

# MATERIAL SAFETY DATA SHEET

## Section 1 - Chemical Product and Company Identification

**MSDS Name:** 1-Acetoxy-2-methoxyethane  
**Catalog Numbers:** A/0700/17  
**Synonyms:** Methyl Cellosolve(R) Acetate ; Ethylene glycol monomethyl ether acetate.  
**Company Identification:** Fisher Scientific UK  
Bishop Meadow Road, Loughborough  
Leics. LE11 5RG  
**For information in Europe, call:** (01509) 231166  
**Emergency Number, Europe:** 01509 231166

## Section 2 - Composition, Information on Ingredients

CAS#: 110-49-6  
Chemical Name: 2-Methoxyethyl acetate  
%: 100  
EINECS#: 203-772-9

**Hazard Symbols:** XN



**Risk Phrases:** 60 61 10 20/21/22

## Section 3 - Hazards Identification

### EMERGENCY OVERVIEW

Warning! Flammable liquid and vapor. Causes eye irritation. May be harmful if swallowed. May cause central nervous system depression. May be absorbed through intact skin. May cause kidney damage. May cause reproductive and fetal effects. May cause blood abnormalities. May be harmful if inhaled. May cause skin and respiratory tract irritation. Target Organs: Kidneys, central nervous system, blood forming organs, reproductive system.

### Potential Health Effects

**Eye:** Causes eye irritation. May cause chemical conjunctivitis and corneal damage.  
**Skin:** May be absorbed through the skin in harmful amounts. May cause irritation and dermatitis. May cause cyanosis of the extremities.  
**Ingestion:** May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause nausea and vomiting. May be harmful if swallowed. May cause polyuria, oliguria (excretion of a diminished amount of urine in relation to the fluid intake) and anuria (complete suppression of urination). Lesions may appear in the brain, lungs, liver, meninges, and heart. Ingestion of large amounts may cause CNS depression.  
**Inhalation:** May cause respiratory tract irritation. May cause effects similar to those described for ingestion. May cause narcotic effects in high concentration. Aspiration may lead to pulmonary edema. May be harmful if inhaled. Vapors may cause dizziness or suffocation. May cause burning sensation in the chest.  
**Chronic:** Chronic inhalation and ingestion may cause effects similar to those of acute inhalation and ingestion. Prolonged or repeated exposure may cause adverse reproductive effects.

## Section 4 - First Aid Measures

- Eyes:** Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.
- Skin:** Get medical aid. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.
- Ingestion:** Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.
- Inhalation:** Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation.

**Notes to Physician:**

### Section 5 - Fire Fighting Measures

- General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Will burn if involved in a fire. Use water spray to keep fire-exposed containers cool. Containers may explode in the heat of a fire. Flammable liquid and vapor. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas.
- Extinguishing Media:** For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. For large fires, use water spray, fog, or alcohol-resistant foam. Use water spray to cool fire-exposed containers. Water may be ineffective. Do NOT use straight streams of water.
- Autoignition Temperature:** 394 deg C ( 741.20 deg F)
- Flash Point:** 45 deg C ( 113.00 deg F)
- Explosion Limits: Lower:** 1.70 vol %
- Explosion Limits: Upper:** 8.20 vol %
- NFPA Rating:** health: 1; flammability: 2; instability: 1;

### Section 6 - Accidental Release Measures

- General Information:** Use proper personal protective equipment as indicated in Section 8.
- Spills/Leaks:** Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Use a spark-proof tool. A vapor suppressing foam may be used to reduce vapors.

### Section 7 - Handling and Storage

- Handling:** Wash thoroughly after handling. Use only in a well-ventilated area. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Keep away from heat, sparks and flame. Avoid ingestion and inhalation. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.
- Storage:** Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Flammables-area.

### Section 8 - Exposure Controls, Personal Protection

- Engineering Controls:**  
Facilities storing or utilizing this material should be equipped with an eyewash facility and a

safety shower. Use adequate general or local explosion-proof ventilation to keep airborne levels to acceptable levels.

Exposure Limits			
Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
2-Methoxyethyl acetate	5 ppm; Skin - potential significant contribution to overall exposure by the cutaneous route	0.1 ppm TWA; 0.5 mg/m <sup>3</sup> TWA 200 ppm IDLH	25 ppm mg/m <sup>3</sup>

OSHA Vacated PELs: 2-Methoxyethyl acetate: 25 ppm TWA; 120 mg/m<sup>3</sup> TWA

**Personal Protective Equipment**

- Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
- Skin:** Wear appropriate protective gloves to prevent skin exposure.
- Clothing:** Wear appropriate protective clothing to prevent skin exposure.
- Respirators:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

**Section 9 - Physical and Chemical Properties**

- Physical State:** Liquid
- Color:** clear, colorless
- Odor:** Pleasant ester-like odor
- pH:** Not available
- Vapor Pressure:** 2 mm Hg
- Vapor Density:** 4.1
- Evaporation Rate:** Not available
- Viscosity:** 1.14 mPas 20 deg C
- Boiling Point:** 293 deg F ( 145.00°C)
- Freezing/Melting Point:** -85 deg F ( -65.00°C)
- Decomposition Temperature:** Not available
- Solubility in water:** Miscible
- Specific Gravity/Density:** 1.0090g/cm<sup>3</sup>
- Molecular Formula:** C<sub>5</sub>H<sub>10</sub>O<sub>3</sub>
- Molecular Weight:** 118.13

**Section 10 - Stability and Reactivity**

- Chemical Stability:** Stable under normal temperatures and pressures.
- Conditions to Avoid:** Incompatible materials, ignition sources, excess heat.

<b>Incompatibilities with Other Materials</b>	Not available
<b>Hazardous Decomposition Products</b>	Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.
<b>Hazardous Polymerization</b>	Will not occur.

### Section 11 - Toxicological Information

<b>RTECS#:</b>	CAS# 110-49-6: KL5950000
<b>LD50/LC50:</b>	RTECS: <b>CAS# 110-49-6:</b> Draize test, rabbit, eye: 218 mg Mild; Oral, mouse: LD50 = 3100 mg/kg; Oral, rat: LD50 = 2900 mg/kg; Skin, rabbit: LD50 = 5250 uL/kg;
<b>Carcinogenicity:</b>	2-Methoxyethyl acetate - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Epidemiology:	Experimental reproductive effects have been reported.
Teratogenicity:	No information found
Reproductive:	Adverse reproductive effects have occurred in experimental animals.
Neurotoxicity:	No information found
Mutagenicity:	No information found
Other:	See actual entry in RTECS for complete information.

### Section 12 - Ecological Information

Not available

### Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification. RCRA P-Series: None listed. RCRA U-Series: None listed.

### Section 14 - Transport Information

US DOT  
Shipping Name: Not regulated as a hazardous material  
Hazard Class:  
UN Number:  
Packing Group:  
Canada TDG  
Shipping Name: Not available  
Hazard Class:  
UN Number:  
Packing Group:

### Section 15 - Regulatory Information

#### US Federal

TSCA

CAS# 110-49-6 is listed on the TSCA Inventory.

#### Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

#### Chemical Test Rules Section 12b

None of the chemicals in this product are under a Chemical Test Rule.  
CAS# 110-49-6: Section 5

<b>TSCA Significant New Use Rule</b>	None of the chemicals in this material have a SNUR under TSCA.
<b>CERCLA Hazardous Substances and corresponding RQs</b>	None of the chemicals in this material have an RQ.
<b>SARA Section 302 Extremely Hazardous Substances Section 313</b>	None of the chemicals in this product have a TPQ.  This material contains 2-Methoxyethyl acetate (listed as Glycol ethers), 100%, (CAS# 110-49-6) which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 372.
<b>Clean Air Act:</b>	CAS# 110-49-6 listed as Glycol ethers (except for EGBE) is listed as a hazardous air pollutant (HAP). This material does not contain any Class 1 Ozone depleters. This material does not contain any Class 2 Ozone depleters.
<b>Clean Water Act:</b>	None of the chemicals in this product are listed as Hazardous Substances under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.
<b>OSHA: STATE</b>	2-Methoxyethyl acetate can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.
<b>California Prop 65</b>	The following statement(s) is(are) made in order to comply with the California Safe Drinking Water Act: WARNING: This product contains 2-Methoxyethyl acetate, a chemical known to the state of California to cause birth defects or other reproductive harm.
<b>California No Significant Risk Level:</b>	None of the chemicals in this product are listed.
<b>European/International Regulations</b>	

European Labeling in Accordance with EC Directives

Hazard Symbols: XN

Risk Phrases:

R 61 May cause harm to the unborn child.

R 10 Flammable.

R 20/21/22 Harmful by inhalation, in contact with skin and if swallowed.

R 60 May impair fertility.

Safety Phrases:

S 53 Avoid exposure - obtain special instructions before use.

S 9 Keep container in a well-ventilated place.

S 16 Keep away from sources of ignition - No smoking.

S 33 Take precautionary measures against static discharges.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

WGK (Water Danger/Protection)

CAS# 110-49-6: 1

Canada

CAS# 110-49-6 is listed on Canada's DSL List

Canadian WHMIS Classifications: B3, D2A, D2B

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

CAS# 110-49-6 is listed on Canada's Ingredient Disclosure List

### Section 16 - Other Information

**MSDS Creation Date:** 12/12/1997

**Revision #6 Date** 2/10/2006

#### **Revisions were made in Sections: 3**

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.