1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING 1.1 **Product identifiers** 3,4-Dichloroaniline Product name CAS-No. 95-76-1 1.2 Relevant identified uses of the substance or mixture and uses advised against Identified uses Laboratory chemicals, Manufacture of substances 2. HAZARDS IDENTIFICATION Classification of the substance or mixture 2.1 Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP] Serious eye damage (Category 1) Skin sensitization (Category 1) Acute aquatic toxicity (Category 1) Chronic aquatic toxicity (Category 1) Acute toxicity, Inhalation (Category 3) Acute toxicity, Dermal (Category 3) Acute toxicity, Oral (Category 3) Classification according to EU Directives 67/548/EEC or 1999/45/EC Toxic by inhalation, in contact with skin and if swallowed. Risk of serious damage to eyes. May cause sensitization by skin contact. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. 2.2 Label elements Labelling according Regulation (EC) No 1272/2008 [CLP] Pictogram Signal word Danger Hazard statement(s) H301 Toxic if swallowed. H311 Toxic in contact with skin. H317 May cause an allergic skin reaction. H318 Causes serious eye damage. H331 Toxic if inhaled. Very toxic to aquatic life with long lasting effects. H410 Precautionary statement(s) P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. P273 Avoid release to the environment. Wear protective gloves/ eye protection/ face protection. P280 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ P301 + P310physician. P305 + P351 + P338IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P311 Call a POISON CENTER or doctor/physician. Supplemental Hazard none Statements According to European Directive 67/548/EEC as amended. Hazard symbol(s) R-phrase(s) R23/24/25 Toxic by inhalation, in contact with skin and if swallowed. R41 Risk of serious damage to eyes. R43 May cause sensitization by skin contact. R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. 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). S60 This material and its container must be disposed of as hazardous waste. Avoid release to the environment. Refer to special instructions/ Safety S61 data sheets. 2.3 Other hazards - none 3. **COMPOSITION/INFORMATION ON INGREDIENTS** 3.1 Substances C6H5Cl2N Formula Molecular Weight 162,02 g/mol Concentration Component 3,4-Dichloroaniline CAS-No. 95-76-1 EC-No. 202-448-4 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. Most important symptoms and effects, both acute and delayed 4.2 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 Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. **5.2** Special hazards arising from the substance or mixture Hydrogen chloride gas Nature of decomposition products not known. Carbon oxides, nitrogen oxides (NOx), Hydrogen chloride gas 5.3 **Precautions for fire-fighters** Wear self contained breathing apparatus for fire fighting if necessary. 5.4 **Further information** no data available ACCIDENTAL RELEASE MEASURES **6.** 6.1 Personal precautions, protective equipment and emergency procedures Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. **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 Pick up and arrange disposal without creating dust. Sweep up and shovel. 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 formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection. 7.2 Conditions for safe storage, including any incompatibilities Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Light sensitive. 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 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** 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 particle respirator type N100 (US) or type P3 (EN 143) 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: solid a) Colour: dark brown no data available Odour b) Odour Threshold no data available no data available d) рН Melting/freezing point Melting point/range: 69 - 71 °C 272 °C Initial boiling point and boiling range Flash point 135,00 °C - closed cup Evaporation rate no data available h) Flammability (solid, gas) no data available **i**) Upper/lower Upper explosion limit: 7,2 %(V) j) flammability or Lower explosion limit: 2,8 %(V) explosive limits no data available Vapour pressure k) Vapour density 6,49 1) m) Relative density no data available Water solubility no data available n) Partition coefficient: nno data available octanol/water Autoignition no data available temperature Decomposition no data available temperature Viscosity no data available r) Explosive properties no data available s) Oxidizing properties no data available 9.2 Other safety information no data available STABILITY AND REACTIVITY **10.** 10.1 Reactivity no data available Chemical stability 10.2 no data available 10.3 Possibility of hazardous reactions no data available Conditions to avoid 10.4 no data available **Incompatible materials** 10.5 Acid anhydrides, Oxidizing agents 10.6 Hazardous decomposition products Other decomposition products - no data available 11. TOXICOLOGICAL INFORMATION Information on toxicological effects **Acute toxicity** LD50 Oral - rat - 545 mg/kg Skin corrosion/irritation Skin - rabbit - Severe skin irritation Serious eye damage/eye irritation Eyes - rabbit - Severe eye irritation Respiratory or skin sensitization May cause allergic skin reaction. Causes sensitization. Germ cell mutagenicity Genotoxicity in vitro - Human - lymphocyte Sister chromatid exchange 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 Aspiration hazard no data available Potential health effects Inhalation Toxic if inhaled. Causes respiratory tract irritation. Toxic if swallowed. Ingestion Toxic if absorbed through skin. Causes skin irritation. Skin Eyes Causes eye burns. **Additional Information** RTECS: BX2625000 **12. ECOLOGICAL INFORMATION** 12.1 **Toxicity** LC50 - Pimephales promelas (fathead minnow) - 7 - 10 mg/l - 96,0 h Toxicity to fish EC50 - Daphnia magna (Water flea) - 0,05 - 2,20 mg/l - 48 h Toxicity to daphnia and other aquatic invertebrates. Toxicity to algae EC50 - Pseudokirchneriella subcapitata (green algae) - 4,9 mg/l - 72 h Growth inhibition LOEC - Algae - 1 - 10 mg/l - 28 d 12.2 Persistence and degradability Biodegradability Result: - Not readily biodegradable. **Bioaccumulative potential** 12.3 Bioaccumulation Poecilia reticulata (guppy) - 48 h -48,6 μg/l Bioconcentration factor (BCF): 96 12.4 Mobility in soil no data available 12.5 Results of PBT and vPvB assessment no data available 12.6 Other adverse effects Very toxic to aquatic life with long lasting effects. **13. DISPOSAL CONSIDERATIONS** 13.1 Waste treatment methods **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. **14.** TRANSPORT INFORMATION 14.1 **UN-Number** ADR/RID: 3442 IMDG: 3442 IATA: 3442 **UN proper shipping name** 14.2 ADR/RID: DICHLOROANILINES, SOLID IMDG: DICHLOROANILINES, SOLID IATA: Dichloroanilines, solid Transport hazard class(es) 14.3 ADR/RID: 6.1 IMDG: 6.1 IATA: 6.1 14.4 Packaging group ADR/RID: II IMDG: II IATA: II **Environmental hazards** 14.5 ADR/RID: no IATA: no IMDG Marine pollutant: yes 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 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. 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.