Printing date 07/19/2021

CHEMICALS, INC

Reviewed on 07/14/2021

1 Identification

- · Product name
- · Trade name: Bismuth (III) neodecanoate, superconductor grade, ~60% in neodecanoic acid (15-20% Bi)
- Item number: 83-7000
- · Details of the supplier of the safety data sheet
- Manufacturer/Supplier: Strem Chemicals, Inc.
 7 Mulliken Way NEWBURYPORT, MA 01950 USA info@strem.com
- Information department: Technical Department • Emergency telephone number: EMERGENCY: CHEMTREC: + 1 (800) 424-9300
- During normal opening times: +1 (978) 499-1600

2 Hazard(s) identification

· Classification of the substance or mixture

GHS07

Skin Irrit. 2 H315 Causes skin irritation.

- Eye Irrit. 2A H319 Causes serious eye irritation.
- · Label elements
- *GHS label elements* The product is classified and labeled according to the Globally Harmonized System (GHS). *Hazard pictograms*



| · Signal word W | arning |
|--------------------|--|
| · Hazard statem | |
| H315 Causes s | kin irritation. |
| H319 Causes s | erious eye irritation. |
| · Precautionary | statements |
| P262 | Do not get in eyes, on skin, or on clothing. |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| P305+P351+P | 2338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P304+P340 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. |
| P403+P233 | Store in a well-ventilated place. Keep container tightly closed. |
| P501 | Dispose of contents/container in accordance with local/regional/national/international regulations. |
| · Classification s | system: |
| · NFPA ratings | (scale 0 - 4) |
| | Health = 1 |



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40.0%

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· HMIS-ratings (scale 0 - 4)



· Other hazards

· Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- · vPvB: Not applicable.

3 Composition/information on ingredients

· Chemical characterization: Mixtures

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

· Dangerous components:

26896-20-8 neo-Decanoic acid, prime grade

4 First-aid measures

- · Description of first aid measures
- · 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. If symptoms persist, consult a doctor.
- After swallowing: If symptoms persist consult doctor.
- · Information for doctor:
- Most important symptoms and effects, both acute and delayed No further relevant information available.
- *Indication of any immediate medical attention and special treatment needed No further relevant information available.*

5 Fire-fighting measures

- · Extinguishing media
- Suitable extinguishing agents: Use fire fighting measures that suit the environment.
- Special hazards arising from the substance or mixture No further relevant information available.
- · Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- · Environmental precautions: No special measures required.
- *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.

· 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.

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| · Protective Action Criteria for Chemicals | (Contd. of page 2) |
|--|--------------------|
| · PAC-1: | |
| 26896-20-8 neo-Decanoic acid, prime grade | 6 mg/m3 |
| · PAC-2: | |
| 26896-20-8 neo-Decanoic acid, prime grade | 66 mg/m3 |
| · PAC-3: | |
| 26896-20-8 neo-Decanoic acid, prime grade | 400 mg/m3 |
| | |

7 Handling and storage

· Handling:

- *Precautions for safe handling* No special precautions are necessary if used correctly.
- Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- · Storage:
- Requirements to be met by storerooms and receptacles: No special requirements.
- Information about storage in one common storage facility: Not required.
- Further information about storage conditions: Keep receptacle tightly sealed.
- · Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- · Additional information about design of technical systems: No further data; see item 7.
- · Control parameters
- Components with limit values that require monitoring at the workplace: The product does not contain any relevant quantities of materials with critical values that have to be monitored at
- *the workplace.* • *Additional information:* The lists that were valid during the creation were used as basis.
- · 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. Avoid contact with the eyes and skin.
- · Breathing equipment: Not required.
- · 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.

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\cdot 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.

 \cdot Eye protection:



Tightly sealed goggles

| Information on basic physical and | chemical properties | |
|---|---|--|
| General Information | | |
| Appearance: | ¥ 7: | |
| Form: | Viscous | |
| Color: | Light yellow | |
| Odor: Odor threshold: | Acetone-like Not determined. | |
| pH-value: | Not determined. | |
| • | | |
| Change in condition Melting point/Melting range: | Undetermined. | |
| Boiling point/Boiling range: | Undetermined. | |
| Flash point: | Not applicable. | |
| Flammability (solid, gaseous): | Not determined. | |
| Ignition temperature: | | |
| Decomposition temperature: | Not determined. | |
| Auto igniting: | Product is not selfigniting. | |
| Danger of explosion: | Product does not present an explosion hazard. | |
| Explosion limits: | | |
| Lower: | Not determined. | |
| Upper: | Not determined. | |
| Vapor pressure: | Not determined. | |
| Density: | Not determined. | |
| Relative density | Not determined. | |
| Vapor density | Not determined. | |
| Evaporation rate | Not determined. | |
| Solubility in / Miscibility with | | |
| Water: | Not miscible or difficult to mix. | |
| Partition coefficient (n-octanol/wat | er): Not determined. | |
| Viscosity: | | |
| Dynamic: | Not determined. | |
| Kinematic: | Not determined. | |
| Solvent content: | | |
| Organic solvents: | 0.0 % | |



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VOC content: • Other information 0.0 g/l / 0.00 lb/gl No further relevant information available.

10 Stability and reactivity

· Reactivity No further relevant information available.

- · Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- · Incompatible materials: No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

· Information on toxicological effects

- · Acute toxicity:
- Primary irritant effect:
- on the skin: Irritant to skin and mucous membranes.
- on the eye: Irritating effect.
- Sensitization: No sensitizing effects known.
- Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations: Irritant

· Carcinogenic categories

· IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

· NTP (National Toxicology Program)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

- · Toxicity
- Aquatic toxicity: No further relevant information available.
- Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- *Mobility in soil* No further relevant information available.
- · Additional ecological information:
- · General notes: Not known to be hazardous to water.
- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- **vPvB:** Not applicable.
- Other adverse effects No further relevant information available.

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13 Disposal considerations

· Waste treatment methods

· Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- · Uncleaned packagings:
- · Recommendation: Disposal must be made according to official regulations.

14 Transport information

| 14 ITunsport information | |
|--|-----------------|
| · UN-Number · DOT, ADN, IMDG, IATA | not regulated |
| · UN proper shipping name · DOT, ADN, IMDG, IATA | not regulated |
| · Transport hazard class(es) | |
| · DOT, ADN, IMDG, IATA · Class | not regulated |
| · Packing group · DOT, IMDG, IATA | not regulated |
| • Environmental hazards: • Marine pollutant: | No |
| · Special precautions for user | Not applicable. |
| • Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable. | |
| · UN "Model Regulation": | not regulated |

15 Regulatory information

 \cdot Safety, health and environmental regulations/legislation specific for the substance or mixture \cdot Sara

• Section 355 (extremely hazardous substances):

None of the ingredients is listed.

• Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

• TSCA (Toxic Substances Control Act):

All ingredients are listed.

· Proposition 65

· Chemicals known to cause cancer:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for females:

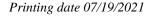
None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

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• Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

· Carcinogenic categories

· EPA (Environmental Protection Agency)

None of the ingredients is listed.

· TLV (Threshold Limit Value established by ACGIH)

None of the ingredients is listed.

· NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

• *GHS label elements* The product is classified and labeled according to the Globally Harmonized System (GHS). • *Hazard pictograms*



| Signal word Wa | arning |
|-----------------|--|
| Hazard stateme | ents |
| H315 Causes sh | kin irritation. |
| H319 Causes se | erious eye irritation. |
| Precautionary : | statements |
| P262 | Do not get in eyes, on skin, or on clothing. |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| P305+P351+P | 338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P304+P340 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. |
| P403+P233 | Store in a well-ventilated place. Keep container tightly closed. |
| P501 | Dispose of contents/container in accordance with local/regional/national/international regulations. |
| | |

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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.

- · Department issuing SDS: Technical Department.
- · Contact: Technical Director
- · Date of preparation / last revision 07/19/2021 / -
- · 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
- DOT: US Department of Transportation
- IATA: International Air Transport Association
- ACGIH: American Conference of Governmental Industrial Hygienists
- 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)
- NFPA: National Fire Protection Association (USA)
- HMIS: Hazardous Materials Identification System (USA) VOC: Volatile Organic Compounds (USA, EU)
- *PBT: Persistent, Bioaccumulative and Toxic*

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US

vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety OSHA: Occupational Safety & Health TLV: Threshold Limit Value PEL: Permissible Exposure Limit REL: Recommended Exposure Limit Skin Irrit. 2: Skin corrosion/irritation – Category 2 Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A