1. IDENTIFICATION

Product name: 2-Methoxyethanol (stabilized with BHT)
Product code: M0111
Product use: For laboratory research purposes.
Restrictions on use: Not for drug or household use.

Company:
TCI America
9211 N. Harborgate Street
Portland, OR 97203 U.S.A.
Telephone: +1-800-423-8616 / +1-503-283-1681
Fax: +1-888-520-1075 / +1-503-283-1987
e-mail: sales-US@TCIchemicals.com
www.TCIchemicals.com

2. HAZARD(S) IDENTIFICATION

OSHA Haz Com: CFR 1910.1200:
Acute Toxicity - Dermal [Category 4]
Acute Toxicity - Inhalation [Category 3]
Eye Damage/Irritation [Category 2B]
Toxic to Reproduction [Category 1B]
Specific Target Organ Toxicity (Single Exposure) [Category 1]
Specific Target Organ Toxicity (Single Exposure) [Category 2]
Specific Target Organ Toxicity (Repeated Exposure) [Category 1]
Flammable Liquids [Category 3]

WHMIS 2015:
Danger!

Hazard Statement(s):
Flammable liquid and vapor
Harmful in contact with skin
Toxic if inhaled
Causes eye irritation
May damage fertility or the unborn child
Causes damage to: Liver Kidney Testis Central Nervous System
May cause damage to organs: Testis
Causes damage to organs through prolonged or repeated exposure: Testis Hematopoietic System
Central Nervous System

Pictogram(s) or Symbol(s):

Precautionary Statement(s):

Prevention
Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, sparks, open flames and hot surfaces. – No smoking. Keep container tightly closed. Ground and bond container and receiving equipment. Use explosion-proof electrical, ventilating and lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe mist, vapors or spray. Use only outdoors or in a well-ventilated area. Do not eat, drink or smoke when using this product. Wash hands and face thoroughly after handling. Wear protective gloves, protective clothing, face protection.
If on skin: Wash with plenty of soap and water. Call a poison center or doctor if you feel unwell. Take off contaminated clothing and wash it before reuse. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center or doctor. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention. If exposed: Call a poison center or doctor.

Response

Storage
Store in a well-ventilated place. Keep container tightly closed. Store locked up.

Disposal
Dispose of contents and container in accordance with local, regional, national regulations (e.g. US: 40...
2-Methoxyethanol (stabilized with BHT)  

Hazards not otherwise classified: Causes mild skin irritation. May be harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Substance/mixture:</th>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Components:</td>
<td>2-Methoxyethanol (stabilized with BHT)</td>
</tr>
<tr>
<td>Percent:</td>
<td>&gt;99.0%(GC)</td>
</tr>
<tr>
<td>CAS RN:</td>
<td>109-86-4</td>
</tr>
<tr>
<td>Molecular Weight:</td>
<td>76.10</td>
</tr>
<tr>
<td>Chemical Formula:</td>
<td>C₃H₈O₂</td>
</tr>
<tr>
<td>Synonyms:</td>
<td>Ethylene Glycol Monomethyl Ether (stabilized with BHT), Methyl Cellosolve (stabilized with BHT), O-Methyl Glycol (stabilized with BHT)</td>
</tr>
</tbody>
</table>

4. FIRST-AID MEASURES

**Description of first aid measures**

- **Inhalation:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician.
- **Skin contact:** Remove/Take off immediately all contaminated clothing. Gently wash with plenty of soap and water. Call a POISON CENTER or doctor/physician.
- **Eye contact:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Call a POISON CENTER or doctor/physician.
- **Ingestion:** Call a POISON CENTER or doctor/physician. Rinse mouth.

**Symptoms/effects:**

- **Acute:** Redness.
- **Delayed:** No data available

**Indication of any immediate medical attention:** Not available.

**Notes to physician:** No data available

5. FIRE-FIGHTING MEASURES

**Suitable extinguishing media:** Dry chemical, foam, water in large amounts, carbon dioxide.

**Hazardous combustion products:** These products include: Carbon oxides

**Other specific hazards:** Closed containers may explode from heat of a fire.

**Advice for firefighters:** Wear self-contained breathing apparatus if possible.

6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures:** Use extra personal protective equipment (self-contained breathing apparatus). Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Entry to non-involved personnel should be controlled around the leakage area by roping off, etc.

**Environmental precautions:** Prevent product from entering drains.

**Methods and materials for containment and cleaning up:** Absorb spilled material in dry sand or inert absorbent before recovering it into an airtight container. In case of large amount of spillage, contain a spill by bunding. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

**Prevention of secondary hazards:** Remove all sources of ignition. Fire-extinguishing devices should be prepared in case of a fire. Use spark-proof tools and explosion-proof equipment.
### 7. HANDLING AND STORAGE

**Precautions for safe handling:**
Handling is performed in a well ventilated place. Wear suitable protective equipment. Prevent generation of vapour or mist. Keep away from heat/sparks/open flame/hot surfaces. - No smoking. Take measures to prevent the build up of electrostatic charge. Use explosion-proof equipment. Wash hands and face thoroughly after handling. Use a closed system if possible. Use a ventilation, local exhaust if vapour or aerosol will be generated. Avoid all contact! Confirm in advance if peroxides exist when operations involving heating such as distillation are carried out.

**Conditions for safe storage, including any incompatibilities**
- **Storage conditions:** Keep container tightly closed. Store in a cool, dark and well-ventilated place. Store locked up. Store away from incompatible materials such as oxidizing agents.
- **Packaging material:** Comply with laws.

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Exposure limits:**
- ACGIH TLV(TWA): 5 ppm (skin)
- OSHA PEL(TWA): 25 ppm (skin)
- JSOH OELs(TWA): 0.1 ppm (skin)

**Appropriate engineering controls:** Follow safe industrial engineering/laboratory practices when handling any chemical. Install a closed system or local exhaust. Also install safety shower and eye bath.

**Personal protective equipment**
- **Respiratory protection:** Half or full facepiece respirator, self-contained breathing apparatus (SCBA), supplied air respirator, etc. Use respirators approved under appropriate government standards and follow local and national regulations.
- **Hand protection:** Impervious gloves.
- **Eye protection:** Safety goggles. A face-shield, if the situation requires.
- **Skin and body protection:** Impervious protective clothing. Protective boots, if the situation requires.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical state (20°C):** Liquid
- **Form:** Clear
- **Colour:** Colorless - Almost colorless
- **Odour:** Characteristic
- **Odour threshold:** No data available
- **Odour threshold:** No data available

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melting point/freezing point</td>
<td>-85°C (-121°F)</td>
</tr>
<tr>
<td>Boiling point/range</td>
<td>124°C (255°F)</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>0.97</td>
</tr>
<tr>
<td>Kinematic viscosity</td>
<td>No data available</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour pressure</td>
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</tr>
<tr>
<td>Vapour density</td>
<td>2.6</td>
</tr>
<tr>
<td>Dynamic Viscosity</td>
<td>No data available</td>
</tr>
<tr>
<td>Evaporation rate(Butyl Acetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>41°C (106°F)</td>
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<tr>
<td>Flammability(solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>285°C (545°F)</td>
</tr>
<tr>
<td>Flammability or explosive limits:</td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>2.3%</td>
</tr>
<tr>
<td>Upper</td>
<td>24.5%</td>
</tr>
</tbody>
</table>

**Solubility(ies):**
- [Water] Miscible
- [Other solvents] Ether, Benzene, Ethanol, Dimethylformamide (DMF)
- Soluble: Alcohols, Acetone, Glycerol

### 10. STABILITY AND REACTIVITY

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reactivity</td>
<td>No data available</td>
</tr>
<tr>
<td>Chemical stability</td>
<td>May form explosive peroxides.</td>
</tr>
<tr>
<td>Possibility of hazardous reactions:</td>
<td>No special reactivity has been reported.</td>
</tr>
<tr>
<td>Conditions to avoid</td>
<td>Spark, Open flame, Static discharge, Air</td>
</tr>
<tr>
<td>Incompatible materials</td>
<td>Oxidizing agents, Acid chlorides, Acid anhydrides, Strong bases</td>
</tr>
<tr>
<td>Hazardous decomposition products</td>
<td>Carbon dioxide, Carbon monoxide</td>
</tr>
</tbody>
</table>
RTECS Number: KL5775000

Acute Toxicity:
ihl-rat LC50:1500 ppm/7H
orl-rat LD50:2370 mg/kg

Carcinogenicity:
No data available

Skin corrosion/irritation:
skn-rbt 483 mg/24H MLD

Serious eye damage/irritation:
eye-rbt 500 mg/24H MLD
eye-gpg 10 ug MLD

Respiratory or skin sensitization:
No data available

Germ cell mutagenicity:
cyt-hmn-lym 150 mmol/L
dlt-rat-orl 500 mg/kg

Carcinogenicity:
No data available

IARC: No data available
NTP: No data available
OSHA: No data available

Reproductive toxicity:
ihl-rat TCLo:30 ppm/6H (65D male)
orl-rat TDLo:175 mg/kg (7-13D preg)
orl-rat TDLo:15 mg/kg (multigenerations)

Target organ(s):
Causes damage to: Liver Kidney Testis Central Nervous System
May cause damage to organs: Testis
Causes damage to organs through prolonged or repeated exposure: Testis Hematopoietic System Central Nervous System

Ecotoxicity:
Fish: No data available
Crustacea: No data available
Algae: No data available

Persistence / degradability:
73 - 94% (by BOD) , 96% (by TOC) , 100% (by GC)

Bioaccumulative potential (BCF):
3.1

Mobility in soil:
Log Pow: -0.61
Soil adsorption (Koc): 1
Henry's Law (PaM^3/mol): 3.3 x 10^-2

Disposal of product:
Recycle to process if possible. It is the generator's responsibility to comply with Federal, State and Local rules and regulations. You may be able to dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber system. This section is intended to provide assistance but does not replace these laws, nor does compliance in accordance with this section ensure regulatory compliance according to the law. US EPA guidelines for Identification and Listing of Hazardous Waste are listed in 40 CFR Parts 261. The product should not be allowed to enter the environment, drains, waterways, or the soil.

Disposal of container:
Dispose of as unused product. Do not re-use empty containers.

Other considerations:
Observe all federal, state and local regulations when disposing of the substance.
14. TRANSPORT INFORMATION

DOT (US)

UN number: UN1188
Proper Shipping Name: Ethylene glycol monomethyl ether
Class or Division: 3 Flammable liquid
Packing Group: III

IATA

UN number: UN1188
Proper Shipping Name: Ethylene glycol monomethyl ether
Class or Division: 3 Flammable liquid
Packing Group: III

IMDG

UN number: UN1188
Proper Shipping Name: Ethylene glycol monomethyl ether
Class or Division: 3 Flammable liquid
Packing Group: III

EmS number: F-E, S-D

15. REGULATORY INFORMATION

Toxic Substance Control Act (TSCA 8b.):
This product is ON the EPA Toxic Substances Control Act (TSCA) inventory.

US Federal Regulations
CERCLA Hazardous substance and Reportable Quantity:
SARA 313: Listed
SARA 302: Not Listed

State Regulations
State Right-to-Know
Massachusetts Listed
New Jersey Listed
Pennsylvania Listed

California Proposition 65: Listed

Other Information

NFPA Rating:
Health: 2
Flammability: 2
Instability: 0

HMIS Classification:
Health: 2
Flammability: 2
Physical: 0

International Inventories
Canada: DSL On DSL
EC-No: 203-713-7

16. OTHER INFORMATION

Revision date: 07/06/2018
Revision number: 1

TCI chemicals are for research purposes only and are NOT intended for use as drugs, food additives, households, or pesticides. The information herein is believed to be correct, but does not claim to be all inclusive and should be used only as a guide. Neither the above named supplier nor any of its affiliates or subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All chemical reagents must be handled with the recognition that their chemical, physiological, toxicological, and hazardous properties have not been fully investigated or determined. All chemical reagents should be handled only by individuals who are familiar with their potential hazards and who have been fully trained in proper safety, laboratory, and chemical handling procedures. Although certain hazards are described herein, we can not guarantee that these are the only hazards which exist. Our SDS are based only on data available at the time of shipping and are subject to change without notice as new information is obtained. Avoid long storage periods since the product is subject to degradation with age and may become more dangerous or hazardous. It is the responsibility of the user to request updated SDS for products that are stored for extended periods. Disposal of unused product must be undertaken by qualified personnel who are knowledgeable in all applicable regulations and follow all pertinent safety precautions including the use of appropriate protective equipment (e.g. protective goggles, protective clothing, breathing equipment, face mask, fume hood). For proper handling and disposal, always comply with federal, state and local regulations.