## Safety Data Sheet

## HO-PEG-COOH

Revision date: 24.07.2019

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

### 1.1. Product identifier

HO-PEG-COOH
Further trade names alpha-Hydroxy-omega-carboxy poly(ethylene glycol)
1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture
Laboratory chemical. Manufacture of the substance.
Uses advised against
Do not use for private purposes (household).
1.3. Details of the supplier of the safety data sheet

Company name:
Street:
Place:
Post-office box:

Telephone:
e-mail:
Contact person:
e-mail:
Internet:
Responsible Department:

Iris Biotech GmbH
Adalbert-Zoellner-Straße 1
D-95615 Marktredwitz, Germany
568
D-95605 Marktredwitz, Germany
+49 9231971210
info@iris-biotech.de
Compliance Department Telephone:+499231971210
sds@iris-biotech.de
www.iris-biotech.de
Only available during office hours.
+49 (0)89 19240 (POISON CENTER Munich: 24 h)

Telefax: +49 92319712199
1.4. Emergency telephone number:

## Further Information

This product does not meet the criteria for classification into a hazardous class according to Regulation (EC) No 1272/2008 on the classification, labeling and packaging of substances and mixtures. A safety data sheet is provided which does not fully comply with Article 31 and Annex II of REACH.

Voluntary safety information following the Safety Data Sheet format according to Regulation (EC) No. 1907/2006 (REACH)

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008
This substance is not classified as hazardous in accordance with Regulation (EC) No. 1272/2008.

### 2.2. Label elements

## Regulation (EC) No. 1272/2008

## Precautionary statements

P202 Do not handle until all safety precautions have been read and understood.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P262 Do not get in eyes, on skin, or on clothing.
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
Additional advice on labelling
Warning - substance not yet tested completely.

### 2.3. Other hazards

No information available.

## SECTION 3: Composition/information on ingredients

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3.1. Substances
Chemical characterization
    alpha-Hydroxy-omega-carboxy poly(ethylene glycol)
    Molecular weight: 5000 Da
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## SECTION 4: First aid measures

### 4.1. Description of first aid measures

## General information

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

## After inhalation

Provide fresh air. Remove casualty to fresh air and keep warm and at rest. In case of irregular breathing or respiratory arrest provide artificial respiration.
In all cases of doubt, or when symptoms persist, seek medical advice.

## After contact with skin

Wash with plenty of water. Take off contaminated clothing and wash it before reuse. After contact with skin, wash immediately with plenty of water and soap.
In all cases of doubt, or when symptoms persist, seek medical advice.

## After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water. If product gets into the eye, keep eyelid open and rinse immediately with large quantities of water, for at least 5 minutes. Subsequently consult an ophthalmologist.

## After ingestion

Rinse mouth immediately and drink plenty of water. Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person or a person with cramps.
In all cases of doubt, or when symptoms persist, seek medical advice.

### 4.2. Most important symptoms and effects, both acute and delayed

No information available.
4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

## Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings. Water spray. alcohol resistant foam. Dry extinguishing powder. Carbon dioxide (CO2). Sand.
Unsuitable extinguishing media
High power water jet.
5.2. Special hazards arising from the substance or mixture

Non-flammable. Thermal decomposition can lead to the escape of irritating gases and vapours.
In case of fire may be liberated: Carbon dioxide (CO2). Carbon monoxide (CO). Nitrogen oxides (NOx).

### 5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

## Additional information

Usual measures for fire prevention.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures <br> General advice

Provide adequate ventilation. Avoid breathing dust/fume/gas/mist/vapours/spray.
Avoid contact with skin, eyes and clothes.
Wear personal protection equipment.
In case of fire: Evacuate area.

### 6.2. Environmental precautions

Do not allow to enter into soil/subsoil.
Do not allow to enter into surface water or drains.

### 6.3. Methods and material for containment and cleaning up <br> Other information

Take up mechanically. Treat the recovered material as prescribed in the section on waste disposal. Take up mechanically, placing in appropriate containers for disposal. Avoid dust formation.
Clear contaminated areas thoroughly.

### 6.4. Reference to other sections

Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Advice on safe handling
Provide adequate ventilation.
Avoid dust formation. Avoid breathing dust/fume/gas/mist/vapours/spray.
Avoid contact with skin, eyes and clothes.
Advice on protection against fire and explosion
Usual measures for fire prevention.

## Advice on general occupational hygiene

Take off contaminated clothing. Wash hands before breaks and after work. When using do not eat, drink, smoke, sniff. Avoid contact with skin, eyes and clothes. Provide adequate ventilation.

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

Requirements for storage rooms and vessels
Keep container tightly closed in a cool, well-ventilated place.
Handle and store contents under inert gas. Protect from moisture.
storage temperature: $-20^{\circ} \mathrm{C}$
Hints on joint storage
No special measures are necessary.

### 7.3. Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

## Additional advice on limit values

To date, no national critical limit values exist.

### 8.2. Exposure controls

## Appropriate engineering controls

The receiver of our product is singularly responsible for adhering to existing laws and regulations. Individual protection measures, such as personal protective equipment

## Eye/face protection

Wear eye/face protection.

## Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. Wear suitable gloves.

## Skin protection

Use of protective clothing.

## Respiratory protection

In case of inadequate ventilation wear respiratory protection. If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn.

## Environmental exposure controls

Discharge into the environment must be avoided.

## SECTION 9: Physical and chemical properties

| 9.1. Information on basic physical and chemical properties |  |
| :---: | :---: |
| Physical state: | Powder |
| Colour: | white - yellowish |
| Odour: | No data available |

Changes in the physical state
Melting point/freezing point:
Boiling point or initial boiling point and
boiling range:
Sublimation point: not determined
Softening point:
Flash point:
Flammability
Solid/liquid: not determined
Gas: not applicable

## Explosive properties

The product is not: Explosive.
Lower explosion limits: not determined
Upper explosion limits:
Auto-ignition temperature:

## Self-ignition temperature

Solid: not determined
Gas: not applicable
Decomposition temperature:
pH-Value:
Water solubility:
not determined
not determined
not determined not determined
not determined
No data available
not determined
not determined
No data available

## Solubility in other solvents

not determined
Partition coefficient n-octanol/water: not determined
Vapour pressure: not determined

Density: not determined

Relative vapour density:
not determined

### 9.2. Other information

Information with regard to physical hazard classes
Sustaining combustion:
No data available
Oxidizing properties
No data available
Other safety characteristics

| Solvent content: | No data available |
| :--- | ---: |
| Solid content: | not determined |
| Evaporation rate: | not determined |
| Further Information |  |

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No data available

### 10.2. Chemical stability

Stable under recommended storage conditions.
10.3. Possibility of hazardous reactions

No data available
10.4. Conditions to avoid

Protect from moisture.
Keep away from heat.

### 10.5. Incompatible materials

Oxidizing agents, strong.

### 10.6. Hazardous decomposition products

Thermal decomposition can lead to the escape of irritating gases and vapours.
In case of fire may be liberated: Carbon dioxide (CO2). Carbon monoxide (CO). Nitrogen oxides (NOx).
Further information
In case of fire: See chapter 5.

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Toxicocinetics, metabolism and distribution
No data available

## Acute toxicity

Based on available data, the classification criteria are not met.
Irritation and corrosivity
Based on available data, the classification criteria are not met.

## Sensitising effects

Based on available data, the classification criteria are not met
Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.
IARC: No component of this product present at levels greater than or equal to $0.1 \%$ is identified as probable, possible or confirmed human carcinogen by IARC.
STOT-single exposure Based on available data, the classification criteria are not met.

## STOT-repeated exposure

Based on available data, the classification criteria are not met.
Aspiration hazard
Based on available data, the classification criteria are not met.
Specific effects in experiment on an animal No data available

## Additional information on tests

The substance is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].
Practical experience No data available

Further information RTECS: No data available Caution! To the best of our knowledge the toxicological properties of this material have not been thoroughly investigated.

## SECTION 12: Ecological information

### 12.1. Toxicity

No data available
12.2. Persistence and degradability No data available
12.3. Bioaccumulative potential

No data available
12.4. Mobility in soil

No data available

### 12.5. Results of $P B T$ and $v P v B$ assessment

 PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.
### 12.7. Other adverse effects

 Warning - substance not yet tested completely.Further information
Avoid release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Disposal recommendations
Dispose of waste according to applicable legislation.
Consult the appropriate local waste disposal expert about waste disposal. Handle contaminated packages in the same way as the substance itself.
Contaminated packaging Wash with plenty of water. Completely emptied packages can be recycled.

## SECTION 14: Transport information

Land transport (ADR/RID)
14.2. UN proper shipping name:

No dangerous good in sense of these transport regulations.

Inland waterways transport (ADN)
14.2. UN proper shipping name:

Marine transport (IMDG)
14.2. UN proper shipping name:

Air transport (ICAO-TI/IATA-DGR)
14.2. UN proper shipping name:
14.5. Environmental hazards ENVIRONMENTALLY HAZARDOUS:

No dangerous good in sense of these transport regulations

No dangerous good in sense of these transport regulations.

No dangerous good in sense of these transport regulations.
14.6. Special precautions for user No information available.
14.7. Maritime transport in bulk according to IMO instruments
not applicable

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture EU regulatory information <br> Information according to 2012/18/EU Not subject to 2012/18/EU (SEVESO III) (SEVESO III): <br> Additional information <br> Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH) <br> National regulatory information <br> Water hazard class (D): 3 - highly hazardous to water

15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out.

## SECTION 16: Other information

## 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
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service
LC50: Lethal concentration, 50\%
LD50: Lethal dose, 50\%
CLP: Classification, labelling and Packaging
REACH: Registration, Evaluation and Authorization of Chemicals
GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals
UN: United Nations
DNEL: Derived No Effect Level
DMEL: Derived Minimal Effect Level
PNEC: Predicted No Effect Concentration
ATE: Acute toxicity estimate
LL50: Lethal loading, 50\%
EL50: Effect loading, 50\%
EC50: Effective Concentration 50\%

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

## HO-PEG-COOH

Revision date: 24.07.2019
ErC50: Effective Concentration 50\%, growth rate NOEC: No Observed Effect Concentration
BCF: Bio-concentration factor
PBT: persistent, bioaccumulative, toxic
vPvB: very persistent, very bioaccumulative
RID: Regulations concerning the international carriage of dangerous goods by rail
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
(Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures)
EmS: Emergency Schedules
MFAG: Medical First Aid Guide
ICAO: International Civil Aviation Organization
MARPOL: International Convention for the Prevention of Marine Pollution from Ships
IBC: Intermediate Bulk Container
SVHC: Substance of Very High Concern
For abbreviations and acronyms, see table at http://abbrev.esdscom.eu

## Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

