1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING 1.1 **Product identifiers** *N,N* -Dimethylacetamide dimethyl acetal Product name CAS-No. 18871-66-4 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 2) Acute toxicity, Oral (Category 4) Acute toxicity, Inhalation (Category 3) Acute toxicity, Dermal (Category 3) Skin irritation (Category 2) Eye irritation (Category 2) Specific target organ toxicity - single exposure (Category 2) Specific target organ toxicity - single exposure (Category 3) Classification according to EU Directives 67/548/EEC or 1999/45/EC Highly flammable. Harmful by inhalation, in contact with skin and if swallowed. Harmful: possible risk of irreversible effects through inhalation, in contact with skin and if swallowed. 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) H225 Highly flammable liquid and vapour. H302 Harmful if swallowed. H311 Toxic in contact with skin. H315 Causes skin irritation. H319 Causes serious eye irritation. H331 Toxic if inhaled. H335 May cause respiratory irritation. H371 May cause damage to organs. Precautionary statement(s) P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking. P260 Do not breathe 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. 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) Highly flammable. R11 R20/21/22 Harmful by inhalation, in contact with skin and if swallowed. R36/37/38 Irritating to eyes, respiratory system and skin. Harmful: possible risk of irreversible effects through inhalation, in contact R68/20/21/22 with skin and if swallowed. S-phrase(s) S16 Keep away from sources of ignition - No smoking. In case of contact with eyes, rinse immediately with plenty of water and S26 seek medical advice. Wear suitable protective clothing and gloves. S36/37 2.3 Other hazards - none 3. **COMPOSITION/INFORMATION ON INGREDIENTS** 3.1 Substances Formula CH3C(OCH3)2N(CH3)2 Concentration Component 1,1-Dimethoxyethyl(dimethyl)amine CAS-No. 18871-66-4 EC-No. 242-641-0 Methanol < 10 % CAS-No. 67-56-1 EC-No. 200-659-6 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: contains methanol. May be fatal or cause blindness if swallowed. Cannot be made nonpoisonous. 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. **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 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. 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 Form: clear, liquid Appearance a) Colour: yellow Odour no data available b) Odour Threshold no data available рН d) no data available Melting/freezing point no data available Initial boiling point and 118 °C at 1.013 hPa boiling range 8 °C - closed cup Flash point g) no data available h) Evaporation rate Flammability (solid, gas) no data available i) Upper/lower no data available flammability or explosive limits Vapour pressure no data available k) Vapour density no data available 1) 0,911 g/mL at 25 °C m) Relative density Water solubility no data available Partition coefficient: nlog Pow: 0,922 0) 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 **10.** STABILITY AND REACTIVITY 10.1 Reactivity no data available Chemical stability 10.2 no data available Possibility of hazardous reactions 10.3 no data available 10.4 Conditions to avoid Heat, flames and sparks. Extremes of temperature and direct sunlight. Incompatible materials 10.5 Strong oxidizing agents, Acids Hazardous decomposition products 10.6 Other decomposition products - no data available TOXICOLOGICAL INFORMATION 11.1 **Information on toxicological effects Acute toxicity** no data available Inhalation: Irritating to respiratory system. Inhalation: Irritating to respiratory system. 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: 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 Toxic if inhaled. Causes respiratory tract irritation. Toxic if swallowed. Ingestion Skin Toxic if absorbed through skin. Causes skin irritation. Eyes Causes serious eye irritation. Signs and Symptoms of Exposure Warning: contains methanol. May be fatal or cause blindness if swallowed. Cannot be made nonpoisonous. **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. 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: 1993 IMDG: 1993 IATA: 1993 14.2 **UN proper shipping name** ADR/RID: FLAMMABLE LIQUID, N.O.S. (1,1-Dimethoxyethyl(dimethyl)amine) IMDG: FLAMMABLE LIQUID, N.O.S. (1,1-Dimethoxyethyl(dimethyl)amine) IATA: Flammable liquid, n.o.s. (1,1-Dimethoxyethyl(dimethyl)amine) 14.3 Transport hazard class(es) ADR/RID: 3 IMDG: 3 IATA: 3 14.4 Packaging group ADR/RID: II IMDG: II IATA: II 14.5 **Environmental hazards** ADR/RID: no IATA: no IMDG Marine pollutant: 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. 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 **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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