

MATERIAL SAFETY DATA SHEET
METHYL 4-CHLORO-3-METHOXY-2-(E)-BUTENOATE 98%

Section 1 - Chemical Product and Company Identification

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|---|---|
| MSDS Name: | METHYL 4-CHLORO-3-METHOXY-2-(E)-BUTENOATE 98% |
| Catalog Numbers: | 9.141 |
| Synonyms: | |
| Relevant identified uses of substance or mixture and uses advised against | |
| Identified uses | Laboratory chemicals, Manufacture of substances |
| Company Identification: | Tau-Chem, Ltd. Nobelova 34, P.O. Box 29 836 05 Bratislava, Slovak Republic Phone: +421 2 44 452 252 Fax: +421 2 44 457 645 |
| POISON CENTER: | National Toxicological Information Centre Limbová 5, 833 05 Bratislava, |
| Emergency Numbers Slovakia: | Phone: +421 2 54 774 166 Fax: +421 2 54 774 605 |

Section 2 – Hazards Identification

Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]

Acute toxicity, Oral (Category 4)


Skin corrosion (Category 1B)

Classification according to EU Directives 67/548/EEC or 1999/45/EC


Harmful if swallowed. Causes burns.

Label elements

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

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| Pictogram |  |
| Signal word | Warning |
| Hazard statement(s) | |
| H302 | Harmful if swallowed. |
| H314 | Causes severe skin burns and eye damage. |
| Precautionary statement(s) | |
| P280 | Wear protective gloves/ protective clothing. |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P310 | Immediately call a POISON CENTER or doctor/ physician. |

According to European Directive 67/548/EEC as amended

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| Hazard symbol(s) |  |
| C | Corrosive |
| R-phrase(s) | |
| R22 | Harmful if swallowed. |
| R34 | Causes burns |
| S-phrase(s) | |
| S26 | In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. |
| S36/37/39 | Wear suitable protective clothing, gloves and eye/face protection. |
| S45 | In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). |
| Other hazards | Lachrymator |

Section 3 – Composition, Information on Ingredients

| CAS# | Chemical Name: | % | EINECS# |
|-----------------------|---|----|----------|
| 110104-60-4 | METHYL 4-CHLORO-3-METHOXY-2-(E)-BUTENOATE | 98 | Unlisted |
| Classification | Acute Tox. 4; Skin Corr. 1B H302, H314 Xn, C, R22 - R34 | | |

Section 4 – First Aid Measures

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| 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: | Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician. |
| In case eye contact: | Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. |
| If swallowed: | 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 | Burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. |

Section 5 – Fire Fighting Measures

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| Suitable extinguishing media: | Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. |
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| Special protective equipment for fire-fighters: | Wear self contained apparatus breathing apparatus for fire fighting if necessary. |
| Further information: | None |

Section 6 – Accidental Release Measures

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| Personal precautions: | Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. |
| Environmental precautions: | Do not let product enter drains. |
| Methods and materials for containment and cleaning up | Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal. |

Section 7 – Handling and Storage

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| Precautions for safe handling: | Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Normal measures for preventive fire protection. |
| Conditions for safe storage: | 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. |

Section 8 – Exposure Controls, Personal Protection

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| Personal protective equipment: | |
| 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). |
| Hand 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. |
| Eye protection: | Safety glasses with side-shields conforming to EN 166. Use equipment for eye protection tested and approved under appropriate government standards as NIOSH (US) or EN 166 (EU) |
| Skin and body protection: | Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. |
| Hygiene measures: | Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. |

Section 9 – Physical and Chemical Properties

Appearance

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|--------------------------------|--|
| Form: | Clear liquid |
| Colour: | Colourless to yellowish |
| Safety data: | |
| pH | Not available |
| Boiling Point: | 95 - 97 °C / 15 mm Hg |
| Freezing/Melting Point: | 25 °C |
| Flash Point: | 104 °C closed cup |
| Ignition temperature: | Not available |
| Solubility in water: | Insoluble |
| Refractive Index: | 1.4830 – 1.4850 |
| Density: | 1.210 g/cm ³ |
| Molecular Formula: | C ₆ H ₉ ClO ₃ |
| Molecular Weight: | 164.59 g/mol |

Section 10 – Stability and Reactivity

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| Chemical Stability: | Stabile under recommended storage conditions. |
| Conditions to avoid: | No data available. |
| Materials to avoid: | Strong oxidizing agents. |
| Hazardous Decomposition Products | Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen chloride (gas) |

Section 11 – Toxicological Information

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| Acute toxicity | No data available |
| 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 effect: | |
| Inhalation | May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. |
| Ingestion | Harmful if swallowed. Causes burns. |
| Skin | May be harmful if absorbed through skin. Causes skin burns. |
| Eyes | Causes eye burns. |

Signs and Symptoms of Exposure

Burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Additional Information

RTECS: Not available

Section 12 – Ecological Information

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|--------------------------------------|-------------------|
| Toxicity: | No data available |
| Persistence and degradability | No data available |
| Bioaccumulative potential | No data available |
| Mobility in soil | No data available |
| PBT and vPvB assessment | No data available |
| Other adverse effects | No data available |

Section 13 - Disposal Considerations

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| Product | Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. |
| Contaminated packaging | Dispose of as unused product. |

Section 14 - Transport Information

| | IATA | IMDG | RID/ADR |
|-----------------------|---|----------------------|---------------------|
| Shipping Name: | AVIATION REGULATED LIQUID, N.O.S. | Not dangerous goods | Not dangerous goods |
| Hazard Class: | 9 | | |
| UN Number: | 3334 | | |
| Packing Group: | | Marine pollutant: no | |

Section 15 - Regulatory Information

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

Section 16 - Other Information

Text of H-code(s) and R-phrase(s) mentioned in Section 3

| | |
|------------|----------------|
| Acute Tox. | Acute toxicity |
| Skin Corr. | Skin corrosion |

| | |
|------|--|
| H302 | Harmful if swallowed. |
| H314 | Causes severe skin burns and eye damage. |
| C | Corrosive. |
| Xn | Harmful. |
| R22 | Harmful if swallowed. |
| R34 | Causes burns |

MSDS Creation Date: 4/7/2007

Revision #1: 22/09/2011

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

Disclaimer: The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.