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

Product identifier

Product name: Methyl benzoate

Stock number: A12404, L04144

CAS Number: 93-58-3

EINECS Number: 202-259-7

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.

H227 Combustible liquid.

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

Xn; Harmful

R22: Harmful if swallowed.

Label elements

Labelling according to EU guidelines:

Code letter and hazard designation of product:
Xn Harmful

Risk phrases:
22 Harmful if swallowed.

Safety phrases:
23 Do not breathe gas/fumes/vapour/spray.
36 Wear suitable protective clothing.

WHMIS classification

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.
vPvB: Not applicable.
3 Composition/information on ingredients

Chemical characterization: Substances
(CAS#) Description:
Methyl benzoate (CAS# 93-58-3); 100%
Identification number(s):
EINECS Number: 202-259-7

4 First aid measures

Description of first aid measures
After inhalation
Supply fresh air and to be sure call for a doctor.
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 immediate medical advice.

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
In case of 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.
Prevent formation of aerosols.
Information about protection against explosions and fires: No information known.

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.
Store away from strong bases.
Store in the dark.
Further information about storage conditions:
Keep container tightly sealed.
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: Not required.
Additional information: No data

Exposure controls
Personal protective equipment
General protective and hygienic measures
The usual precautionary measures for handling chemicals should be followed.
Remove all soiled and contaminated clothing immediately.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.
Breathing equipment: Use suitable respirator when high concentrations are present.
Protection of hands: Impervious gloves
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: Not determined
Odour threshold: Not determined.

pH-value: Not determined.

Change in condition
Melting point/Melting range: Not determined
Boiling point/Boiling range: 198-200°C (388-392 °F)
Sublimation temperature / start: Not determined

Flash point: 83°C (181 °F)

Flammability (solid, gaseous) Not applicable.
Ignition temperature: Not determined
Decomposition temperature: Not determined

Auto igniting: Not determined.

Danger of explosion: Product does not present an explosion hazard.

Explosion limits:
Lower: Not determined
Upper: Not determined

Vapor pressure: Not determined

Density at 20°C (68 °F): 1.094 g/cm³ (9.129 lbs/gal)
Relative density Not determined.
Vapour density Not determined.
Evaporation rate Not determined.

Segregation coefficient (n-octonol/water): Not determined.

Viscosity:
dynamic: Not determined.
kinematic: Not determined.

Other information
No further relevant information available.
Material Safety Data Sheet
According to OSHA and ANSI

Product name: Methyl benzoate

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:
Light
Oxidizing agents
Bases
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>Route</th>
<th>LD50</th>
<th>LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>4100  mg/kg (guinea pig)</td>
<td>3330 mg/kg (mouse)</td>
</tr>
<tr>
<td></td>
<td>1177 mg/kg (rat)</td>
<td>2170 mg/kg (rabbit)</td>
</tr>
<tr>
<td>LDLo</td>
<td>10000 mg/kg (cat)</td>
<td></td>
</tr>
</tbody>
</table>

Primary irritant effect:
- on the skin: Irritant to skin and mucous membranes.
- on the eye: Irritating effect.
Sensitization:
- Sensitization possible through inhalation.
- Sensitization possible through skin contact.
Subacute to chronic toxicity:
- Effects of exposure in laboratory animals via oral route include tremors, muscle weakness, somnolence, weight loss or decreased weight gain.
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.

12 Ecological information
Toxicity
Acquatic 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.
Uncleaned packagings:
Recommendation:
- Disposal must be made according to official regulations.

14 Transport information
Not a hazardous material for transportation.

(Contd. on page 5)
Material Safety Data Sheet
According to OSHA and ANSI

Product name: Methyl benzoate

<table>
<thead>
<tr>
<th>DOT regulations:</th>
<th>Hazard class: None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land transport ADR/RID (cross-border)</td>
<td>ADR/RID class: None</td>
</tr>
<tr>
<td>Maritime transport IMDG:</td>
<td>IMDG Class: None</td>
</tr>
<tr>
<td>Marine pollutant:</td>
<td>No</td>
</tr>
<tr>
<td>Air transport ICAO-TI and IATA-DGR:</td>
<td>ICAO/IATA Class: None</td>
</tr>
</tbody>
</table>

Special precautions for user: Not applicable.

Transport/Additional information: Not dangerous according to the above specifications. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.

15 Regulatory information

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

Product related hazard informations:

Hazard symbols:
Xn Harmful

Risk phrases:
22 Harmful if swallowed.

Safety phrases:
23 Do not breathe gas/fumes/vapour/spray.
36 Wear suitable protective clothing.

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.

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

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)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organization
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
EINECS: European Inventory of Existing Commercial Chemical Substances
CRS: Chemical Abstracts Service (Division of the American Chemical Society)
HMIS: Hazardous Materials Identification System (USA)
WHMIS: Workplace Hazardous Materials Information System (Canada)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent