1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING 1.1 **Product identifiers** Edifenphos Product name CAS-No. 17109-49-8 1.2 Relevant identified uses of the substance or mixture and uses advised against Identified uses Laboratory chemicals, Manufacture of substances 2. HAZARDS IDENTIFICATION 2.1 Classification of the substance or mixture Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP] Acute toxicity (Category 3) Acute toxicity (Category 3) Acute toxicity (Category 4) Skin sensitization (Category 1) Acute aquatic toxicity (Category 1) Chronic aquatic toxicity (Category 1) Classification according to EU Directives 67/548/EEC or 1999/45/EC Toxic by inhalation and if swallowed. Harmful in contact with skin. 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. H312 Harmful in contact with skin. H317 May cause an allergic skin reaction. H331 Toxic if inhaled. H410 Very toxic to aquatic life with long lasting effects. Precautionary statement(s) P273 Avoid release to the environment. P280 Wear protective gloves. P501 Dispose of contents/ container to an approved waste disposal plant. Supplemental Hazard none Statements May produce an allergic reaction. According to European Directive 67/548/EEC as amended. Hazard symbol(s) & ¥2 R-phrase(s) R21 Harmful in contact with skin. Toxic by inhalation and if swallowed. R23/25 R43 May cause sensitization by skin contact. Very toxic to aquatic organisms, may cause long-term adverse effects in R50/53the aquatic environment. S-phrase(s) S36/37 Wear suitable protective clothing and gloves. S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). This material and its container must be disposed of as hazardous waste. S60 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 Formula C14H15O2PS2 Molecular Weight 310,4 g/mol Concentration Component **Edifenphos** CAS-No. 17109-49-8 EC-No. 241-178-1 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 Flush eyes with water as a precaution. 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 To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Indication of immediate medical attention and special treatment needed 4.3 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, Sulphur oxides, Oxides of phosphorus 5.3 **Precautions for fire-fighters** Wear self contained breathing apparatus for fire fighting if necessary. 5.4 **Further information** no data available **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. **Environmental precautions 6.2** 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 Soak up with inert absorbent material and dispose of as hazardous waste. 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. 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. Recommended storage temperature: 2 - 8 °C 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 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 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: liquid a) Odour b) no data available Odour Threshold no data available d) рН no data available Melting/freezing point no data available e) Initial boiling point and 154 °C at 0,009 hPa f) boiling range no data available Flash point Evaporation rate no data available h) **i**) Flammability (solid, gas) no data available Upper/lower no data available flammability or explosive limits Vapour pressure no data available no data available Vapour density 1,230 g/cm3 at 20 °C m) Relative density insoluble Water solubility Partition coefficient: nno data available octanol/water no data available Autoignition temperature Decomposition no data available temperature Viscosity no data available r) no data available Explosive properties 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 no data available 10.5 **Incompatible materials** Strong oxidizing agents Hazardous decomposition products 10.6 Other decomposition products - no data available TOXICOLOGICAL INFORMATION 11. 11.1 **Information on toxicological effects Acute toxicity** LD50 Oral - rat - 100 mg/kg LC50 Inhalation - rat - 4 h - 650 mg/m³ LD50 Dermal - rat - 615 mg/kg Skin corrosion/irritation no data available Serious eye damage/eye irritation no data available Respiratory or skin sensitization May cause allergic skin reaction. Germ cell mutagenicity Genotoxicity in vivo - rat - Intraperitoneal Cytogenetic analysis Genotoxicity in vivo - mouse - Oral Cytogenetic analysis Genotoxicity in vivo - mouse - Oral Micronucleus test Genotoxicity in vivo - mouse - Oral sperm Genotoxicity in vivo - mouse - Intraperitoneal Cytogenetic analysis 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 Inhalation May be fatal if inhaled. May cause respiratory tract irritation. Toxic if swallowed. Ingestion Skin Toxic if absorbed through skin. May cause skin irritation. 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: TE3850000 **12. ECOLOGICAL INFORMATION** 12.1 **Toxicity** Toxicity to fish LC50 - Cyprinus carpio (Carp) - 1,2 - 2,9 mg/l - 48,0 h EC50 - Daphnia pulex (Water flea) - 0,06 mg/l - 6 h Toxicity to daphnia and other aquatic invertebrates. 12.2 Persistence and degradability no data available 12.3 **Bioaccumulative potential** no data available Mobility in soil 12.4 no data available 12.5 Results of PBT and vPvB assessment no data available 12.6 Other adverse effects Very toxic to aquatic life. **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: 2810 IMDG: 2810 IATA: 2810 14.2 **UN proper shipping name** ADR/RID: TOXIC LIQUID, ORGANIC, N.O.S. (Edifenphos) IMDG: TOXIC LIQUID, ORGANIC, N.O.S. (Edifenphos) IATA: Toxic liquid, organic n.o.s. (Edifenphos) 14.3 Transport hazard class(es) ADR/RID: 6.1 IMDG: 6.1 IATA: 6.1 14.4 Packaging group ADR/RID: III IMDG: III IATA: III 14.5 **Environmental hazards** 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 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.