1. Product and company identification

Trade Name

3-Methoxybutanol

Manufacturer, importer, supplier
Celanese Sales Germany GmbH
Am Unisys-Park 1
65843 Sulzbach (Taunus)
Germany

Transportation emergency phone numbers:
In USA, call  800 424 9300
Outside USA, call  +001 703 527 3887, collect calls accepted.
In Mexico, call  01-800-681-9531

Identified uses
Solvent, Chemical intermediate

2. Hazard Identification

GHS Classification

Hazards
Flammable liquid

Category
Category 4

Label elements
No Pictogram Required.

Signal Word
Warning

Hazard Statements
Combustible liquid

Precautionary statements
Keep away from open flames/hot surfaces. - No smoking
Wear protective gloves/ eye protection/ face protection.
In case of fire:
Use foam, dry chemical, carbon dioxide (CO2) to extinguish.
Store in a well-ventilated place. Keep cool.
Dispose of contents/ container to an approved landfill
3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No</th>
<th>Percent %</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-Methoxybutan-1-ol</td>
<td>2517-43-3</td>
<td>&gt; 99.5</td>
</tr>
</tbody>
</table>

4. First aid measures

General Information
Remove contaminated, soaked clothing immediately and dispose of safely. Pay attention to own protection. In any case show the physician the Safety Data Sheet.

Skin
Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, call a physician.

Eyes
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician immediately.

Inhalation
Move to fresh air. Keep at rest. Call a physician immediately.

Ingestion
If conscious, drink plenty of water. If swallowed, do not induce vomiting - seek medical advice.

5. Fire-fighting measures

NFPA: Health: 2  Flammability: 2  Instability: 0

Suitable extinguishing media
Foam, Dry chemical, Carbon dioxide (CO2)

Extinguishing media which must not be used for safety reasons
Do not use a solid water stream as it may scatter and spread fire.

Special exposure hazards arising from the substance or preparation itself, its combustion products, or released gases
Under conditions giving incomplete combustion, hazardous gases produced may consist of Carbon monoxide Carbon dioxide (CO2) Combustion gases of organic materials must in principle be graded as inhalation poisons

Special protective equipment for fire-fighters
self-contained breathing apparatus (EN 133).

Environmental precautions
Water used to fight fire runoff can cause environmental damage. Dike and collect water used to fight fire.
6. Accidental release measures

Personal precautions
Avoid contact with the skin and the eyes. Keep away from heat and sources of ignition. Provide adequate ventilation.

Environmental precautions
Prevent further leakage or spillage. Do not discharge into the drains/surface waters/groundwater.

Methods for cleaning up
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal. Dispose of in accordance with local regulations.

7. Handling and storage

Advice on safe handling
Provide sufficient air exchange and/or exhaust in work rooms.

Protection - fire and explosion:
Keep away from sources of ignition - No smoking. Take necessary action to avoid static electricity discharge. In case of fire, emergency cooling with water spray should be available.

Technical measures/Storage conditions
Keep container tightly closed in a dry and well-ventilated place. Handle an open container with care.

Material storage
Keep in a dry, cool and well-ventilated place.

Incompatible products
None known

8. Exposure controls / personal protection

OSHA Exposure Limits
No exposure limits established.

ACGIH Exposure Limits
No exposure limits established.

Mexico National Exposure Limits
No exposure limits established
Exposure controls

Engineering measures
General or dilution ventilation is frequently insufficient as the sole means of controlling employee exposure. Local ventilation is usually preferred. Explosion-proof equipment (for example fans, switches, and grounded ducts) should be used in mechanical ventilation systems.

Protective equipment
A safety shower and eyewash should be readily available.

General advice
Avoid contact with skin and eyes. Do not breathe vapors or spray mist. Use only in an area equipped with a safety shower. Hold eye wash fountain available.

Respiratory protection
Based on workplace contaminant level and working limits of the respirator, use a respirator approved by NIOSH.

Skin protection:
Wear impervious clothing and gloves when there is a reasonable chance for skin contact.

Eye/face protection:
Wear chemical goggles when there is a reasonable chance of eye contact.

9. Physical and chemical properties

Appearance
Form liquid
Color colourless
Odor mild
Molecular Weight 104.15
Flash point 67°C (152.6°F)
Method DIN EN ISO 2719
Ignition temperature 305°C
Method DIN 51794
Decomposition Temperature Not determined
Lower explosion limit Not determined
Upper explosion limit Not determined (-121°F)
Boiling point/range 157°C (321.8°F) @ 1013 hPa
Density 0.923 g/ml @ 23°C
pH neutral
Viscosity 3.68 mPa*s @ 20°C
Vapor pressure 0.17 hPa @ 20°C
4.6 hPa @ 50°C
Vapor density 3.59 (Air=1)
Evaporation Rate Not determined
Water solubility miscible
Solubility in other solvents very soluble in, Ethanol, Acetone, soluble in, Diethyl ether
Partition coefficient
(n-octanol/water) 0.002 (calculated)

10. Stability and reactivity

Reactivity
Stable under normal conditions of handling, use and transportation.

Conditions to avoid
Avoid any source of ignition. Avoid contact with heat, sparks, open flame, and static discharge.

Incompatible Materials
None known

Hazardous Combustion or Decomposition Products:
Thermal decomposition products may include oxides of carbon.

Possibility of hazardous reactions
No hazards to be especially mentioned.
11. Toxicological information

Potential health effects

Routes of exposure
Skin, eyes, inhalation, ingestion.

Immediate effects

Skin
Prolonged or repeated contact may dry skin and cause irritation.

Eyes
May cause eye irritation.

Inhalation
No adverse health effects have been observed.

Ingestion
May cause gastrointestinal irritation.

Medical conditions which may be aggravated by exposure:

Eyes

3-Methoxybutan-1-ol

Acute oral toxicity
LD50: >2000 mg/kg

Acute inhalation toxicity
LC50 (6h): ~ 6200 mg/m³

Skin corrosion/irritation
No skin irritation
Species rabbit
Method OECD 404

Skin Sensitization
nonsensitizer
Species mouse female
Method MEST

Serious eye damage/eye irritation
No eye irritation
Species rabbit eye
Method OECD 405

Carcinogenic effects
No evidence of carcinogenicity

in vitro Mutagenicity

Reproductive toxicity
No adverse reproductive / developmental effects at the highest dose tested (Reference substance: 3-Methoxy-3-methyl-1-butanol)

Routes of exposure
Species
oral gavage
rat
NOEL: 1000 mg/kg bw/day
12. Ecological Information

**3-Methoxybutan-1-ol**

- **Acute fish toxicity**
  - Species: Oncorhynchus mykiss (rainbow trout)
  - Method: OECD 203
  - LC50: > 100 mg/l (96h)

- **Acute daphnia toxicity**
  - Species: Daphnia magna
  - Method: OECD 202
  - EC50: > 100 mg/l (48h)

- **Toxicity to aquatic plants**
  - Species: Pseudokirchneriella subcapitata
  - Method: OECD 201
  - EC50: > 100 mg/l (72h)

- **Toxicity to bacteria**
  - Species: in activated sludge
  - Method: OECD 209
  - EC50: > 1000 mg/l (3h)

- **Biodegradation**
  - Species: activated sludge
  - Method: OECD 301 F
  - Readily biodegradable: > 70 % (28d)

- **Other potential hazards**
  - The substance does not meet the criteria for PBT / vPvB according to REACH, Annex XIII

13. Disposal considerations

**Disposal considerations**

Dispose of spilled material in accordance with state and local regulations for waste that is non-hazardous by Federal definition. Note that this information applies to the material as manufactured; processing, use, or contamination may make this information inappropriate, inaccurate, or incomplete.

Landfill in accordance with federal, state and local regulations

14. Transport information

**US Department of Transportation**

- **UN/NA Number:** NA 1993
- **Proper Shipping Name:** Combustible liquid, n.o.s.
- **Hazard Inducer:** (3-Methoxybutanol)
14. Transport information

| Hazard class | 3 |
| Packing Group | III |
| Emergency Resp. Guide | 127 |

TDG Not regulated

Mexico Transport Information Not regulated

ICAO/IATA Not restricted

IMDG Not regulated

15. Regulatory Information

US State Regulations
Chemicals associated with the product which are subject to the state right-to-know regulations are listed along with the applicable state(s):
none

U.S. FEDERAL REGULATIONS

Environmental Regulations:

SARA 311:
- Acute health: Yes
- Chronic health: No
- Fire: Yes
- Sudden release of pressure: No
- Reactive: No

INTERNATIONAL REGULATIONS

International Inventories
Listed on the chemical inventories of the following countries or qualifies for an exemption:
Australia (AICS)
Canada (DSL)
China (IECSC)
Europe (EINECS)
Japan (ENCS)
Japan (ISHL)
Korea (KECI)
New Zealand (NZIoC)
Philippines (PICCS)
United States (TSCA)
16. Other information

NFPA: Health: 2  Flammability: 2  Instability: 0
HMIS: Health: 1  Flammability: 2  Physical Hazard: 0

Prepared By
Product Stewardship Department
Celanese

Sources of key data used to compile the datasheet
Information contained in this safety data sheet is based on Celanese owned data and public sources deemed valid or acceptable. The absence of data elements required by ANSI or 1907/2006/EC indicates that no data meeting these requirements is available.

Other Information:
Observe national and local legal requirements
Changes against the previous version are marked by ***

This information is based on our present state of knowledge. It shall describe our products regarding safety requirements and shall not be construed as a guarantee or statement of condition and/or quality.

Abbreviation and Acronym:
ADR = Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
CAS = Chemical Abstracts Service (division of the American Chemical Society)
CLP = Classification, Labelling and Packaging
DNEL = Derived No Effect Level
EINECS = European Inventory of Existing Commercial Chemical Substances
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
ICAO = International Civil Aviation Organization
IMDG = International Maritime Code for Dangerous Goods
LC50 = Lethal Concentration
LD50 = Lethal Dose
LOAEC = Low Observed Adverse Effect Concentration
LOAEL = Low Observed Adverse Effect Level
LOEL = Low Observed Effect Level
NOAEC = No Observed Adverse Effect Concentration
NOAEL = No Observed Adverse Effect Level
NOEC = No Observed Effect Concentration
NOEL = No Observed Effect Level
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RCR = Risk Characterization Ratio
RID = Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
STP = Sewage Treatment Plant
vPvB = very Persistent and very Bioaccumulative