

# KLH (Keyhole Limpet Hemocyanin) base

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Issue date: 04 January 2023      Version: 2.0

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixture  
Product name : KLH (Keyhole Limpet Hemocyanin) base  
Product code : T-5060, N-5060, N-5042, D-5060, T-5061  
Other means of identification : TNP-KLH (Keyhole Limpet Hemocyanin) ; NP-KLH (Keyhole Limpet Hemocyanin) ; NIP-KLH (Keyhole Limpet Hemocyanin) ; DNP-KLH (Keyhole Limpet Hemocyanin) ; TNP-KLH-Biotin

#### 1.2. Recommended use and restrictions on use

See Section 15.1

#### 1.3. Supplier

Biosearch Technologies, Inc  
2199 South McDowell Boulevard  
Petaluma, CA 94954-6904  
U.S.A.

#### 1.4. Emergency telephone number

Emergency number : 1-888-575-9695 (Monday-Friday, 8:00AM-5:00PM)

### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### GHS US classification

Not classified

#### 2.2. GHS Label elements, including precautionary statements

##### GHS US labeling

No labeling applicable

#### 2.3. Other hazards which do not result in classification

No additional information available

#### 2.4. Unknown acute toxicity (GHS US)

Not applicable

### SECTION 3: Composition/Information on ingredients

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

| Name  | Product identifier | % |
|---|--------------------|---|
| Contains no hazardous ingredients at levels requiring disclosure by the OSHA Hazard Communication Standard (29 CFR 1910.1200) |                    |   |

\*In accordance with paragraph (i) of the OSHA Hazard Communication Standard (29 CFR §1910.1200), the specific chemical identity or exact weight % has been withheld as a trade secret

### SECTION 4: First-aid measures

#### 4.1. Description of first aid measures

First-aid measures general : If exposed or concerned, get medical attention/advice. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before re-use. Never give anything to an unconscious person.

First-aid measures after inhalation : IF INHALED: Remove to fresh air and keep at rest in a comfortable position for breathing.

First-aid measures after skin contact : IF ON SKIN (or clothing): Remove affected clothing and wash all exposed skin with water for at least 15 minutes.

First-aid measures after eye contact : IF IN EYES: Immediately flush with plenty of water for at least 15 minutes. Remove contact lenses if present and easy to do so. Continue rinsing.

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First-aid measures after ingestion : IF SWALLOWED: rinse mouth thoroughly. Do not induce vomiting without advice from poison control center. Get medical attention if you feel unwell.

#### 4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects : Not expected to present a significant hazard under anticipated conditions of normal use.  
Symptoms/effects after inhalation : May cause respiratory irritation.  
Symptoms/effects after skin contact : May cause skin irritation.  
Symptoms/effects after eye contact : Direct contact with the eyes is likely to be irritating.  
Symptoms/effects after ingestion : May cause gastrointestinal irritation.

#### 4.3. Immediate medical attention and special treatment, if necessary

No additional information available

### SECTION 5: Fire-fighting measures

#### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide (CO<sub>2</sub>).  
Unsuitable extinguishing media : Water spray.

#### 5.2. Specific hazards arising from the chemical

Fire hazard : Not flammable.  
Explosion hazard : Product is not explosive.  
Reactivity : No dangerous reactions known under normal conditions of use.

#### 5.3. Special protective equipment and precautions for fire-fighters

Precautionary measures fire : Eliminate all ignition sources if safe to do so.  
Firefighting instructions : Exercise caution when fighting any chemical fire. Use water spray or fog for cooling exposed containers. Do not dispose of fire-fighting water in the environment.  
Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Self-contained breathing apparatus.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Evacuate area. Ventilate area. Keep upwind. Spill should be handled by trained cleaning personnel properly equipped with respiratory and eye protection.

##### 6.1.1. For non-emergency personnel

Protective equipment : Wear protective equipment as described in section 8.  
Emergency procedures : Evacuate unnecessary personnel.

##### 6.1.2. For emergency responders

Protective equipment : Wear suitable protective clothing, gloves and eye or face protection. Approved supplied-air respirator, in case of emergency.

#### 6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters.

#### 6.3. Methods and material for containment and cleaning up

For containment : Contain solid spills with appropriate barriers and prevent migration and entry into sewers or streams. Minimize generation of dust.  
Methods for cleaning up : Scoop solid spill into closing conductive containers or conductive bags. This material and its container must be disposed of in a safe way, and as per local legislation.

#### 6.4. Reference to other sections

See Sections 8 and 13.

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### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Precautions for safe handling : Do not handle until all safety precautions have been read and understood. Keep container closed when not in use. Do not breathe dust. Avoid contact with skin and eyes. Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

#### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in original container. Keep container closed when not in use. Containers which are opened should be properly resealed and kept upright to prevent leakage. Store in a dry, cool and well-ventilated place.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

Not applicable

#### 8.2. Appropriate engineering controls

Appropriate engineering controls : Provide adequate general and local exhaust ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Ensure adequate ventilation, especially in confined areas.

#### 8.3. Individual protection measures/Personal protective equipment

Personal protective equipment symbol(s):



Personal protective equipment:

Gloves. Protective goggles. Wear labcoat with full coverage clothing. Wear respiratory protection.

##### Hand protection:

Use gloves appropriate to the work environment

##### Eye protection:

Use eye protection suitable to the environment. Avoid direct contact with eyes.

##### Skin and body protection:

Wear long sleeves, and chemically impervious PPE/coveralls to minimize bodily exposure.

##### Respiratory protection:

Use NIOSH (or other equivalent national standard) -approved dust/particulate respirator. Where vapor, mist, or dust exceed PELs or other applicable OELs, use NIOSH-approved respiratory protective equipment.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state : Solid  
Color : Not applicable  
Odor : Not applicable  
Odor threshold : Not applicable  
pH : Not applicable  
Melting point : Not applicable  
Freezing point : Not applicable  
Boiling point : Not applicable

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|   |                  |
|---|------------------|
| Flash point                                     | : Not applicable |
| Relative evaporation rate (butyl acetate=1)     | : Not applicable |
| Flammability (solid, gas)                       | : Not applicable |
| Vapor pressure                                  | : Not applicable |
| Relative vapor density at 20 °C                 | : Not applicable |
| Relative density                                | : Not applicable |
| Solubility                                      | : Not applicable |
| Partition coefficient n-octanol/water (Log Pow) | : Not applicable |
| Auto-ignition temperature                       | : Not applicable |
| Decomposition temperature                       | : Not applicable |
| Viscosity, kinematic                            | : Not applicable |
| Viscosity, dynamic                              | : Not applicable |
| Explosion limits                                | : Not applicable |
| Explosive properties                            | : Not applicable |
| Oxidizing properties                            | : Not applicable |

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No dangerous reactions known under normal conditions of use.

### 10.2. Chemical stability

Stable under recommended handling and storage conditions (see section 7).

### 10.3. Possibility of hazardous reactions

None under normal use.

### 10.4. Conditions to avoid

None known.

### 10.5. Incompatible materials

None known.

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

|                                   |                                     |
|-----------------------------------|-------------------------------------|
| Acute toxicity (oral)             | : Not classified                    |
| Acute toxicity (dermal)           | : Not classified                    |
| Acute toxicity (inhalation)       | : Not classified                    |
| Skin corrosion/irritation         | : Not classified                    |
| Serious eye damage/irritation     | : Not classified                    |
| Respiratory or skin sensitization | : Not classified                    |
| Germ cell mutagenicity            | : Not classified                    |
| Carcinogenicity                   | : Not classified                    |
| Reproductive toxicity             | : Not classified                    |
| STOT-single exposure              | : Not classified                    |
| STOT-repeated exposure            | : Not classified                    |
| Aspiration hazard                 | : Not classified                    |
| Viscosity, kinematic              | : Not applicable                    |
| Symptoms/effects after inhalation | : May cause respiratory irritation. |

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|                                     |  |
|-------------------------------------|--|
| Symptoms/effects after skin contact | : May cause skin irritation.                               |
| Symptoms/effects after eye contact  | : Direct contact with the eyes is likely to be irritating. |
| Symptoms/effects after ingestion    | : May cause gastrointestinal irritation.                   |

### SECTION 12: Ecological information

#### 12.1. Toxicity

|   |                            |
|---|----------------------------|
| Ecology - general   | : No data available.       |
| Hazardous to the aquatic environment, short-term (acute)  | : Harmful to aquatic life. |
| Hazardous to the aquatic environment, long-term (chronic) | : Not classified           |

#### 12.2. Persistence and degradability

No additional information available

#### 12.3. Bioaccumulative potential

No additional information available

#### 12.4. Mobility in soil

No additional information available

#### 12.5. Other adverse effects

Other adverse effects : No data available.

### SECTION 13: Disposal considerations

#### 13.1. Disposal methods

|  |   |
|--|---|
| Waste treatment methods                    | : Do not discharge to public wastewater systems without permit of pollution control authorities. No discharge to surface waters is allowed without an NPDES permit. |
| Product/Packaging disposal recommendations | : Dispose in a safe manner in accordance with local/national regulations. Do not allow the product to be released into the environment.                             |

### SECTION 14: Transport information

#### Department of Transportation (DOT)

In accordance with DOT

Not regulated for transport

#### Transport by sea (IMDG)

Not regulated for transport

#### Air transport (IATA)

Not regulated for transport

### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

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LGC claims research and development (R&D) exemption status under the Toxic Substances Control Act (TSCA) for this product. It may contain ingredients that are not on the TSCA inventory and only be used exclusively for research and development activities in accordance with the R&D exemption requirements under TSCA found at 40 CFR 720.36. It is the end-user's responsibility to understand and follow these requirements.

#### 15.2. International regulations

No additional information available

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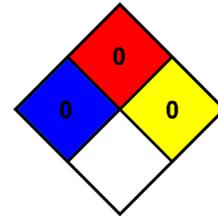
### 15.3. US State regulations

This product does not contain any substances known to the state of California to cause cancer and/or reproductive harm

| Component                             | State or local regulations  |
|---------------------------------------|---|
| Keyhole Limpet Hemocyanin (7783-20-2) | U.S. - Massachusetts - Right To Know List; U.S. - Pennsylvania - RTK (Right to Know) List |

## SECTION 16: Other information

|                    |   |
|--------------------|---|
| Other information  | : Author: JAD.  |
| NFPA health hazard | : 0 - Materials that, under emergency conditions, would offer no hazard beyond that of ordinary combustible materials.                                |
| NFPA fire hazard   | : 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand. |
| NFPA reactivity    | : 0 - Material that in themselves are normally stable, even under fire conditions.  |
| HMIS Hazard Rating |   |
| Health             | : 0   |
| Flammability       | : 0   |
| Physical           | : 0   |



Indication of changes:  
Revision 1.0: New SDS Created.

*This information is disclosed to the best of LGC's knowledge. Disposal should be in accordance with applicable regional, national and local laws and regulations.*