1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING 1.1 **Product identifiers** Methylamine Product name CAS-No. 74-89-5 1.2 Relevant identified uses of the substance or mixture and uses advised against Identified uses Laboratory chemicals, Manufacture of substances **HAZARDS IDENTIFICATION** 2. 2.1 Classification of the substance or mixture Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP] Flammable gases (Category 1) Gases under pressure (Compressed gas) Acute toxicity, Inhalation (Category 4) Specific target organ toxicity - single exposure (Category 3) Skin irritation (Category 2) Serious eye damage (Category 1) Classification according to EU Directives 67/548/EEC or 1999/45/EC Extremely flammable. Harmful by inhalation. Irritating to respiratory system and skin. Risk of serious damage to eyes. Label elements 2.2 Labelling according Regulation (EC) No 1272/2008 [CLP] Pictogram Signal word Danger Hazard statement(s) H220 Extremely flammable gas. Contains gas under pressure; may explode if heated. H280 H315 Causes skin irritation. Causes serious eye damage. H318 H332 Harmful if inhaled. H335 May cause respiratory irritation. Precautionary statement(s) P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. P261 Wear protective gloves/ eye protection/ face protection. P280 IF IN EYES: Rinse cautiously with water for several minutes. Remove P305 + P351 + P338contact lenses, if present and easy to do. Continue rinsing. Protect from sunlight. Store in a well-ventilated place. P410 + P403Supplemental Hazard none Statements According to European Directive 67/548/EEC as amended. Hazard symbol(s) R-phrase(s) Extremely flammable. R12 R20 Harmful by inhalation. R37/38 Irritating to respiratory system and skin. R41 Risk of serious damage to eyes. S-phrase(s) S16 Keep away from sources of ignition - No smoking. S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S39 Wear eye/face protection. 2.3 Other hazards Lachrymator. 3. **COMPOSITION/INFORMATION ON INGREDIENTS** 3.1 Substances Synonyms Monomethylamine Formula CH5N 31,06 g/mol Molecular Weight Component Concentration mono-Methylamine CAS-No. 74-89-5 EC-No. 200-820-0 4. FIRST AID MEASURES 4.1 **Description of first aid measures** General advice Consult a physician. Show this safety data sheet to the doctor in attendance. If inhale d 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. Take victim immediately to hospital. Consult a physician. In case of 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. 4.2 Most important symptoms and effects, both acute and delayed May cause irritation to eyes and respitatory passages to workers briefly exposed to high concentrations, Conjunctivitis., sore throat 4.3 Indication of any immediate medical attention and special treatment needed no data available **5.** FIRE-FIGHTING MEASURES **5.1** Extinguishing media Suitable extinguishing media Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. **5.2** Special hazards arising from the substance or mixture Carbon oxides, nitrogen oxides (NOx) 5.3 Advice for firefighters Wear self contained breathing apparatus for fire fighting if necessary. **5.4 Further information** Use water spray to cool unopened containers. **6.** ACCIDENTAL RELEASE MEASURES 6.1 Personal precautions, protective equipment and emergency procedures Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. **6.2 Environmental precautions** Prevent further leakage or spillage if safe to do so. Do not let product enter drains. 6.3 Methods and materials for containment and cleaning up Clean up promptly by sweeping or vacuum. 6.4 Reference to other sections For disposal see section 13. 7. HANDLING AND STORAGE 7.1 **Precautions for safe handling** Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. 7.2 Conditions for safe storage, including any incompatibilities Store in cool place. Keep container tightly closed in a dry and well-ventilated place. 7.3 Specific end uses no data available 8. EXPOSURE CONTROLS/PERSONAL PROTECTION 8.1 **Control parameters Components with workplace control parameters** 8.2 **Exposure controls Appropriate engineering controls** Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. Personal protective equipment Eye/face protection Tightly fitting safety goggles. Faceshield (8-inch minimum). 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** 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. Respiratory protection Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type AXBEK (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: Compressed gas Appearance a) Colour: colourless b) Odour no data available Odour Threshold no data available c) 14 at 100 g/l at 20 °C рН d) Melting point/range: -93 °C - lit. Melting point/freezing e) point Initial boiling point and -6,3 °C - lit. boiling range < -30 °C - closed cup Flash point no data available h) Evaporation rate Flammability (solid, gas) no data available i) Upper/lower Upper explosion limit: 20,8 %(V) flammability or Lower explosion limit: 4.9 %(V)explosive limits 1.861,0 hPa at 20 °C Vapour pressure Vapour density 1.07 - (Air = 1.0)m) Relative density 0,7 g/cm3 at 20 °C Water solubility no data available Partition coefficient: nlog Pow: -0,713 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 Surface tension 19,19 mN/m at 25 °C **10.** STABILITY AND REACTIVITY 10.1 Reactivity no data available 10.2 **Chemical stability** no data available Possibility of hazardous reactions 10.3 no data available 10.4 Conditions to avoid no data available 10.5 **Incompatible materials** acids, Acid chlorides, Acid anhydrides, Oxidizing agents, Chloroformates, Phosphorus halides 10.6 Hazardous decomposition products Other decomposition products - no data available 11. TOXICOLOGICAL INFORMATION 11.1 **Information on toxicological effects Acute toxicity** LD50 Oral - rat - 100 mg/kg LC50 Inhalation - mouse - 2,0 h - 2.400,0 mg/m3 Skin corrosion/irritation Skin - rabbit - Severe skin irritation 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 present 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 May cause respiratory irritation. **Specific target organ toxicity - repeated exposure** no data available Aspiration hazard no data available Potential health effects Inhalation Harmful if inhaled. Causes respiratory tract irritation. Ingestion Toxic if swallowed. Skin May be harmful if absorbed through skin. Causes skin irritation. Eyes Causes eye burns. Signs and Symptoms of Exposure May cause irritation to eyes and respitatory passages to workers briefly exposed to high concentrations, Conjunctivitis., sore throat **Additional Information** RTECS: PF6300000 **12. ECOLOGICAL INFORMATION** 12.1 **Toxicity** no data available 12.2 Persistence and degradability no data available 12.3 **Bioaccumulative potential** no data available 12.4 Mobility in soil no data available 12.5 Results of PBT and vPvB assessment no data available 12.6 Other adverse effects no data available **13. DISPOSAL CONSIDERATIONS** 13.1 Waste treatment methods **Product** Offer surplus and non-recyclable solutions to a licensed disposal company. Contaminated packaging Dispose of as unused product. **14.** TRANSPORT INFORMATION 14.1 UN number ADR/RID: 1061 IMDG: 1061 IATA: 1061 14.2 **UN proper shipping name** ADR/RID: METHYLAMINE, ANHYDROUS IMDG: METHYLAMINE, ANHYDROUS IATA: Methylamine, anhydrous Passenger Aircraft: Not permitted for transport 14.3 Transport hazard class(es) ADR/RID: 2.1 IMDG: 2.1 IATA: 2.1 14.4 Packaging group ADR/RID: -IMDG: -IATA: -14.5 **Environmental hazards** ADR/RID: no IMDG Marine pollutant: no IATA: no 14.6 Special precautions for user no data available **15. REGULATORY INFORMATION** This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006. Safety, health and environmental regulations/legislation specific for the substance or mixture 15.1 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.