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1 Identification of the substance/mixture and of the company/undertaking

· Product identifier

· Trade name: Linker-SMCC-KLH

· Article number: 40-7000-05

· CAS Number:

9013-72-3

· Registration number

A registration number is not available for this substance because the annual tonnage is less than that required for registration or the registration date is envisaged for a later registration deadline.

· Relevant identified uses of the substance or mixture and uses advised against

No further relevant information available.

- · Application of the substance / the preparation Laboratory reagent
- · Details of the supplier of the safety data sheet
- · Manufacturer/Supplier:

Severn Biotech Ltd.

Unit 2,

Park Lane,

Kidderminster,

Worcestershire.

DY11 6TJ

UK

Tel: 0044 1562 825286 Fax: 0044 1562 825284

email: info@severnbiotech.com

- · Further information obtainable from: Product safety department.
- · Emergency telephone number: Tel: 0044 1562 825286 (not 24 hours)

2 Hazards identification

- · Classification of the substance or mixture
- · Classification according to Regulation (EC) No 1272/2008

The substance is not classified according to the CLP regulation.

- · Classification according to Directive 67/548/EEC or Directive 1999/45/EC Not applicable.
- · Information concerning particular hazards for human and environment: Not applicable.
- · Label elements
- · Labelling according to Regulation (EC) No 1272/2008 Void
- · Hazard pictograms Void
- · Signal word Void
- · Hazard statements Void
- · 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

9013-72-3 Hemocyanin, from Megathura crenulata (keyhole limpet)

· Identification number(s)

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· Additional information:

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A copper-containing respiratory pigment occurring in the blood of mollusks and arthropods.

4 First aid measures

- · Description of first aid measures
- · General information: No special measures required.
- · After inhalation: Supply fresh air; consult doctor in case of complaints.
- · After skin contact: Immediately wash with water and soap and rinse thoroughly.
- · After eye contact:

Check for and remove any contact lenses.

Rinse opened eye for several minutes under running water. Then consult a doctor.

· After swallowing:

Rinse out mouth and then drink plenty of water.

Do not induce vomiting: call for medical help immediately.

- · Information for doctor: Treat symptomatically and supportively.
- · 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 Firefighting measures

- · Extinguishing media
- · Suitable extinguishing agents:

CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

- · Special hazards arising from the substance or mixture No further relevant information available.
- · Advice for firefighters
- · Protective equipment:

Wear fully protective suit.

Wear self-contained respiratory protective device.

Do not inhale explosion gases or combustion gases.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures

Avoid formation of dust.

Ensure adequate ventilation

Keep ignition sources away - no smoking.

- · Environmental precautions: No special measures required.
- · Methods and material for containment and cleaning up:

Pick up mechanically.

Send for recovery or disposal in suitable receptacles.

· Reference to other sections

No dangerous substances are released.

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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7 Handling and storage

- · Handling:
- · Precautions for safe handling

Prevent formation of dust.

Ensure good ventilation/exhaustion at the workplace.

- · Information about fire and explosion protection: 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:

Store away from oxidizing agents.

Store away from foodstuffs.

· Further information about storage conditions:

Store in cool, dry conditions in well sealed receptacles.

· Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- · Additional information about design of technical facilities: No further data; see item 7.
- · Control parameters
- · Ingredients with limit values that require monitoring at the workplace: Not required.
- · Additional information: The lists valid during the making were used as basis.
- · Exposure controls
- · Personal protective equipment:

Select PPE appropriate for the operations taking place taking into account the product properties.

· General protective and hygienic measures:

Avoid close or long term contact with the skin.

Do not eat, drink, smoke or sniff while working.

Do not breath dust

Avoid contact with the eyes.

Wash hands before breaks and at the end of work.

· 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:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. 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 glasses
- · Body protection: Protective work clothing

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9 Physical and chemical properties		
· Information on basic physical and chemical properties		
General Information	enemear properties	
· Appearance:		
Form:	Powder	
Colour:	Whitish	
· Odour:	Characteristic	
· Odour 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):	Product is not flammable.	
· Ignition temperature:		
Decomposition temperature:	Not determined.	
· Self-igniting:	Not determined.	
· Danger of explosion:	Product does not present an explosion hazard.	
· Explosion limits:		
Lower:	Not determined.	
Upper:	Not determined.	
· Vapour pressure:	Not applicable.	
· Density:	Not determined.	
· Relative density	Not determined.	
· Vapour density	Not applicable.	
· Evaporation rate	Not applicable.	
· Solubility in / Miscibility with		
water:	Soluble.	
· Partition coefficient (n-octanol/water): Not determined.		
· Viscosity:		
Dynamic:	Not applicable.	
Kinematic:	Not applicable.	
· Other information	No further relevant information available.	

10 Stability and reactivity

- · Reactivity
- · Chemical stability
- · Thermal decomposition / conditions to be avoided:

No decomposition if used and stored according to specifications.

- · Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- · Incompatible materials: Strong acids and oxidising agents
- · Hazardous decomposition products:

Carbon monoxide and carbon dioxide

Nitrogen oxides (NOx)

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Copper oxides.

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11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:
- · Primary irritant effect:
- · on the skin: No irritant effect.
- · on the eye: No irritating effect.
- · Sensitization: No sensitizing effects known.
- · Additional toxicological information:

When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

The substance is not subject to classification according to the latest version of the EU lists.

12 Ecological information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability biodegradable
- · Behaviour in environmental systems:
- · Bioaccumulative potential Product is not expected to bioaccumulate.
- · Mobility in soil No further relevant information available.
- · Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- · vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- · Recommendation

Contact waste processors for recycling information.

Used, degraded or contaminated product may be classified as hazardous waste. Anyone classifying hazardous waste and determining its fate must be qualified in accordance with state and international legislation.

· European waste catalogue

Waste key numbers in accordance with the European Waste catalogue (EWC) are origin-referred defined. Since this product is used in several industries, no waste key can be provided by the supplier. The waste key number should be determined in arrangement with your waste disposal partner or the responsible authority.

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

14 Transport information

- · UN-Number
- · ADR, ADN, IMDG, IATA Void
- · UN proper shipping name
- · ADR, ADN, IMDG, IATA Void

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· Transport hazard class(es)	
· ADR, ADN, IMDG, IATA	
· Class	Void
· Packing group · ADR, IMDG, IATA	Void
· Environmental hazards: · Marine pollutant:	No
· Special precautions for user	Not applicable.
· Transport in bulk according to Annex MARPOL73/78 and the IBC Code	II of Not applicable.
· Transport/Additional information:	Not dangerous according to the above specifications.
· UN "Model Regulation":	-

15 Regulatory information

· 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.

 $\cdot \ \textbf{Department issuing MSDS:} \ Product \ safety \ department.$

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