# MATERIAL SAFETY DATA SHEET
# 4,5-DIMETHYL-2-FURANCARBOXALDEHYDE 97%

## Section 1 - Chemical Product and Company Identification

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|---|---|
| **MSDS Name:** | 4,5-DIMETHYL-2-FURANCARBOXALDEHYDE 97% |
| **Catalog Numbers:** | 4.15 |
| **Synonyms:** | 4,5-Dimethyl-2-furfural; 4,5-Dimethylfurfural |

Relevant identified uses of substance or mixture and uses advised against

| | |
|---|---|
| Identified uses | Laboratory chemicals, Manufacture of substances |
| **Company Identification:** | Tau-Chem, Ltd.<br>Nobelova 34, P.O. Box 29<br>836 05 Bratislava, Slovak Republic<br>Phone: +421 2 44 452 252 Fax: +421 244 457 645 |
| **POISON CENTER:** | National Toxicological Information Centre<br>Limbová 5, 833 05 Bratislava, |
| **Emergency Numbers Slovakia:** | Phone: +42 2 54 774 166 Fax: +42 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]**
Not a dangerous substance according to GHS.

**Classification according to EU Directives 67/548/EEC or 1999/45/EC**
This substance is not classified as dangerous according to Directive 67/548/EEC.
Not a hazardous substance or mixture according to EC-directives 67/548/EEC or 1999/45/EC.

**Label elements**
**Labelling according Regulation (EC) No 1272/2008 [CLP]**
None. Not a dangerous substance according to GHS.
Caution – substance not yet tested completely.

**Other hazards** None.

## Section 3 - Composition, Information on Ingredients

| CAS# | Chemical Name: | % | EINECS# |
|---|---|---|---|
| 52480-43-0 | 4,5-DIMETHYL-2-FURANCARBOXALDEHYDE | 97 | unlisted |

**Classification** This substance is not classified as dangerous according to Directive 67/548/EEC.
For he full text of the H-Statements mentioned in this Section, see Section 16.

## Section 4 - First Aid Measures

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| **General advice:** | Consult a physician. |
| **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 eye contact:** | Rinse thoroughly with plenty f 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. |

## Section 5 - Fire Fighting Measures

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| **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 protective equipment for fire-fighters:** | Wear self contained apparatus breathing apparatus for fire fighting if necessary. |

## Section 6 - Accidental Release Measures

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| **Personal precautions:** | Avoid breathing vapours, mist or gas. Remove all sources of ignition. Beware of vapours accumulating to form explosive concentrations. Vapours 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). Keep in suitable, closed containers for disposal. |

## Section 7 - Handling and Storage

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| **Precautions for safe handling:** | Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge. |
| **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

**Personal protective equipment:**

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| **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 |

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| | 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** | The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Handle with gloves. |
| **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:** | Impervious body protection according to the amount and concentration of the dangerous substance at the work place. |
| **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

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| **Appearance** | |
| Form: | Clear liquid |
| Colour: | Colourless to yellow |
| **Safety data:** | |
| **pH** | Not available |
| **Melting point:** | Not available |
| **Boiling Point:** | 98 - 100 °C / 12 mm Hg |
| **Flash Point:** | 66 °C – closed cup |
| **Ignition temperature:** | Not available |
| **Explosion Limits: Lower:** | Not available |
| **Explosion Limits: Upper:** | Not available |
| **Solubility in water:** | Slightly soluble |
| **Specific density:** | 1.015 g/cm$^3$ |
| **Refractive Index:** | 1.5310 |
| **Molecular Formula:** | $C_7H_8O_2$ |
| **Molecular Weight:** | 124.14 g/mol |

## Section 10 - Stability and Reactivity

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| **Chemical Stability:** | Stabile under recommended storage conditions. |
| **Conditions to avoid:** | Heat, flames and sparks. |
| **Materials to avoid:** | Strong oxidizing agents. |
| **Hazardous Decomposition Products** | Hazardous decomposition products under fire conditions. – Carbon oxides. |

## 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 |

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| **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.

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| **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. |
| **Ingestion** | May be harmful if swallowed. |
| **Skin** | May be harmful if absorbed through skin. |
| **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: No data available

## Section 12 – Ecological Information

| | |
|---|---|
| **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** | This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable 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. |

## Section 14 - Transport Information

| | **IATA** | **IMDG** | **RID/ADR** |
|---|---|---|---|
| **Shipping Name:** | Not dangerous goods | Not dangerous goods | Not dangerous goods |
| **Hazard Class:** | | | |
| **UN Number:** | | | |

**Packing Group:**

## Section 15 - Regulatory Information

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

## Section 16 - Other Information

**MSDS Creation Date:** 27/03/2007 **Revision #1:**26/07/2011Original

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.