

334100

 Revision: 17.06.2011  
Printing date: 07.07.2016

## 01 Identification of the substance/mixture and of the company/undertaking

- Product identifier
- Trade name:  
H-D-Ala-D-Ala-D-Ala-D-Ala-OH  
Penta-D-alanine
- Article number:  
new: 4004970      old: H-1275
- CAS Number:  
10491-09-5
- Relevant identified uses of the substance or mixture and uses advised against
- Application of the substance / the preparation  
Laboratory chemicals
- Details of the supplier of the safety data sheet
- Manufacturer/Supplier:  
Bachem AG  
Hauptstrasse 144  
CH-4416 Bubendorf  
Switzerland  
E-mail [msds@bachem.com](mailto:msds@bachem.com)  
Tel +41 58 595 2021  
Fax +41 58 595 2040
- Further information obtainable from:  
Department: Marketing
- Emergency telephone number:  
+41 44 251 51 51 (Tox Info Suisse)

## \* 02 Hazards identification

- Classification of the substance or mixture
- Classification according to Regulation (EC) No 1272/2008  
Void
- Label elements
- Labelling according to Regulation (EC) No 1272/2008  
Void
- Signal word  
Void
- Hazard statements  
Void
- Other hazards
- Results of PBT and vPvB assessment
- PBT:  
Not applicable.
- vPvB:  
Not applicable.

## 03 Composition/information on ingredients

- Chemical characterization: Substances
- | <b>CAS No.</b> | <b>Description</b>           |
|----------------|------------------------------|
|                | H-D-Ala-D-Ala-D-Ala-D-Ala-OH |
- Identification number(s)
- EINECS Number:  
-
- RTECS Number:

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## 04 First aid measures

- 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:  
Rinse opened eye for several minutes under running water.
- After swallowing:  
Call a doctor immediately.
- Information for doctor:  
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.

## 05 Firefighting measures

- Suitable extinguishing agents:  
CO<sub>2</sub>, 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:  
No special measures required.

## 06 Accidental release measures

- Personal precautions, protective equipment and emergency procedures  
Not required.
- Environmental precautions:  
No special measures required.
- Methods and material for containment and cleaning up:  
Pick up mechanically.

## 07 Handling and storage

- Handling:
- Precautions for safe handling  
Prevent formation of dust.
- Information about fire - and explosion protection:  
No special measures required.
- Storage:
- Requirements to be met by storerooms and receptacles:  
No special requirements.
- Information about storage in one common storage facility:  
Store away from foodstuffs.
- Further information about storage conditions:  
Store in dry conditions.
- Recommended storage temperature:  
-20 +/- 5 °C
- Specific end use(s)  
No further relevant information available.

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## 08 Exposure controls/personal protection

- Ingredients with limit values that require monitoring at the workplace:

<b>CAS No.</b>	<b>Designation of material</b>
Not required.	

- Additional information:  
The lists valid during the making were used as basis.
- Personal protective equipment:
- General protective and hygienic measures:  
The usual precautionary measures are to be adhered to when handling chemicals.
- 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.  
Use suitable respiratory protective device in case of insufficient ventilation.
- 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  
Protective gloves
- 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

## 09 Physical and chemical properties

<b>General Information</b>	
<b>Appearance:</b>	
<b>Form:</b>	Powder
<b>Colour:</b>	Whitish
<b>Odour:</b>	Nearly odourless
<b>Odour threshold:</b>	Not determined.
<b>Molecular Weight</b>	373,4100 g/mol
<b>Change in condition</b>	
<b>Boiling point/Boiling range:</b>	Undetermined.
<b>Flash point:</b>	Not applicable.
<b>Flammability (solid, gaseous):</b>	Not applicable.
<b>Ignition temperature:</b>	
<b>Decomposition temperature:</b>	Not determined.
<b>Self-igniting:</b>	Not determined.
<b>Danger of explosion:</b>	Not determined.
<b>Explosion limits:</b>	
<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.
<b>Vapour pressure:</b>	Not determined.
<b>Density:</b>	Not determined.
<b>Solubility in / Miscibility with water:</b>	
	Not determined.
<b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
<b>Other information</b>	No further relevant information available.

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## 10 Stability and reactivity

- 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:  
No further relevant information available.
- Dangerous decomposition products:  
No dangerous decomposition products known.

## 11 Toxicological information

- Acute toxicity:  
No further relevant information available.
- Primary irritant effect:
- on the skin:  
No further relevant information available.
- on the eye:  
No further relevant information available.
- Sensitization:  
No sensitizing effects known.
- Additional toxicological information:  
The substance is not subject to classification according to the latest version of the EU lists.

## 12 Ecological information

- Aquatic toxicity:  
No further relevant information available.
- Persistence and degradability  
No further relevant information available.
- Behaviour in environmental systems:
- Bioaccumulative potential  
No further relevant information available.
- Mobility in soil  
No further relevant information available.
- Additional ecological information:
- General notes:  
Not known to be hazardous to water.
- 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
- Waste disposal key:  
18 02 06
- Uncleaned packaging:
- Recommendation:  
Disposal must be made according to official regulations.

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## 14 Transport information

- ADR/RID class:** -
- IMDG Class:** -
- ICAO/IATA Class:** -
- Environmental hazards:  
Not applicable.
  - Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code  
Not applicable.

## 15 Regulatory information

- National regulations:
- Waterhazard class:  
Generally not hazardous for water. Self-assessment
- 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 MSDS:  
Department: Marketing
- 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)  
 RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
 IMDG: International Maritime Code for Dangerous Goods  
 IATA: International Air Transport Association  
 ICAO: International Civil Aviation Organisation  
 EINECS: European Inventory of Existing Commercial Chemical Substances  
 CAS: Chemical Abstracts Service (division of the American Chemical Society)  
 RTECS: Registry of Toxic Effects of Chemical Substances  
 WGK: Wassergefährdungsklasse  
 vPvB: very Persistent and very Bioaccumulative
- \* Data compared to the previous version altered.