1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING 1.1 **Product identifiers** 2-(Methylamino)ethanol Product name CAS-No. 109-83-1 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] Acute toxicity, Dermal (Category 4) Acute toxicity, Oral (Category 4) Skin corrosion (Category 1B) Classification according to EU Directives 67/548/EEC or 1999/45/EC Causes burns. Harmful in contact with skin and if swallowed. 2.2 Label elements Labelling according Regulation (EC) No 1272/2008 [CLP] Pictogram Signal word Danger Hazard statement(s) Causes severe skin burns and eye damage. H314 H302 Harmful if swallowed. H312 Harmful in contact with skin. Precautionary statement(s) P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P305 + P351 + P338IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician. P310 Supplemental Hazard none Statements According to European Directive 67/548/EEC as amended. Hazard symbol(s) R-phrase(s) Harmful in contact with skin and if swallowed. R21/22Causes burns. R34 S-phrase(s) In case of contact with eyes, rinse immediately with plenty of water and S26 seek medical advice. Wear suitable protective clothing, gloves and eye/face protection. S36/37/39 In case of accident or if you feel unwell, seek medical advice immediately S45 (show the label where possible). 2.3 Other hazards - none 3. **COMPOSITION/INFORMATION ON INGREDIENTS** 3.1 Substances Synonyms N-Methylethanolamine Formula C3H9NO Molecular Weight 75,11 g/mol Component Concentration N-Methylethanolamine CAS-No. 109-83-1 EC-No. 203-710-0 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 Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. 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 Do NOT induce vomiting. 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 Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, Shortness of breath, Headache, Nausea 4.3 Indication of immediate medical attention and special treatment needed no data available **5.** FIRE-FIGHTING MEASURES **5.1** Extinguishing media 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. **5.2** Special hazards arising from the substance or mixture Carbon oxides, nitrogen oxides (NOx) 5.3 **Precautions for fire-fighters** Wear self contained breathing apparatus for fire fighting if necessary. **5.4 Further information** Use water spray to cool unopened containers. ACCIDENTAL RELEASE MEASURES **6.** 6.1 Personal precautions, protective equipment and emergency procedures Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. **6.2 Environmental precautions** Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided. 6.3 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. **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. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge. 7.2 Conditions for safe storage, including any incompatibilities 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 8. EXPOSURE CONTROLS/PERSONAL PROTECTION 8.1 **Control parameters** 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 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 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 Appearance Form: clear, liquid a) Colour: colourless no data available Odour b) Odour Threshold no data available c) рН 13,6 at 100 g/l at 20 °C d) Melting/freezing point no data available e) 159 °C - lit. Initial boiling point and boiling range 76 °C - closed cup Flash point no data available Evaporation rate h) Flammability (solid, gas) no data available i) Upper explosion limit: 19,8 %(V) Upper/lower flammability or Lower explosion limit: 1,6 %(V)explosive limits Vapour pressure 0,7 hPa at 20 °C 2.59 - (Air = 1.0)Vapour density m) Relative density 0,935 g/cm3 at 25 °C Water solubility no data available Partition coefficient: nlog Pow: -0,91 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** Oxidizing agents, Copper, Zinc, Iron, Do not store near acids. 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 - 1.391 mg/kg Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste): Eye: Chromodacryorrhea. Behavioral:Ataxia. Diarrhoea LD50 Dermal - rabbit - 1.005 mg/kg Remarks: Behavioral:Somnolence (general depressed activity). Lungs, Thorax, or Respiration:Other changes. Prolonged skin contact may cause skin irritation and/or dermatitis. Skin corrosion/irritation Skin - rabbit - Corrosive 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 no data available Specific target organ toxicity - repeated exposure no data available As piration hazard no data available Potential health effects May be harmful if inhaled. Material is extremely destructive to the tissue of Inhalation the mucous membranes and upper respiratory tract. Ingestion Harmful if swallowed. Causes burns. Skin Harmful if absorbed through skin. Causes skin burns. Eyes Causes eye burns. Signs and Symptoms of Exposure Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, Shortness of breath, Headache, Nausea **Additional Information** RTECS: KL6650000 **12. ECOLOGICAL INFORMATION** 12.1 **Toxicity** Toxicity to fish LC50 - Danio rerio (zebra fish) - > 100 mg/l - 96 h EC50 - Daphnia magna (Water flea) - 33 mg/l - 48 h Toxicity to daphnia and other aquatic invertebrates. Toxicity to algae EC50 - Desmodesmus subspicatus (green algae) - 18,4 mg/l - 72 h 12.2 Persistence and degradability Biodegradability 12.3 **Bioaccumulative potential** no data available Mobility in soil no data available 12.5 Results of PBT and vPvB assessment no data available **12.6** Other adverse effects Harmful to aquatic life. no data available 13. **DISPOSAL CONSIDERATIONS** 13.1 Waste treatment methods **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. **14.** TRANSPORT INFORMATION 14.1 **UN-Number** ADR/RID: 2735 IMDG: 2735 IATA: 2735 UN proper shipping name 14.2 ADR/RID: AMINES, LIQUID, CORROSIVE, N.O.S. (N-Methylethanolamine) IMDG: AMINES, LIQUID, CORROSIVE, N.O.S. (N-Methylethanolamine) Amines, liquid, corrosive, n.o.s. (N-Methylethanolamine) IATA: 14.3 Transport hazard class(es) ADR/RID: 8 IMDG: 8 IATA: 8 14.4 Packaging group ADR/RID: III IMDG: III IATA: III 14.5 **Environmental hazards** ADR/RID: no IMDG Marine pollutant: no IATA: no 14.6 Special precautions for users 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 **OTHER INFORMATION 16. 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. 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