1 Identification

- Product identifier
  - Trade name: CHIR 99021
  - Article number: SM-0001-0010
  - CAS Number: 252917-06-9

- Details of the supplier of the safety data sheet
  - Manufacturer/Supplier: Biological Industries Israel Beit Haemek Ltd.
    BEIT HAEMEK 25115
    ISRAEL
    michalb@bioind.com
  - Information department: Product safety department.
  - Emergency telephone number: During normal opening times: +972/4/9962467

2 Hazard(s) identification

- Classification of the substance or mixture
  - GHS09 Environment
    Aquatic Acute 1 H400 Very toxic to aquatic life.
    Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.

- GHS07
  Acute Tox. 4 H302 Harmful if swallowed.

- Label elements
  - GHS label elements
    The substance is classified and labeled according to the Globally Harmonized System (GHS).

- Hazard pictograms

  - GHS07
  - GHS09

- Signal word Warning
- Hazard statements
  Harmful if swallowed.
  Very toxic to aquatic life.
  Very toxic to aquatic life with long lasting effects.

- Precautionary statements
  Wash thoroughly after handling.
  Do not eat, drink or smoke when using this product.
  Avoid release to the environment.
  If swallowed: Call a poison center/doctor if you feel unwell.
  Rinse mouth.
  Collect spillage.

(Contd. on page 2)
Dispose of contents/container in accordance with local/regional/national/international regulations.

· Classification system:
· NFPA ratings (scale 0 - 4)
  Health = 2
  Fire = 0
  Reactivity = 0

· HMIS-ratings (scale 0 - 4)
  HEALTH
  Health = 2
  FIRE
  Fire = 0
  REACTIVITY
  Reactivity = 0

· Other hazards
· Results of PBT and vPvB assessment
  · PBT: Not applicable.
  · vPvB: Not applicable.

3 Composition/information on ingredients

· Chemical characterization: Substances
· CAS No. Description
  252917-06-9 CHIR 99021

4 First-aid measures

· Description of first aid measures
· General information:
  Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
· After inhalation:
  Immediately relocate self or casualty to fresh air. If breathing is difficult, give cardiopulmonary resuscitation (CPR). Avoid mouth-to-mouth resuscitation.
· After skin contact:
  Rinse skin thoroughly with large amounts of water. Remove contaminated clothing and shoes and call a physician.
· After eye contact:
  Remove any contact lenses, locate eye-wash station, and flush eyes immediately with large amounts of water. Separate eyelids with fingers to ensure adequate flushing. Promptly call a physician.
· After swallowing:
  Wash out mouth with water; Do NOT induce vomiting; call a physician.
· Information for doctor:
  · Most important symptoms and effects, both acute and delayed
    The most important known symptoms and effects are described in the labelling (see section 2.2).
  · Indication of any immediate medical attention and special treatment needed
    Treat symptomatically

5 Fire-fighting measures

· Extinguishing media
· Suitable extinguishing agents: Use water spray, dry chemical, foam, and carbon dioxide fire extinguisher.
· Special hazards arising from the substance or mixture
  During combustion, may emit irritant fumes.
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6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
  Use full personal protective equipment. Avoid breathing vapors, mist, dust or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.
  Refer to protective measures listed in sections 8.
- **Environmental precautions:**
  Inform respective authorities in case of seepage into water course or sewage system.
  Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
  Dispose contaminated material as waste according to item 13.
  Absorb solutions with finely-powdered liquid-binding material (diatomite, universal binders); Decontaminate surfaces and equipment by scrubbing with alcohol;
- **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.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
  Avoid inhalation, contact with eyes and skin. Avoid dust and aerosol formation. Use only in areas with appropriate exhaust ventilation.
- **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:** (-20) °C
  - **Information about storage in one common storage facility:**
    Keep container tightly sealed in cool, well-ventilated area. Keep away from direct sunlight and sources of ignition.
- **Further information about storage conditions:**
  Shipping at room temperature if less than 2 weeks.
- **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:**
  No required.
- **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.
  Avoid contact with the eyes and skin.

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- **Breathing equipment:** Suitable respirator.
- **Protection of hands:**
  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.
- **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:** Safety goggles with side-shields.

### 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
  - **General Information**
    - **Appearance:**
      - **Form:** Powder
      - **Color:** Not determined.
      - **Odor:** Characteristic
      - **Odor threshold:** Not determined.
    - **pH-value:** Not applicable.
  - **Change in condition**
    - **Melting point/Melting range:** Undetermined.
    - **Boiling point/Boiling range:** Undetermined.
  - **Flash point:** Not applicable.
  - **Flammability (solid, gaseous):** Not applicable.
  - **Decomposition temperature:** Not determined.
  - **Auto igniting:** Not determined.
  - **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**
    - **Vapor density**
    - **Evaporation rate**
  - **Solubility in / Miscibility with Water:** Not determined.
  - **Partition coefficient (n-octanol/water):** Not determined.
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· Viscosity:
  · Dynamic: Not determined.
  · Kinematic: Not determined.
· Other information: 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: Strong acids/alkalis, strong oxidising/reducing agents.
· Hazardous decomposition products: Poisonous gases/vapors

11 Toxicological information

· Information on toxicological effects:
  · Acute toxicity:
  · Primary irritant effect:
    · on the skin: Classified based on available data. For more details, see section 2
    · on the eye: Classified based on available data. For more details, see section 2
  · Sensitization: Classified based on available data. For more details, see section 2
· Additional toxicological information:
  · Carcinogenic categories:
    · IARC (International Agency for Research on Cancer) Substance is not listed.
    · NTP (National Toxicology Program) Substance is not listed.
    · OSHA-Ca (Occupational Safety & Health Administration) Substance is not 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.
· Ecotoxicological effects:
  · Remark: Very toxic for fish
· Additional ecological information:
  · General notes:
    Water hazard class 3 (Self-assessment): extremely hazardous for water
    Do not allow product to reach ground water, water course or sewage system, even in small quantities.
    Danger to drinking water if even extremely small quantities leak into the ground.
    Also poisonous for fish and plankton in water bodies.
    Very toxic for aquatic organisms.
  · Results of PBT and vPvB assessment:
  · PBT: Not applicable.
13 Disposal considerations

- Waste treatment methods
- Recommendation: Dispose substance in accordance with prevailing country, federal, state and local regulations.

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

14 Transport information

- UN-Number
  - DOT, IMDG, IATA: not regulated

- UN proper shipping name
  - DOT, IMDG, IATA: not regulated

- Transport hazard class(es)
  - DOT, ADN, IMDG, IATA
    - Class: not regulated

- Packing group
  - DOT, IMDG, IATA: not regulated

- Environmental hazards:
  - Environmentally hazardous substance, liquid

- 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

- Safety, health and environmental regulations/legislation specific for the substance or mixture
  - Sara
  - Section 355 (extremely hazardous substances): Substance is not listed.
  - Section 313 (Specific toxic chemical listings): Substance is not listed.
  - TSCA (Toxic Substances Control Act): Substance is not listed.
  - Hazardous Air Pollutants: Substance is not listed.
  - Proposition 65
  - Chemicals known to cause cancer: Substance is not listed.
  - Chemicals known to cause reproductive toxicity for females: Substance is not listed.
  - Chemicals known to cause reproductive toxicity for males: Substance is not listed.
  - Chemicals known to cause developmental toxicity: Substance is not listed.

- Carcinogenic categories

- EPA (Environmental Protection Agency) Substance is not listed.

- TLV (Threshold Limit Value established by ACGIH) Substance is not listed.
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- NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.
- GHS label elements
  The substance is classified and labeled according to the Globally Harmonized System (GHS).
- Hazard pictograms
  GHS07  GHS09
- Signal word Warning
- Hazard statements
  Harmful if swallowed.
  Very toxic to aquatic life.
  Very toxic to aquatic life with long lasting effects.
- Precautionary statements
  Wash thoroughly after handling.
  Do not eat, drink or smoke when using this product.
  Avoid release to the environment.
  If swallowed: Call a poison center/doctor if you feel unwell.
  Rinse mouth.
  Collect spillage.
  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: Product safety department.
- Contact: Ms. BADICHI GITLIN
- Date of preparation / last revision 06/25/2019
- Abbreviations and acronyms:
  IMDG: International Maritime Code for Dangerous Goods
  DOT: US Department of Transportation
  IATA: International Air Transport Association
  ACGIH: American Conference of Governmental Industrial Hygienists
  CAS: Chemical Abstracts Service (division of the American Chemical Society)
  NFPA: National Fire Protection Association (USA)
  HMIS: Hazardous Materials Identification System (USA)
  PBT: Persistent, Bioaccumulative and Toxic
  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
  Acute Tox. 4: Acute toxicity – Category 4
  Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
  Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1