



MATERIAL SAFETY DATA SHEET <u>3-Methoxybutanol</u>

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3-Methoxybutanol

SYNONYM: 1,3-Butyleneglycol-3-monomethyl ether

MOLECULAR FORMULA: C₅H₁₂O₂

MOLECULAR WEIGHT: 104.15 g/mol

CREATION DATE: Mar 02 2007

CONTACT PERSON:

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2. HAZARDS IDENTIFICATION

Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]

Flammable liquids (Category 3) Classification according to EU Directives 67/548/EEC or 1999/45/EC

Flammable.

Label elements

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

Signal word Hazard statement(s) H226

Warning

Flammable liquid and vapour.

Precautionary statement(s) none

Supplemental Hazard Statements

none

According to European Directive 67/548/EEC as amended.

Hazard symbol(s) none

R-phrase(s) R10

S-phrase(s)

none

Flammable.

Other hazards

none

3. COMPOSITION, INFORMATION ON INGREDIENTS

CAS No.	Chemical Name	Percent
2517-43-3	3-Methoxy butanol	>99

4. FIRST AID MEASURES

Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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.

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

5. FIRE FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media

For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

Special hazards arising from the substance or mixture

Carbon oxides

Advice for firefighters

Wear self contained breathing apparatus for firefighting if necessary.

Further information

Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Avoid breathing vapors, mist or gas. Remove all sources of ignition. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

Reference to other sections

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid inhalation of vapour or mist.

Keep away from sources of ignition - No smoking. Take measures to prevent the buildup of electrostatic charge.

Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Specific end uses no data available

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Control parameters

Components with workplace control parameters

Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

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

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.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Body Protection

Impervious clothing, Flame retardant antistatic protective clothing, 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

Appearance Form:	clear, liquid	
Odour:	no data available	
Odour Threshold:	no data available	
pH:	no data available	
Melting point/freezing point:	no data available	
Initial boiling point and boiling range:	158-160°C	
Flash point:	46.7 °C - closed cup	
Evaporation rate:	no data available	
Flammability (solid, gas):	no data available	
Upper/lower flammability or explosive limits:	no data available	
Vapour pressure:	no data available	
Vapour density:	no data available	
Relative density:	0,920 g/cm³ at 25 °C	

MSDS – 3-Methoxybutanol

Water solubility:	no data available
Partition coefficient: octanol/water:	no data available
Auto ignition temperature:	no data available
Decomposition temperature:	no data available
Viscosity:	no data available
Explosive properties:	no data available
Oxidizing properties:	no data available

10. STABILITY AND REACTIVITY

Reactivity no data available

Chemical stability no data available

Possibility of hazardous reactions no data available

Conditions to avoid Heat, flames and sparks.

Incompatible materials Strong oxidizing agents, Acid chlorides, Acid anhydrides

Hazardous decomposition products Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity No data available

MSDS – 3-Methoxybutanol

Skin corrosion/irritation No data available

Serious eye damage/eye irritation No data available

Respiratory or skin sensitization No data available

Germ cell mutagenicity No data available

Carcinogenicity

IARC: No component of this product presents at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity No data available

Specific target organ toxicity - single exposure No data available

Specific target organ toxicity - repeated exposure No data available

Aspiration hazard No data available

Potential health effects

Inhalation May be harmful if inhaled. May cause respiratory tract irritation.

Ingestion May be harmful if swallowed.

Skin May be harmful if absorbed through skin. May cause skin irritation.

Eyes May cause eye irritation.

Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Additional Information

RTECS: Not available

12. ECOLOGICAL INFORMATION

Toxicity No data available

Persistence and degradability No data available

Bio accumulative potential No data available

Mobility in soil No data available

Results of PBT and vPvB assessment No data available

Other adverse effects No data available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and nonrecyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

UN number ADR/RID: 1987

IMDG: 1987

IATA: 1987

UN proper shipping name

ADR/RID: ALCOHOLS, N.O.S. (3-Methoxybutan-1-ol) IMDG: ALCOHOLS, N.O.S. (3-Methoxybutan-1-ol) IATA: Alcohols, n.o.s. (3-Methoxybutan-1-ol)

	MSDS – 3-Methoxybutanol		
Transport hazard class (es) ADR/RID: 3	IMDG: 3	IATA: 3	
Packaging group ADR/RID: III	IMDG: III	IATA: III	
Environmental hazards ADR/RID: no	IMDG Marine pollutant:	No	IATA: a
Special precautions for user			

No data available

15. REGULATORY INFORMATION

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

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

No data available

15.2 Chemical Safety Assessment

No data available

16. OTHER INFORMATION

The information in this safety data sheet is based on data and samples provided. The sheet was written to the best of our ability and according to the state of knowledge at that time. The safety data sheet only constitutes a guideline for the safe handling, use, consumption, storage, transport and disposal of the substances/preparations/mixtures mentioned under point 1. New safety data sheets are written from time to time. Only the most recent versions may be used. Old versions must be destroyed. Unless indicated otherwise word for word on the safety data sheet, the information does not apply to substances/preparations/mixtures in purer form, mixed with other substances or in processes.

The safety data sheet offers no quality specification for the substances/preparations/mixtures in question. Compliance with the instructions in this safety data sheet does not release the user from the obligation to take all measures dictated by common sense, regulations and recommendations or which are necessary and/or useful based on the real applicable circumstances. Godavari Biorefineries Limited does not guarantee the accuracy or exhaustiveness of the information provided.

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