1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING 1.1 **Product identifiers** Product name Indole CAS-No. 120-72-9 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] Acute toxicity, Dermal (Category 3) Acute toxicity, Oral (Category 4) Skin irritation (Category 2) Serious eye damage (Category 1) Specific target organ toxicity - single exposure (Category 3) Acute aquatic toxicity (Category 1) Classification according to EU Directives 67/548/EEC or 1999/45/EC Harmful in contact with skin and if swallowed. Irritating to respiratory system and skin. Risk of serious damage to eyes. 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) Harmful if swallowed. H302 H311 Toxic in contact with skin. H315 Causes skin irritation. Causes serious eye damage. H318 H335 May cause respiratory irritation. H400 Very toxic to aquatic life. Precautionary statement(s) Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. P261 Avoid release to the environment. P273 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. P312 Call a POISON CENTER or doctor/ physician if you feel unwell. 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. R21/22Irritating to respiratory system and skin. R37/38 Risk of serious damage to eyes. R41 R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. S-phrase(s) S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves and eye/face protection. S36/37/39 This material and its container must be disposed of as hazardous waste. S60 S61 Avoid release to the environment. Refer to special instructions/ Safety data sheets. 2.3 Other hazards Stench. 3. **COMPOSITION/INFORMATION ON INGREDIENTS** 3.1 **Substances** Synonyms 1H-Benzo[b]pyrrole C8H7N Formula Molecular Weight 117,15 g/mol Component Concentration Indole CAS-No. 120-72-9 EC-No. 204-420-7 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 Nausea, Headache, Vomiting, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. 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** no data available **6.** ACCIDENTAL RELEASE MEASURES 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. Methods and materials for containment and cleaning up 6.3 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. Air and light sensitive. 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 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 Form: flakes Appearance a) Colour: light brown Odour b) no data available Odour Threshold no data available d) рН no data available Melting point/freezing Melting point/range: 51 - 54 °C - lit. point Initial boiling point and 253 - 254 °C - lit. boiling range Flash point 121 °C - closed cup g) no data available Evaporation rate h) i) Flammability (solid, gas) no data available Upper/lower <u>j</u>) no data available flammability or explosive limits Vapour pressure no data available k) 1) Vapour density no data available m) Relative density no data available no data available Water solubility 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) no data available Oxidizing properties 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 Possibility of hazardous reactions 10.3 no data available 10.4 Conditions to avoid Air Light. **Incompatible materials** 10.5 Strong oxidizing agents, Iron and iron salts. Hazardous decomposition products 10.6 Other decomposition products - no data available **TOXICOLOGICAL INFORMATION** 11.1 **Information on toxicological effects Acute toxicity** LD50 Oral - rat - 1.000 mg/kg LD50 Dermal - rabbit - 790 mg/kg Skin corrosion/irritation Serious eye damage/eye irritation Eyes - rabbit - Severe eye irritation - 24 h Respiratory or skin sensitization no data available Germ cell mutagenicity no data available Carcinogenicity Carcinogenicity - mouse - Subcutaneous Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Lungs, Thorax, or Respiration: Tumors. Leukaemia Carcinogenicity - mouse - Subcutaneous Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Tumorigenic: Tumor types after systemic administration not seen spontaneously. 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 Inhalation - May cause respiratory irritation. Specific target organ toxicity - repeated exposure no data available Aspiration hazard no data available Potential health effects Inhalation May be harmful if inhaled. Causes respiratory tract irritation. Ingestion Harmful if swallowed. Skin Toxic if absorbed through skin. Causes skin irritation. Causes eye burns. Eyes Signs and Symptoms of Exposure Nausea, Headache, Vomiting, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. **Additional Information** RTECS: NL2450000 **12. ECOLOGICAL INFORMATION** 12.1 **Toxicity** Toxicity to daphnia and LC50 - Daphnia magna (Water flea) - 1 mg/l - 48 h other aquatic invertebrates. Toxicity to algae Growth inhibition EC100 - Scenedesmus acuminatus - > 10 mg/l - 96 h 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 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. 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: 2811 IMDG: 2811 IATA: 2811 14.2 **UN proper shipping name** ADR/RID: TOXIC SOLID, ORGANIC, N.O.S. (Indole) IMDG: TOXIC SOLID, ORGANIC, N.O.S. (Indole) Toxic solid, organic, n.o.s. (Indole) IATA: 14.3 Transport hazard class(es) ADR/RID: 6.1 IMDG: 6.1 IATA: 6.1 14.4 Packaging group ADR/RID: III IATA: III IMDG: III 14.5 **Environmental hazards** IATA: no ADR/RID: no IMDG Marine pollutant: no 14.6 Special precautions for user no data available **REGULATORY INFORMATION 15.** 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.