place in container for disposal according to local regulations (see section 13). **6.4** Reference to other sections For disposal see section 13. 7. HANDLING AND STORAGE **7.1 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, including any incompatibilities 7.2 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. 7.3 Specific end uses no data available EXPOSURE CONTROLS/PERSONAL PROTECTION 8. **Control parameters** 8.1 Components with workplace control parameters 8.2 **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 9.1 Information on basic physical and chemical properties Form: liquid a) Appearance Colour: colourless no data available Odour b) Odour Threshold no data available no data available рН Melting point/freezing point Initial boiling point and 175 - 176 °C - lit. boiling range Flash point 59 °C - closed cup no data available Evaporation rate h) i) Flammability (solid, gas) no data available j) Upper/lower no data available flammability or explosive limits Vapour pressure no data available k) Vapour density no data available 1) m) Relative density 1,12 g/mL at 25 °C no data available Water solubility n) Partition coefficient: nno data available octanol/water Autoignition no data available temperature Decomposition no data available temperature no data available Viscosity r) Explosive properties no data available S) Oxidizing properties no data available 9.2 Other safety information no data available **10.** STABILITY AND REACTIVITY 10.1 Reactivity no data available 10.2 **Chemical stability** no data available 10.3 Possibility of hazardous reactions no data available 10.4 Conditions to avoid Heat, flames and sparks. 10.5 **Incompatible materials** acids, Bases, Oxidizing agents, Reducing agents 10.6 Hazardous decomposition products TOXICOLOGICAL INFORMATION 11. **Information on toxicological effects** 11.1 **Acute toxicity** Skin corrosion/irritation Serious eye damage/eye irritation Respiratory or skin sensitization Germ cell mutagenicity Carcinogenicity IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. Reproductive toxicity Specific target organ toxicity - single exposure Specific target organ toxicity - repeated exposure Aspiration hazard 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. **Additional Information** RTECS: Not available **12. ECOLOGICAL INFORMATION** 12.1 **Toxicity** 12.2 Persistence and degradability 12.3 **Bioaccumulative potential** 12.4 Mobility in soil Results of PBT and vPvB assessment 12.5 no data available Other adverse effects 12.6 **13. DISPOSAL CONSIDERATIONS** 13.1 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 non-recyclable solutions to a licensed disposal company. Contaminated packaging Dispose of as unused product. **14.** TRANSPORT INFORMATION UN number 14.1 **ADR/RID: 3272** IATA: 3272 IMDG: 3272 14.2 UN proper shipping name ADR/RID: ESTERS, N.O.S. (Methyl 4-chlorobutyrate) IMDG: ESTERS, N.O.S. (Methyl 4-chlorobutyrate) IATA: Esters, n.o.s. (Methyl 4-chlorobutyrate) 14.3 **Transport hazard class(es)** ADR/RID: 3 IMDG: 3 IATA: 3 14.4 Packaging group ADR/RID: III IMDG: III IATA: III 14.5 **Environmental hazards** ADR/RID: no IMDG Marine pollutant: no IATA: no Special precautions for user 14.6 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 Further information** For R&D use only. Not for drug, household or other uses. WARRANTY: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Lookchem shall not be held liable www.lookchem.com for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.

1.

1.1

1.2

2.

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**3**.

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4.

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**5.** 

**5.1** 

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**6.** 

6.1

**6.2** 

6.3

**Product identifiers** 

Product name

Identified uses

Label elements

Pictogram

Signal word

Statements

Substances

Component

Molecular Weight

**Methyl 4-chlorobutyrate** 

FIRST AID MEASURES

In case of skin contact

In case of eye contact

**Description of first aid measures** 

Flush eyes with water as a precaution.

FIRE-FIGHTING MEASURES

Suitable extinguishing media

Carbon oxides, Hydrogen chloride gas

Use water spray to cool unopened containers.

ACCIDENTAL RELEASE MEASURES

CAS-No.

EC-No.

General advice

If inhaled

If swallowed

Consult a physician.

no data available

Extinguishing media

Advice for firefighters

**Further information** 

**Environmental precautions** 

Formula

H226

Hazard statement(s)

Supplemental Hazard

Other hazards - none

Precautionary statement(s)

HAZARDS IDENTIFICATION

Flammable liquids (Category 3)

Classification of the substance or mixture

CAS-No.

IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Laboratory chemicals, Manufacture of substances

Methyl 4-chlorobutyrate

3153-37-5

Relevant identified uses of the substance or mixture and uses advised against

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

Warning

none

none

C5H9ClO2

136,58 g/mol

3153-37-5

221-592-9

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

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

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

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

Most important symptoms and effects, both acute and delayed

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Wear self contained breathing apparatus for fire fighting if necessary.

form explosive concentrations. Vapours can accumulate in low areas.

Methods and materials for containment and cleaning up

Personal precautions, protective equipment and emergency procedures

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

Avoid breathing vapors, mist or gas. Remove all sources of ignition. Beware of vapours accumulating to

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and

Special hazards arising from the substance or mixture

Indication of any immediate medical attention and special treatment needed

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

COMPOSITION/INFORMATION ON INGREDIENTS

Not a hazardous substance or mixture according to EC-directives 67/548/EEC or 1999/45/EC.

Flammable liquid and vapour.

Concentration