1 Identification of the substance/mixture and of the company/undertaking

Product identifier

Product name: Benzyl alcohol

Stock number: L03292
CAS Number: 100-51-6
EC number: 202-859-9
Index number:
603-057-00-5

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

Sector of Use
SU24 Scientific research and development

Details of the supplier of the safety data sheet

Manufacturer/Supplier:
Alfa Aesar, A Johnson Matthey Company
Johnson Matthey Catalog Company, Inc.
30 Bond Street
Ward Hill, MA 01835-8099
Tel: 800-343-0660
Fax: 800-322-4757
Email: tech@alfa.com
www.alfa.com

Information Department: Health, Safety and Environmental Department
Emergency telephone number:
During normal hours the Health, Safety and Environmental Department at (800) 343-0660. After normal hours call Carechem 24 at (866) 928-0789.

2 Hazards identification

Classification of the substance or mixture

GHS07

H302 Harmful if swallowed.
H332 Harmful if inhaled.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC

Xn; Hazardful

R20/22: Harmful by inhalation and if swallowed.

Information concerning particular hazards for human and environment: Not applicable

Label elements

GHS label elements

The substance is classified and labelled according to the Globally Harmonized System (GHS).

Hazard pictograms GHS07

Signal word Warning

Hazard statements
H302 Harmful if swallowed.
H332 Harmful if inhaled.

Precautionary statements

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 Wash thoroughly after handling.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Classification system

HMIS ratings (scale 0-4)
(Hazardous Materials Identification System)

<table>
<thead>
<tr>
<th>HEALTH</th>
<th>FIRE</th>
<th>REACTIVITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Health (acute effects) = 2
Flammability = 1
Reactivity = 1

Other hazards

Results of PBT and vPvB assessment
PBT: Not applicable.

(Contd. on page 2)
Material Safety Data Sheet
According to OSHA and ANSI

Product name: Benzyl alcohol

VPvB: Not applicable.

3 Composition/information on ingredients

Chemical characterization: Substances
CAS# Description:
100-51-6 Benzyl alcohol
Identification number(s):
EC number: 202-859-9
Index number: 603-057-00-5

4 First aid measures

Description of first aid measures
After inhalation
Supply fresh air. If required, provide artificial respiration. Keep patient warm.
Seek immediate medical advice.
After skin contact
Immediately wash with water and soap and rinse thoroughly.
Seek immediate medical advice.
After eye contact
Rinse opened eye for several minutes under running water. Then consult a doctor.
After swallowing
Seek medical treatment.
Information for doctor
Most important symptoms and effects, both acute and delayed
No further relevant information available.
Indication of any immediate medical attention and special treatment needed
No further relevant information available.

5 Firefighting measures

Extinguishing media
Suitable extinguishing agents
Carbon dioxide, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Special hazards arising from the substance or mixture
If this product is involved in a fire, the following can be released:
Carbon monoxide and carbon dioxide
Advice for firefighters
Protective equipment:
Wear self-contained respirator.
Wear fully protective impervious suit.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Environmental precautions:
Do not allow material to be released to the environment without proper governmental permits.
Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
Reference to other sections
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

Handling
Precautions for safe handling
Keep container tightly sealed.
Store in cool, dry place in tightly closed containers.
Ensure good ventilation at the workplace.
Information about protection against explosions and fires: No information known.

(Contd. of page 1)
Material Safety Data Sheet
According to OSHA and ANSI

Product name: Benzyl alcohol

Conditions for safe storage, including any incompatibilities
Storage
Requirements to be met by storerooms and receptacles: No special requirements.
Information about storage in one common storage facility: Store away from oxidizing agents.
Further information about storage conditions:
Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.
Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

Additional information about design of technical systems:
Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Control parameters

Components with limit values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th>100-51-6 Benzyl alcohol (100.0%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WEEL () 10 ppm</td>
</tr>
</tbody>
</table>

Additional information: No data

Exposure controls

Personal protective equipment
General protective and hygienic measures
The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Remove all soiled and contaminated clothing immediately.
Wash hands before breaks and at the end of work.
Maintain an ergonomically appropriate working environment.
Breathing equipment: Use suitable respirator when high concentrations are present.
Protection of hands:
Impervious gloves
Check protective gloves prior to each use for their proper condition.
The selection of suitable gloves not only depends on the material, but also on quality.
Quality will vary from manufacturer to manufacturer.
Eye protection: Safety glasses
Body protection: Protective work clothing.

9 Physical and chemical properties

Information on basic physical and chemical properties
General Information
Appearance:
Form: Liquid
Color: Colorless
Odor: Aromatic
Odor threshold: Not determined.

pH-value: Not determined.

Change in condition
Melting point/Melting range: -15°C (5 °F)
Boiling point/Boiling range: 205°C (401 °F)
Sublimation temperature / start: Not determined

Flash point: 100°C (212 °F)

Flammability (solid, gaseous) Not determined.
Ignition temperature: 435°C (815 °F)

Decomposition temperature: Not determined
Auto igniting: Not determined.

Explosion limits:
Lower: 1.3 Vol %
Upper: 13 Vol %

Vapor pressure at 20°C (68 °F): 0.13 hPa

Density at 20°C (68 °F): 1.045 g/cm³ (8.721 lbs/gal)
Relative density Not determined.
Vapor density Not determined.
Material Safety Data Sheet
According to OSHA and ANSI

Product name: Benzyl alcohol

<table>
<thead>
<tr>
<th>Evaporation rate</th>
<th>Not determined.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solubility in / Miscibility with</td>
<td></td>
</tr>
<tr>
<td>Water at 20°C (68 °F):</td>
<td>39 g/l</td>
</tr>
<tr>
<td>Segregation coefficient (n-octanol/water):</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Viscosity:</td>
<td></td>
</tr>
<tr>
<td>dynamic:</td>
<td>Not determined.</td>
</tr>
<tr>
<td>kinematic:</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Other information</td>
<td>No further relevant information available.</td>
</tr>
</tbody>
</table>

10 Stability and reactivity

Reactivity
Chemical stability
Thermal decomposition / conditions to be avoided:
Decomposition will not occur if used and stored according to specifications.
Possibility of hazardous reactions No dangerous reactions known
Incompatible materials: Oxidizing agents
Hazardous decomposition products: Carbon monoxide and carbon dioxide

11 Toxicological information

Information on toxicological effects
Acute toxicity:
LD/LC50 values that are relevant for classification:
<table>
<thead>
<tr>
<th>Oral</th>
<th>LD50</th>
<th>1230 mg/kg (rat)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dermal</td>
<td>LD50</td>
<td>2000 mg/kg (rabbit)</td>
</tr>
</tbody>
</table>
Primary irritant effect:
on the skin: May cause irritation
on the eye: May cause irritation
Sensitization: No sensitizing effects known.
Subacute to chronic toxicity: Harmful if inhaled.
Additional toxicological information:
To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.
No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.
The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute and/or other multiple dose toxicity data for components in this product.
The Registry of Toxic Effects of Chemical Substances (RTECS) contains reproductive and/or mutation data for components in this product.

12 Ecological information

Toxicity
Aquatic toxicity: No further relevant information available.
Persistence and degradability No further relevant information available.
Behavior in environmental systems:
Bioaccumulative potential No further relevant information available.
Mobility in soil No further relevant information available.
Additional ecological information:
General notes:
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Do not allow material to be released to the environment without proper governmental permits.
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.
Other adverse effects No further relevant information available.

13 Disposal considerations

Waste treatment methods
Recommendation Consult state, local or national regulations to ensure proper disposal.
Material Safety Data Sheet  
According to OSHA and ANSI  

Product name: Benzyl alcohol  

(Contd. of page 4)  

Uncleaned packagings:  
Recommendation: Disposal must be made according to official regulations.  

### 14 Transport information  

<table>
<thead>
<tr>
<th>UN-Number</th>
<th>DOT, ADR, ADN, IMDG, IATA</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN proper shipping name</td>
<td>DOT, ADR, ADN, IMDG, IATA</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>DOT, ADR, ADN, IMDG, IATA</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Class</td>
<td>Not applicable</td>
<td></td>
</tr>
<tr>
<td>Packing group</td>
<td>DOT, ADR, IMDG, IATA</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

Environmental hazards:  
- Marine pollutant: No  
- Special precautions for user: Not applicable.  
- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable.  
- UN "Model Regulation": -  

### 15 Regulatory information  

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

GHS label elements  
The substance is classified and labelled according to the Globally Harmonized System (GHS).  

Hazard pictograms: GHS07  

Signal word: Warning  

Hazard statements:  
- H302 Harmful if swallowed.  
- H332 Harmful if inhaled.  

Precautionary statements:  
- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
- P264 Wash thoroughly after handling.  
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- P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.  
- P312 Call a POISON CENTER or doctor/physician if you feel unwell.  
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.  

National regulations:  
All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.  
All components of this product are listed on the Canadian Domestic Substances List (DSL).  

Information about limitation of use: For use only by technically qualified individuals.  

Other regulations, limitations and prohibitive regulations  
REACH - Pre-registered substances: Substance is listed.  
Substances of very high concern (SVHC) according to REACH, Article 57: Substance is not listed.  
Chemical safety assessment: A Chemical Safety Assessment has not been carried out.  

### 16 Other information  

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.  

Department issuing MSDS: Health, Safety and Environmental Department.  
Contact:  
Zachariah C. Holt  
Global EHS Manager  

(Contd. on page 6)  

USA
Product name: Benzyl alcohol

Abbreviations and acronyms:
- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- EINECS: European Inventory of Existing Commercial Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- HMIS: Hazardous Materials Identification System (USA)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent