Safety data sheet

| CHEMICALS, INC. | Safety data sheet according to 1907/2006/EC, Article 31 | Page 1/8 |
|-----------------|--|----------------------|
| H | Printing date 17.07.2021 | Revision: 17.07.2021 |
| | SECTION 1: Identification of the substance/mixture and of the company/ | undertaking |
| | · 1.1 Product identifier | |
| | · Trade name: Copper (II) neodecanoate, superconductor grade, approx. 60% in toluene (| 6-12% Cu) |
| | • Item number: 29-7000 • 1.2 Relevant identified uses of the substance or mixture and uses advised against No further relevant information available. | |
| | 1.3 Details of the supplier of the safety data sheet Manufacturer/Supplier: Strem Chemicals, Inc. 7 Mulliken Way NEWBURYPORT, MA 01950 USA info@strem.com | |
| | Further information obtainable from: Technical Department 1.4 Emergency telephone number: EMERGENCY: CHEMTREC: + 1 (800) 424-9300 During normal opening times: +1 (978) 499-1600 | |
| | SECTION 2: Hazards identification | |
| | • 2.1 Classification of the substance or mixture • Classification according to Regulation (EC) No 1272/2008 GHS02 flame | |
| | Flam. Liq. 2 H225 Highly flammable liquid and vapour. | |
| | GHS08 health hazard | |
| | Repr. 2 H361d Suspected of damaging the unborn child. | |
| | STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposur Asp. Tox. 1 H304 May be fatal if swallowed and enters airways. | 'е. |
| | GHS07 | |
| | Skin Irrit. 2 H315 Causes skin irritation. | |
| - | STOT SE 3 H336 May cause drowsiness or dizziness. | |
| | 2.2 Label elements Labelling according to Regulation (EC) No 1272/2008 The product is classified and labelled according to the CLP regulation. Hazard pictograms | |
| | | |
| | GHS02 GHS07 GHS08 | |

· Signal word Danger

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Trade name: Copper (II) neodecanoate, superconductor grade, approx. 60% in toluene (6-12% Cu)

| | (Contd. of page 1) |
|-----------------|--|
| Hazard-determi | ning components of labelling: |
| toluene | |
| Hazard stateme | nts |
| - | ammable liquid and vapour. |
| H315 Causes s | |
| | d of damaging the unborn child. |
| | se drowsiness or dizziness. |
| | se damage to organs through prolonged or repeated exposure. |
| | <i>Catal if swallowed and enters airways.</i> |
| Precautionary s | |
| P101 | If medical advice is needed, have product container or label at hand. |
| P102 | Keep out of reach of children. |
| P103 | Read label before use. |
| P210 | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No |
| | smoking. |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| P301+P310 | IF SWALLOWED: Immediately call a POISON CENTER/ doctor. |
| | 338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if |
| 1000 11001 110 | present and easy to do. Continue rinsing. |
| P403+P233 | Store in a well-ventilated place. Keep container tightly closed. |
| P501 | Dispose of contents/container in accordance with local/regional/national/international |
| 1.501 | regulations. |
| 2.3 Other hazar | • |
| | and vPvB assessment |

· **PBT:** Not applicable.

· vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

· 3.2 Chemical characterisation: Mixtures

• Description: Mixture of substances listed below with nonhazardous additions.

· Dangerous components:

| CAS: 108-88-3 toli | luene | 40.0% |
|---------------------------|---|-------|
| EINECS: 203-625-9 | > Flam. Liq. 2, H225; 🚸 Repr. 2, H361d; STOT RE 2, H373; Asp. Tox. 1, H304; > Skin Irrit. 2, H315; STOT SE 3, H336 | |
| • Additional information: | : For the wording of the listed hazard phrases refer to section 16. | |

SECTION 4: First aid measures

· 4.1 Description of first aid measures

· General information:

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

• After inhalation: In case of unconsciousness place patient stably in side position for transportation.

• After skin contact: Immediately wash with water and soap and rinse thoroughly.

• After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.

• After swallowing: If symptoms persist consult doctor.

• 4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.

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· 4.3 Indication of any immediate medical attention and special treatment needed No further relevant information available.

SECTION 5: Firefighting measures

· 5.1 Extinguishing media

· Suitable extinguishing agents:

- CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- · For safety reasons unsuitable extinguishing agents: Water with full jet
- 5.2 Special hazards arising from the substance or mixture No further relevant information available.
- · 5.3 Advice for firefighters
- · Protective equipment: No special measures required.

SECTION 6: Accidental release measures

- · 6.1 Personal precautions, protective equipment and emergency procedures Wear protective equipment. Keep unprotected persons away.
- · 6.2 Environmental precautions:

Do not allow product to reach sewage system or any water course.

Prevent seepage into sewage system, workpits and cellars.

Inform respective authorities in case of seepage into water course or sewage system.

- · 6.3 Methods and material for containment and cleaning up: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose contaminated material as waste according to item 13. Ensure adequate ventilation.
- 6.4 Reference to other sections See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information.

SECTION 7: Handling and storage

· 7.1 Precautions for safe handling *Ensure good ventilation/exhaustion at the workplace.* Open and handle receptacle with care. Prevent formation of aerosols.

- · Information about fire and explosion protection: Keep ignition sources away - Do not smoke. Protect against electrostatic charges. Keep respiratory protective device available.
- · 7.2 Conditions for safe storage, including any incompatibilities
- · Storage:
- Requirements to be met by storerooms and receptacles: Store in a cool location.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: Keep container tightly sealed. Store in cool, dry conditions in well sealed receptacles.
- · 7.3 Specific end use(s) No further relevant information available.

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SECTION 8: Exposure controls/personal protection · Additional information about design of technical facilities: No further data; see item 7. · 8.1 Control parameters • Ingredients with limit values that require monitoring at the workplace: 108-88-3 toluene WEL Short-term value: 384 mg/m³, 100 ppm Long-term value: 191 mg/m³, 50 ppm Sk • Additional information: The lists valid during the making were used as basis. · 8.2 Exposure controls · Personal protective equipment: · General protective and hygienic measures: Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing Wash hands before breaks and at the end of work. Store protective clothing separately. Avoid contact with the skin. Avoid contact with the eyes and skin. · Respiratory protection: In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device. · Protection of hands: Protective gloves The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation · Material of gloves The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. · Penetration time of glove material The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed. • Eye protection: Tightly sealed goggles · 9.1 Information on basic physical and chemical properties · General Information · Appearance: Form: Liquid Colour: Dark green · Odour: Unpleasant · Odour threshold: Not determined. (Contd. on page 5) GB

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|---------------------------------------|------------------------------|-----------------------------|
| Trade hame. Copper (II) heodecanouic, | superconductor State, approx | |

| | (Contd. of page 4 |
|---|---|
| pH-value: | Not determined. |
| Change in condition | |
| Melting point/freezing point: | Undetermined. |
| Initial boiling point and boiling range | 2: 110 °C |
| Flash point: | $4 \ ^{\circ}C$ (solvent) |
| Flammability (solid, gas): | Not determined. |
| Ignition temperature: | 535 °C |
| Decomposition temperature: | Not determined. |
| Auto-ignition temperature: | Product is not selfigniting. |
| Explosive properties: | Product is not explosive. However, formation of explosive air/vapou |
| | mixtures are possible. |
| Explosion limits: | |
| Lower: | 1.2 Vol % |
| Upper: | 7.0 Vol % |
| Vapour pressure at 20 •C: | 29 hPa |
| Density: | Not determined. |
| Relative density | Not determined. |
| Vapour density | Not determined. |
| Evaporation rate | Not determined. |
| Solubility in / Miscibility with | |
| water: | Not miscible or difficult to mix. |
| Partition coefficient: n-octanol/water: | Not determined. |
| Viscosity: | |
| Dynamic: | Not determined. |
| Kinematic: | Not determined. |
| Solvent content: | |
| Organic solvents: | 40.0 % |
| VOC (EC) | 40.00 % |
| 9.2 Other information | No further relevant information available. |

SECTION 10: Stability and reactivity

· 10.1 Reactivity No further relevant information available.

· 10.2 Chemical stability

- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- 10.3 Possibility of hazardous reactions No dangerous reactions known.
- 10.4 Conditions to avoid No further relevant information available.
- 10.5 Incompatible materials: No further relevant information available.

· 10.6 Hazardous decomposition products: No dangerous decomposition products known.

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| 108-88-3 | ruines reie | evant for classification: | |
|--|---|---|--|
| | | | |
| Oral | LD50 | 5000 mg/kg (rat) | |
| Dermal | LD50 | 12124 mg/kg (rabbit) | |
| Inhalative | LC50/4 h | 5320 mg/l (mouse) | |
| • | rritant effe | | |
| | osion/irrita | | |
| | in irritation | | |
| | | <i>firritation</i> Based on available data, the classification criteria are not met. Sensitisation Based on available data, the classification criteria are not met. | |
| | | ogenity, mutagenicity and toxicity for reproduction) | |
| | | Sity Based on available data, the classification criteria are not met. | |
| | | ed on available data, the classification criteria are not met. | |
| | tive toxicity | | |
| | | ng the unborn child. | |
| | gle exposu | | |
| | | ss or dizziness. | |
| | eated expo | | |
| • Aspiration | | o organs through prolonged or repeated exposure. | |
| | | owed and enters airways. | |
| | | | |
| ODO | | 7 • 7 • <i>6</i> | |
| SECHC | N 12: EC | cological information | |
| 12.1 Toxi | citv | | |
| | | further relevant information available. | |
| | | degradability No further relevant information available. | |
| 12.2 rersi | ccumulativ | e potential No further relevant information available. | |
| 12.3 Bioa | | | |
| 12.3 Bioa 12.4 Mobi | | No further relevant information available. | |
| 12.3 Bioa 12.4 Mobi Additiona | l ecologica | No further relevant information available. I information: | |
| 12.3 Bioa 12.4 Mob Additiona General n | l ecologica otes: Not k | No further relevant information available. I information: mown to be hazardous to water. | |
| 12.3 Bioa 12.4 Mobi Additiona General n 12.5 Resu | l ecologica otes: Not k lts of PBT | No further relevant information available. I information: mown to be hazardous to water. and vPvB assessment | |
| 12.3 Bioa 12.4 Mob Additiona General n 12.5 Resu PBT: Not | l ecologica otes: Not k lts of PBT applicable. | No further relevant information available. I information: cnown to be hazardous to water. and vPvB assessment | |
| 12.3 Bioa 12.4 Mobility Additiona General n 12.5 Resu PBT: Not vPvB: Not | l ecologica otes: Not k lts of PBT applicable t applicable | No further relevant information available. I information: cnown to be hazardous to water. and vPvB assessment e. | |
| 12.3 Bioa 12.4 Mob Additiona General n 12.5 Resu PBT: Not vPvB: No | l ecologica otes: Not k lts of PBT applicable t applicable | No further relevant information available. I information: cnown to be hazardous to water. and vPvB assessment | |
| 12.3 Bioa 12.4 Mob Additiona General n 12.5 Resu PBT: Not vPvB: No 12.6 Othe | l ecologica otes: Not k lts of PBT applicable t applicable r adverse e | No further relevant information available. It information: nown to be hazardous to water. and vPvB assessment e. ffects No further relevant information available. | |
| 12.3 Bioa 12.4 Mob Additiona General n 12.5 Resu PBT: Not vPvB: No 12.6 Othe | l ecologica otes: Not k lts of PBT applicable t applicable r adverse e | No further relevant information available. I information: cnown to be hazardous to water. and vPvB assessment e. | |

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· Uncleaned packaging:

• *Recommendation: Disposal must be made according to official regulations.*

| SECTION 14: Transport information | |
|--|--|
| 14.1 UN-Number ADR, IMDG, IATA | UN1993 |
| 14.2 UN proper shipping name ADR IMDG, IATA | 1993 FLAMMABLE LIQUID, N.O.S. FLAMMABLE LIQUID, N.O.S. |
| 14.3 Transport hazard class(es) | |
| ADR | |
| | |
| Class | 3 Flammable liquids. |
| IMDG, IATA | |
| Class Label | 3 Flammable liquids. 3 |
| 14.4 Packing group ADR, IMDG, IATA | III |
| 14.5 Environmental hazards: Marine pollutant: | No |
| 14.6 Special precautions for user EMS Number: Stowage Category | Warning: Flammable liquids. F-E, <u>S-E</u> A |
| 14.7 Transport in bulk according to Ann Marpol and the IBC Code | ex II of Not applicable. |
| Transport/Additional information: | |
| ADR Limited quantities (LQ) Excepted quantities (EQ) | 5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml |
| IMDG Limited quantities (LQ) Excepted quantities (EQ) | 5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml |

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· UN ''Model Regulation'':

UN 1993 FLAMMABLE LIQUID, N.O.S., 3, III

SECTION 15: Regulatory information

· 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

- · Directive 2012/18/EU
- · Named dangerous substances ANNEX I None of the ingredients is listed.
- Seveso category P5c FLAMMABLE LIQUIDS
- Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t
- \cdot Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 t
- REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3, 48
- 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Relevant phrases

H225 Highly flammable liquid and vapour.

- H304 May be fatal if swallowed and enters airways.
- H315 Causes skin irritation.
- H336 May cause drowsiness or dizziness.
- H361d Suspected of damaging the unborn child.

H373 May cause damage to organs through prolonged or repeated exposure.

- · Department issuing SDS: Technical Department.
- · Contact: Technical Director

· Abbreviations and acronyms: ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods IATA: International Air Transport Association GHS: Globally Harmonised System of Classification and Labelling of Chemicals EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) VOC: Volatile Organic Compounds (USA, EU) LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative Flam. Liq. 2: Flammable liquids - Category 2 Skin Irrit. 2: Skin corrosion/irritation – Category 2 Repr. 2: Reproductive toxicity - Category 2 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3 STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2 Asp. Tox. 1: Aspiration hazard - Category 1