# Material Safety Data sheet

## Section 1: Product and Company Information

| | | | |
|---|---|---|---|
| **Product Name** | Listeria Selective Enrichment Supplement | | |
| **Catalogue Number** | iS47084 | Technical Phone | 0098 21 66787291<br>09391003565 |
| **E-mail** | ibresco@gmail.com | Fax No | 0098 2633523460 |
| **Company Address** | Zist Kavosh Iranian, No.432, East Kokab Av,45 Metri Golshahr, Karaj, Iran. | | |

## Section 2: Hazards Identification

**Classification of the substance or mixture**

**GHS Classification in accordance with Hazardous Products Regulations (HPR) (SOR/2015-17)**

Corrosive to Metals (Category 1), H290
Acute toxicity, Oral (Category 2), H300
Skin corrosion (Category 1B), H314
Serious eye damage (Category 1), H318
Germ cell mutagenicity (Category 2), H341
Carcinogenicity (Category 2), H351
Reproductive toxicity (Category 1B), H360
Short-term (acute) aquatic hazard (Category 2), H401
Long-term (chronic) aquatic hazard (Category 2), H411

**GHS Label elements, including precautionary statements**

Pictogram

Signal Word: Danger

**Hazard Statements**

H290 May be corrosive to metals.
H300 Fatal if swallowed.
H314 Causes severe skin burns and eye damage.
H341 Suspected of causing genetic defects.
H351 Suspected of causing cancer.
H360 May damage fertility or the unborn child.
H411 Toxic to aquatic life with long lasting effects.

**Precautionary Statements**

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P234 Keep only in original packaging.
P260 Do not breathe dust.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER/ doctor. Rinse mouth.
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P363 Wash contaminated clothing before reuse.
P390 Absorb spillage to prevent material damage.
P391 Collect spillage.
P405 Store locked up.
P501 Dispose of contents/ container to an approved waste disposal plant.

**Hazards not otherwise classified (HNOC) or not covered by GHS**
none

## Section 3: Composition / Information on Ingredients

**Mixture**

| **Component** | | **Classification** | **Concentration*** |
|---|---|---|---|
| **Cycloheximide** | | | |
| CAS-No.<br>EC-No.<br>Index-No. | 66-81-9<br>200-636-0<br>613-140-00-8 | Acute Tox. 2; Muta. 2; Repr. 1B; Aquatic Acute 2; Aquatic Chronic 2; H300, H341, H360, H401, H411 | >= 30 - < 60 % |
| **Sodium-1-ethyl-1,4-dihydro-7-methyl-4-oxo-1,8-naphthyridin-3-carboxylate** | | | |
| CAS-No. | 3374-05-8 | Acute Tox. 4; Carc. 2; H302, H351 | >= 30 - < 60 % |
| **Acriflavine hydrochloride** | | | |
| CAS-No. | 69235-50-3 | Acute Tox. 4; Eye Dam. 1; Aquatic Chronic 2; H302, H318, H411 | >= 5 - < 10 % |
| **Sodium hydroxide** | | | |
| CAS-No.<br>EC-No.<br>Index-No.<br>Registration number | 1310-73-2<br>215-185-5<br>011-002-00-6<br>01-2119457892-27-XXXX | Met. Corr. 1; Skin Corr. 1A; Eye Dam. 1; Aquatic Acute 3; H290, H314, H318, H402<br>Concentration limits: >= 0.4 %: Met. Corr. 1, H290; >= 5 %: Skin Corr. 1A, H314; 2 - < 5 %: Skin Corr. 1B, H314; 0.5 - < 2 %: Skin Irrit. 2, H315; 0.5 - < 2 %: Eye Irrit. 2, H319; | >= 2 - < 5 % |

* Weight %

## Section 4: First Aid Measures

**Description of first-aid measures**

| | |
|---|---|
| **General advice** | First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance. |
| **If inhaled** | After inhalation: fresh air. Call in physician. |
| **In case of skin contact** | In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately. |
| **In case of eye contact** | After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses. |
| **If swallowed** | If swallowed: give water to drink (two glasses at most). Seek medical advice immediately. |

In exceptional cases only, if medical care is not available within one hour, induce vomiting (only in persons who are wide awake and fully conscious), administer activated charcoal (20 - 40 g in a 10% slurry) and consult a doctor as quickly as possible. Do not attempt to neutralise.

**Most important symptoms and effects, both acute and delayed**
The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

**Indication of any immediate medical attention and special treatment needed**
No data available

## Section 5: Fire Fighting Measures

**Extinguishing media**

**Suitable extinguishing media**
Water Foam Carbon dioxide (CO2) Dry powder

**Unsuitable extinguishing media**
For this substance/mixture no limitations of extinguishing agents are given.

**Special hazards arising from the substance or mixture**
Carbon oxides
Nitrogen oxides (NOx)
Hydrogen chloride gas
Sodium oxides
Combustible.
Fire may cause evolution of:
nitrogen oxides, Hydrogen chloride gas
Development of hazardous combustion gases or vapours possible in the event of fire.

**Advice for firefighters**
Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

**Further information**
Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

## Section 6: Accidental Release Measures

**Personal precautions, protective equipment and emergency procedures**
Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.
For personal protection see section 8.

**Environmental precautions**
Do not let product enter drains.

**Methods and materials for containment and cleaning up**
Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully. Dispose of properly. Clean up affected area. Avoid generation of dusts.

**Reference to other sections**
For disposal see section 13.

## Section 7: Handling and Storage

**Advice on safe handling**
Work under hood. Do not inhale substance/mixture.

**Hygiene measures**
Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

For precautions see section 2.

**Conditions for safe storage, including any incompatibilities**

| | |
|---|---|
| **Storage conditions** | No metal containers.<br>Tightly closed. Dry. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons.<br>Recommended storage temperature see product label. |
| **Storage class** | Storage class (TRGS 510): 6.1A: Combustible, acute toxic Cat. 1 and 2 / very toxic hazardous materials |

## Section 8: Exposure Controls / Personal Protection

**Control parameters**
**Components with workplace control parameters**

| Components | CAS-No. | Value | Control parameters | Basis |
|---|---|---|---|---|
| sodium hydroxide | 1310-73-2 | C | 2 mg/m3 | Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants |
| | | (c) | 2 mg/m3 | Canada. Alberta, Occupational Health and Safety Code (table 2: OEL) |
| Remarks | Occupational exposure limit is based on irritation effects and its adjustment to compensate for unusual work schedules is not required. | | | |
| | | C | 2 mg/m3 | Canada. British Columbia OEL |
| | | C | 2 mg/m3 | USA. ACGIH Threshold Limit Values (TLV) |

**Exposure controls**
**Appropriate engineering controls**
Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.
**Personal protective equipment**
**Eye/face protection**
Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles.
**Skin protection**
Full contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: > 480 min
Material tested: KCL 741 Dermatril® L
Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: > 480 min
Material tested: KCL 741 Dermatril® L
**Body Protection**
protective clothing
**Respiratory protection**
Recommended Filter type: Filter type P3
The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented. required when dusts are generated.
Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

**Control of environmental exposure**
Do not let product enter drains.

| Section 9: Physical and Chemical Properties | |
|---|---|
| Physical state | solid |
| Color | orange |
| Odor | odorless |
| Odor Threshold | Not applicable |
| Melting point/freezing point | No data available |
| Initial boiling point and boiling range | No data available |
| Evaporation rate | No data available |
| Flammability (solid, gas) | No data available |
| Upper/lower flammability or explosive limits | No data available |
| Flash point | No data available |
| Vapor pressure | No data available |
| Vapor density | No data available |
| Autoignition temperature | No data available |
| Decomposition temperature | No data available |
| pH | No data available |
| Viscosity | No data available |
| Water solubility | soluble |
| Partition coefficient: n-octanol/water | No data available |
| Density | No data available |
| Relative density | No data available |
| Explosive properties | Not classified as explosive. |
| Oxidizing properties | none |
| **Other safety information** | No data available |

## Section 10: Stability and Reactivity

**Reactivity**
The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

**Chemical stability**
The product is chemically stable under standard ambient conditions (room temperature).

**Possibility of hazardous reactions**
Violent reactions possible with:
Acetone
Chlorine
Ethylene oxide
Fluorine
Hydrogen halides

Hydrazine hydrate
hydroxylamine
Acid anhydrides
Acrolein
Acid chlorides
Acids
sulfuric acid
Chloroform
hydrogen peroxide
anhydrides
Antimony trichloride
phosphides
halogen-halogen compounds
trichloroethene
(Methoxymethoxymethyl)tributyltin
Strong oxidizing agents
Strong bases
Peroxides
Ammonia
Alkali metals
Reducing agents
can decompose violently in contact with:
Organic Substances
hydrogen sulphide
Risk of ignition or formation of inflammable gases or vapours with:
powdered aluminium
Ammonium salts
persulfates
Sodium borohydride
phosphorus
Oxides of phosphorus
Halogenated hydrocarbon
Light metals
Metals
Risk of explosion/exothermic reaction with:
Bromine
Calcium
in powder form
furfuryl alcohol
Nitromethane
Peroxides
organic nitro compounds
Nitriles
Acrylic monomers
3-Pentylmagnesium bromide
Chloroform
with
Acetone
Nitrobenzene
with
Methanol
Nitrobenzene
with
salts
Magnesium
Zinc

and
Tin
(in the presence of atmospheric oxygen and/or moisture)

**Conditions to avoid**
no information available

**Incompatible materials**
Metals

**Hazardous decomposition products**
In the event of fire: see section 5

## Section 11: Toxicological Information

**Information on toxicological effects**

**Mixture**

| | |
|---|---|
| **Acute toxicity** | Acute toxicity estimate Oral - 10.55 mg/kg<br>(Calculation method)<br>Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of<br>perforation of the esophagus and the stomach.<br>Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of<br>respiratory tract<br>Dermal: No data available |
| **Skin corrosion/irritation** | Remarks: Mixture causes burns. |
| **Serious eye damage/eye irritation** | Remarks: Mixture causes serious eye damage.<br>Risk of blindness! |
| **Respiratory or skin sensitization** | No data available |
| **Germ cell mutagenicity** | Evidence of genetic defects. |
| **Carcinogenicity** | Evidence of a carcinogenic effect. |
| **Reproductive toxicity** | May harm the unborn child.<br>May impair fertility. |
| **Specific target organ toxicity - single exposure** | No data available |
| **Specific target organ toxicity - repeated exposure** | No data available |
| **Aspiration hazard** | No data available |
| **Additional Information** | Other dangerous properties can not be excluded.<br>This substance should be handled with particular care.<br>Handle in accordance with good industrial hygiene and safety practice. |

**Components**

**Cycloheximide**

| | |
|---|---|
| **Acute toxicity** | Acute toxicity estimate Oral - 5.1 mg/kg<br>(Expert judgment)<br>Remarks: (Regulation (EC) No 1272/2008, Annex VI)<br>Inhalation: No data available<br>Dermal: No data available<br>No data available |
| **Skin corrosion/irritation** | Skin - Rabbit<br>Result: slight irritation<br>Remarks: (RTECS)<br>(Regulation (EC) No 1272/2008, Annex VI) |

| | |
|---|---|
| **Serious eye damage/eye irritation** | Remarks: No data available |
| **Respiratory or skin sensitization** | Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals. |
| **Germ cell mutagenicity** | Suspected of causing genetic defects. |
| **Carcinogenicity** | No data available |
| **Reproductive toxicity** | May damage the unborn child. |
| **Specific target organ toxicity - single exposure** | No data available |
| **Specific target organ toxicity - repeated exposure** | No data available |
| **Aspiration hazard** | No data available |

**sodium-1-ethyl-1,4-dihydro-7-methyl-4-oxo-1,8-naphthyridin-3-carboxylate**

| | |
|---|---|
| **Acute toxicity** | LD50 Oral - 500.1 mg/kg<br>(Expert judgment)<br>Inhalation: No data available<br>Dermal: No data available |
| **Skin corrosion/irritation** | No data available |
| **Serious eye damage/eye irritation** | No data available |
| **Respiratory or skin sensitization** | Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals. |
| **Germ cell mutagenicity** | No data available |
| **Carcinogenicity** | This product is or contains a component that has been reported to be probably carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification. |
| **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 |

**Acriflavine hydrochloride**

| | |
|---|---|
| **Acute toxicity** | LD50 Oral - Rat - 1,048 mg/kg<br>Remarks: (External MSDS)<br>Symptoms: cardiovascular disorders, Breathing difficulties<br>Oral: absorption<br>Inhalation: No data available<br>Dermal: No data available |
| **Skin corrosion/irritation** | Skin - Rabbit<br>Result: No skin irritation<br>Remarks: (External MSDS) |
| **Serious eye damage/eye irritation** | Eyes - Rabbit<br>Result: Eye irritation<br>Remarks: (External MSDS)<br>Remarks: Risk of serious damage to eyes. |
| **Respiratory or skin sensitization** | No data available |
| **Germ cell mutagenicity** | No data available |

| | |
|---|---|
| **Carcinogenicity** | No data available |
| **Reproductive toxicity** | No data available |
| **Specific target organ toxicity - single exposure** | Acute oral toxicity - cardiovascular disorders, Breathing difficulties |
| **Specific target organ toxicity - repeated exposure** | No data available |
| **Aspiration hazard** | No data available |
| **Sodium hydroxide** | |
| **Acute toxicity** | Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger<br>of perforation of the esophagus and the stomach.<br>Inhalation: Corrosive to respiratory system.<br>Symptoms: burns of mucous membranes, Cough, Shortness of breath, Possible<br>damages:, damage of respiratory tract<br>Dermal: No data available |
| **Skin corrosion/irritation** | Skin - Rabbit<br>Result: Causes burns.<br>Remarks: (Regulation (EC) No 1272/2008, Annex VI) |
| **Serious eye damage/eye irritation** | Eyes - Rabbit<br>Result: Causes serious eye damage.<br>(OECD Test Guideline 405)<br>Remarks: (Regulation (EC) No 1272/2008, Annex VI)<br>Remarks: Causes serious eye damage. |
| **Respiratory or skin sensitization** | Patch test: - In vitro study<br>Result: negative<br>Remarks: (ECHA) |
| **Germ cell mutagenicity** | No data available |
| **Carcinogenicity** | No data available |
| **Reproductive toxicity** | No data available |
| **Specific target organ toxicity - single exposure** | Acute oral toxicity - If ingested, severe burns of the mouth and throat, as well as a<br>danger of perforation of the esophagus and the stomach.<br>Acute inhalation toxicity - burns of mucous membranes, Cough, Shortness of<br>breath, Possible damages:, damage of respiratory tract |
| **Specific target organ toxicity - repeated exposure** | No data available |
| **Aspiration hazard** | No data available |

## Section 12: Ecological Information

| | |
|---|---|
| **Toxicity** | |
| **Mixture** | No data available |
| **Persistence and degradability** | No data available |
| **Bio accumulative potential** | No data available |
| **Mobility in soil** | No data available |
| **Results of PBT and vPvB assessment** | PBT/vPvB assessment not available as chemical safety assessment not required/not Conducted. |

| | |
|---|---|
| **Endocrine disrupting properties** | No data available |
| **Other adverse effects** | Discharge into the environment must be avoided. |

**Components**

**Cycloheximide**
No data available
(Regulation (EC) No 1272/2008, Annex VI)

**sodium-1-ethyl-1,4-dihydro-7-methyl-4-oxo-1,8-naphthyridin-3-carboxylate**
No data available

**acriflavine hydrochloride**

| | |
|---|---|
| Toxicity to fish | LC50 - Leuciscus idus (Golden orfe) - 1 - 10 mg/l - 48 h<br>(OECD Test Guideline 203) |

**sodium hydroxide**

| | |
|---|---|
| Toxicity to fish | LC50 - Gambusia affinis (Mosquito fish) - 125 mg/l - 96 h<br>Remarks: (ECOTOX Database) |
| Toxicity to daphnia and other aquatic invertebrates | EC50 - Ceriodaphnia (water flea) - 40.4 mg/l - 48 h<br>Remarks: (ECHA) |
| Toxicity to bacteria | EC50 - Photobacterium phosphoreum - 22 mg/l - 15 min<br>Remarks: (External MSDS) |

## Section 13: Disposal Consideration

**Waste treatment methods**
**Product**
Offer surplus and non- recyclable solutions to a licensed company. Contact a licensed professional waste disposal service to dispose of this material

**Contaminated packaging**
Dispose of as unused product.

## Section 14: Transport Information

| | |
|---|---|
| **TDG** | UN number: 2928 Class: 6.1 (8) Packing group: I<br>Proper shipping name: TOXIC SOLID, CORROSIVE, ORGANIC, N.O.S. (Cycloheximide, sodium hydroxide)<br>Subsidiary risk : 8<br>Labels: 6.1<br>(8)ERG Code: 154<br>Marine pollutant: no |
| **IMDG** | UN number: 2928 Class: 6.1 (8) Packing group: I EMS-No: FA,<br>S-B<br>Proper shipping name: TOXIC SOLID, CORROSIVE, ORGANIC, N.O.S. (Cycloheximide, sodium hydroxide)<br>Marine pollutant : yes |
| **IATA** | UN number: 2928 Class: 6.1 (8) Packing group: I<br>Proper shipping name: Toxic solid, corrosive, organic, n.o.s. (Cycloheximide, sodium hydroxide) |

## Section 15: Regulatory Information

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

## Section 16: Other Information

**DISCLAIMER**

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. *ibresco* shall not be held liable for any damage resulting from handling or from contact with the above product.

The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product.