases
- Strong acids
- Flourine
- Halogens

#### 10.3 Dangerous reactions:

Reacts with strong oxidizing agent

Violent reaction with halogens

#### 10.4 Dangerous products of decomposition:

In the case of fire or at high temperatures the formation of the following decomposition products is possible. Carbon monoxide and carbon dioxide

#### 10.5 Additional information:

Sensitive to light
11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity
- LD50 Oral - rat - 520 mg/kg
- LD50 Dermal - rat - 600 mg/kg
  Rabbit-3000mg/kg
- LD50 Subcutaneous - rat - 900 mg/kg
- LD50 Intraperitoneal - mouse - 231 mg/kg

Primary irritant effect:
- Skin corrosion: Irritant to skin and mucous membranes.
- Serious eye damage: Light irritation possible.
- Sensitization: No sensitizing effects known.

Additional toxicological information: Risk of skin adsorption.

12. ECOLOGICAL INFORMATION

12.1 Information about elimination (persistence and degradability):
- Other information: The product is readily biodegradable.
- Behaviour in environmental systems:
  - Mobility and bioaccumulation potential: Slight bioaccumulation possible.
- Ecotoxic effects: No
- Aquatic toxicity: No
- General notes: Hazardous for water.
  Do not allow product to reach ground water, water course or sewage system.
  Danger to drinking water if even small quantities leak into the ground.

13. DISPOSAL CONSIDERATIONS

13.1 Product:
- Recommendation: Disposal according to instructions of local authorities.
- Uncleaned packagings:
  - Recommendation: Disposal must be made according to official regulations.

14. TRANSPORT INFORMATION

14.1 Land transport:
  - No hazardous good according to the regulation.

Maritime transport:
  - No hazardous good according to the regulation.

Air transport:
  - No hazardous good according to the regulation.

15. REGULATORY INFORMATION

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

15.1 Risk phrases:
  - Harmful in contact with skin and if swallowed.
  - Irritating to skin.

15.2 Safety phrases:
  - Avoid contact with eyes.
Wear suitable protective clothing and gloves. This material and its container must be disposed of as hazardous waste.

15.3 National regulations
- Information about limitation of use:
  Restrictions on juvenile employment must be observed.
  Employment restrictions concerning pregnant and lactating women must be observed.

- 15.4 Water hazard class: hazardous for water.

16. OTHER INFORMATION
Further information
This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Reasons for amendments: General revision
- Department issuing MSDS:
  Technical Department, HUNAN ASTAR BIO-CHEMICAL TECHNOLOGY CO., LTD.