1.1 **Product identifiers** 3-Hydroxy-1,2,3-benzotriazin-4(3H)-one solution Product name 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] Flammable liquids (Category 3) Acute toxicity, Inhalation (Category 4) Acute toxicity, Dermal (Category 4) Skin irritation (Category 2) Eye irritation (Category 2) Reproductive toxicity (Category 1B) Specific target organ toxicity - single exposure (Category 3) Classification according to EU Directives 67/548/EEC or 1999/45/EC May cause harm to the unborn child. Explosive when dry. Harmful by inhalation and in contact with skin. Irritating to eyes, respiratory system and skin. 2.2 Label elements Labelling according Regulation (EC) No 1272/2008 [CLP] Pictogram Signal word Danger Hazard statement(s) H226 Flammable liquid and vapour. H312 Harmful in contact with skin. H315 Causes skin irritation. H319 Causes serious eye irritation. H332 Harmful if inhaled. H335 May cause respiratory irritation. H360D May damage the unborn child. Precautionary statement(s) P201 Obtain special instructions before use. P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. Wear protective gloves/ protective clothing. P280 IF IN EYES: Rinse cautiously with water for several minutes. Remove P305 + P351 + P338contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Get medical advice/ attention. P308 + P313Supplemental Hazard none Statements Restricted to professional users. According to European Directive 67/548/EEC as amended. Hazard symbol(s) R-phrase(s) R61 May cause harm to the unborn child. Explosive when dry. R1 Harmful by inhalation and in contact with skin. R20/21Irritating to eyes, respiratory system and skin. R36/37/38 May cause harm to the unborn child. R61 Also harmful by inhalation and in contact with skin. R20/21R36/37/38 Irritating to eyes, respiratory system and skin. S-phrase(s) S53 Avoid exposure - obtain special instructions before use. S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. This material and its container must be disposed of in a safe way. S35 S36/37 Wear suitable protective clothing and gloves. Avoid exposure - obtain special instructions before use. S53 In case of contact with eyes, rinse immediately with plenty of water and S26 seek medical advice. 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). Restricted to professional users. 2.3 Other hazards - none **3**. **COMPOSITION/INFORMATION ON INGREDIENTS** 3.2 **Mixtures Synonyms DHBT** 3,4-Dihydro-3-hydroxy-4-oxo-1,2,3-benzotriazine Formula C7H5N3O2 Classification Concentration Component N,N-Dimethylformamide CAS-No. 68-12-2 Flam. Liq. 3; Repr. 1B; Acute 75 % Tox. 4; Eye Irrit. 2; H226, EC-No. 200-679-5 H319, H312, H332, H360D Registration number 01-2119475605-32-XXXX T, Repr.Cat.2, R61 - R20/21 -R36 3-Hydroxy-1,2,3-benzotriazin-4(3H)-one CAS-No. 28230-32-2 Skin Irrit. 2; Eye Irrit. 2; STOT 25 % EC-No. 248-916-1 SE 3; H315, H319, H335 E, Xi, R 2 - R36/37/38 For the full text of the H-Statements and R-Phrases mentioned in this Section, see Section 16 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 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 Warning: intolerance for alcohol can occur up to 4 days after dimethylformamide exposure. N,Ndimethylformamide is considered to be a potent liver toxin., Vomiting, Diarrhoea, Abdominal pain, 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 FIRE-FIGHTING MEASURES **5.** 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. 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. 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). **6.4** Reference to other sections For disposal see section 13. 7. HANDLING AND STORAGE 7.1 **Precautions for safe handling** Avoid exposure - obtain special instructions before use. 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. Conditions for safe storage, including any incompatibilities 7.2 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 Store under inert gas. Moisture sensitive. Dry residue is explosive. 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, Flame retardant antistatic protective clothing, 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) no data available Odour b) Odour Threshold no data available c) pН no data available d) Melting point/freezing no data available e) point Initial boiling point and no data available boiling range Flash point 58 °C - closed cup Evaporation rate no data available h) i) Flammability (solid, gas) no data available Upper/lower j) no data available flammability or explosive limits no data available Vapour pressure k) 1) Vapour density no data available m) Relative density 1,041 g/cm3 at 20 °C Water solubility no data available Partition coefficient: nno data available octanol/water Autoignition no data available p) 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 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 Heat, flames and sparks. 10.5 **Incompatible materials** Strong oxidizing agents 10.6 Hazardous decomposition products Other decomposition products - no data available 11. TOXICOLOGICAL INFORMATION 11.1 **Information on toxicological effects Acute toxicity** Skin corrosion/irritation no data available Serious eye damage/eye irritation no data available Respiratory or skin sensitization no data available Germ cell mutagenicity no data available Carcinogenicity IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (N,N-Dimethylformamide) 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. May be harmful if swallowed. Ingestion Skin Harmful if absorbed through skin. Causes skin irritation. Causes serious eye irritation. Eyes Signs and Symptoms of Exposure Warning: intolerance for alcohol can occur up to 4 days after dimethylformamide exposure. N,Ndimethylformamide is considered to be a potent liver toxin., Vomiting, Diarrhoea, Abdominal pain, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. **Additional Information** RTECS: Not available **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** Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. 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: 3379** IMDG: 3379 IATA: 3379 14.2 **UN proper shipping name** ADR/RID: DESENSITIZED EXPLOSIVE, LIQUID, N.O.S. IMDG: DESENSITIZED EXPLOSIVE, LIQUID, N.O.S. IATA: Desensitized explosive, liquid, n.o.s. Passenger Aircraft: Not permitted for transport Cargo Aircraft: Not permitted for transport 14.3 **Transport hazard class(es)** ADR/RID: 3 IATA: 3 IMDG: 3 Packaging group 14.4 ADR/RID: I IMDG: I IATA: -14.5 **Environmental hazards** ADR/RID: no IATA: no IMDG Marine pollutant: 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. 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 Text of H-code(s) and R-phrase(s) mentioned in Section 3 Acute Tox. Acute toxicity Eye Irrit. Eye irritation Flammable liquids Flam. Liq. H226 Flammable liquid and vapour. Harmful in contact with skin. H312 H315 Causes skin irritation. H319 Causes serious eye irritation. H332 Harmful if inhaled. May cause respiratory irritation. H335 H360D May damage the unborn child. Reproductive toxicity Repr. Skin Irrit. Skin irritation STOT SE Specific target organ toxicity - single exposure E Risk of explosion by shock, friction, fire or other sources of ignition. R2 R20/21Harmful by inhalation and in contact with skin. R36 Irritating to eyes. R36/37/38 Irritating to eyes, respiratory system and skin. May cause harm to the unborn child. R61 Toxic to Reproduction Category 2 Repr.Cat.2 T Toxic Xi **Irritant 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. 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