

**Safety Data Sheet**

according to UK REACH Regulation

**H-D-Phe(4-Cl)-OH**

Revision date: 12.03.2020

Product code: HAA1043

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

H-D-Phe(4-Cl)-OH

**Further trade names**

4-Chloro-D-phenylalanine

Substance name: H-D-Phe(4-Cl)-OH

CAS No: 14091-08-8

EC No: 634-290-0

**1.2. Relevant identified uses of the substance or mixture and uses advised against****Use of the substance/mixture**

Laboratory chemicals, 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: Iris Biotech GmbH  
Street: Adalbert-Zoellner-Straße 1  
Place: D-95615 Marktredwitz, Germany  
Post-office box: 568  
D-95605 Marktredwitz, Germany

Telephone: +49 9231 97121 0

Telefax: +49 9231 97121 99

e-mail: info@iris-biotech.de

Contact person: Compliance Department

Telephone: +49 9231 97121 0

e-mail: sds@iris-biotech.de

Internet: www.iris-biotech.de

Responsible Department: Only available during office hours.

**1.4. Emergency telephone number:** +49 (0)89 19240 (POISON CENTER Munich: 24 h)**Further information**

Emergency telephone: 24 h (POISON CENTER Munich)

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****GB CLP Regulation**

Hazard categories:

Acute toxicity: Acute Tox. 3

Respiratory or skin sensitisation: Skin Sens. 1

Hazard Statements:

Toxic if swallowed.

May cause an allergic skin reaction.

**2.2. Label elements****GB CLP Regulation****Signal word:** Danger**Pictograms:**

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**Hazard statements**

H301 Toxic if swallowed.  
H317 May cause an allergic skin reaction.

**Precautionary statements**

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P264 Wash hands thoroughly after handling.  
P272 Contaminated work clothing should not be allowed out of the workplace.  
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.  
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.  
P302+P352 IF ON SKIN: Wash with plenty of Water.  
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.  
P362+P364 Take off contaminated clothing and wash it before reuse.  
P405 Store locked up.  
P501 Dispose of contents/container to an approved disposal site.

**Additional advice on labelling**

Warning - substance not yet tested completely.

**2.3. Other hazards**

No information available.

**SECTION 3: Composition/information on ingredients****3.1. Substances****Chemical characterization**

4-Chloro-D-phenylalanine

Sum formula: C<sub>9</sub>H<sub>10</sub>ClNO<sub>2</sub>

Molecular weight: 199,64 g/mol

**Hazardous components**

CAS No	Chemical name	Quantity		
	EC No	Index No	REACH No	
	GHS Classification			
14091-08-8	H-D-Phe(4-Cl)-OH			<= 100 %
	634-290-0			
	Acute Tox. 3, Skin Sens. 1; H301 H317			

Full text of H and EUH statements: see section 16.

**Specific Conc. Limits, M-factors and ATE**

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
14091-08-8	634-290-0	H-D-Phe(4-Cl)-OH	<= 100 %
	oral: ATE = 100 mg/kg		

**Further Information**

Warning - substance not yet tested completely.

**SECTION 4: First aid measures****4.1. Description of first aid measures****General information**

Call a physician immediately. Show this safety data sheet to the doctor in attendance.

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**After inhalation**

Provide fresh air. When in doubt or if symptoms are observed, get medical advice. Remove casualty to fresh air and keep warm and at rest. In case of irregular breathing or respiratory arrest provide artificial respiration.

**After contact with skin**

After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. Medical treatment necessary. 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**

After eye contact: Rinse immediately carefully and thoroughly with eye-bath or water.

**After ingestion**

Rinse mouth immediately and drink 1 glass of water. Induce vomiting when the affected person is not unconscious. Call a physician immediately. 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 (CO<sub>2</sub>). 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 (CO<sub>2</sub>). Carbon monoxide (CO). Nitrogen oxides (NO<sub>x</sub>). Hydrogen chloride (HCl)

**5.3. Advice for firefighters**

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

**Additional information**

Usual measures for fire prevention.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures****General measures**

Provide adequate ventilation. Avoid dust formation. Do not breathe dust. Avoid contact with skin, eyes and clothes. Use personal protection equipment. Use appropriate respiratory protection. Provide adequate ventilation.

Remove persons to safety.

**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**

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**Other information**

Take up mechanically. 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 Treat the recovered material as prescribed in the section on waste disposal.

**SECTION 7: Handling and storage****7.1. Precautions for safe handling****Advice on safe handling**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Avoid dust formation. Do not breathe dust. 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**

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme.

Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat, drink, smoke, sniff. Avoid contact with skin, eyes and clothes. Provide adequate ventilation. When using do not eat, drink or smoke. Wash hands before breaks and after work.

**7.2. Conditions for safe storage, including any incompatibilities****Requirements for storage rooms and vessels**

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only.

Provide adequate ventilation as well as local exhaustion at critical locations.

Keep the packing dry and well sealed to prevent contamination and absorption of humidity.

storage temperature: +2°C - +8°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**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe dust. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

**Individual protection measures, such as personal protective equipment**

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**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.

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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.

**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:	solid
Colour:	white/ whitish
Odour:	No data available

**Changes in the physical state**

Melting point/freezing point:	254-256 °C
Boiling point or initial boiling point and boiling range:	not determined
Sublimation point:	not determined
Softening point:	not determined
Flash point:	No data available

**Flammability**

Solid/liquid:	not determined
Gas:	not applicable

**Explosive properties**

The product is not: Explosive.

Lower explosion limits:	not determined
Upper explosion limits:	not determined
Auto-ignition temperature:	not determined

**Self-ignition temperature**

Solid:	not determined
Gas:	not applicable
Decomposition temperature:	not determined

**Oxidizing properties**

Not oxidising.

pH-Value:	not determined
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Water solubility:	not determined
<b>Solubility in other solvents</b>	
not determined	
Partition coefficient n-octanol/water:	not determined
Vapour pressure:	not determined
Density:	not determined
Bulk density:	not determined
Relative vapour density:	not determined

**9.2. Other information****Information with regard to physical hazard classes**

Sustaining combustion: 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 (CO<sub>2</sub>). Carbon monoxide (CO). Nitrogen oxides (NO<sub>x</sub>).

Hydrogen chloride (HCl).

**Further information**

In case of fire: See chapter 5.

**SECTION 11: Toxicological information****11.1. Information on hazard classes as defined in GB CLP Regulation****Toxicokinetics, metabolism and distribution**

No data available

**Acute toxicity**

Toxic if swallowed.

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CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
14091-08-8	H-D-Phe(4-Cl)-OH				
	oral	ATE 100 mg/kg			

**Irritation and corrosivity**

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

**Sensitising effects**

May cause an allergic skin reaction. (H-D-Phe(4-Cl)-OH)

**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**

Special hazards arising from the substance or mixture. Classification according to Regulation (EC) No 1272/2008 [CLP]: health hazard properties.

**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.

Handle in accordance with good industrial hygiene and safety practice.

**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 PBT and vPvB 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.

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**SECTION 13: Disposal considerations****13.1. Waste treatment methods****Disposal recommendations**

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation. 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**

Hazardous waste according to Directive 2008/98/EC (waste framework directive). Handle contaminated packages in the same way as the substance itself.

**SECTION 14: Transport information****Land transport (ADR/RID)**

<b>14.1. UN number:</b>	UN 2811
<b>14.2. UN proper shipping name:</b>	TOXIC SOLID, ORGANIC, N.O.S. (4-Chloro-D-phenylalanine)
<b>14.3. Transport hazard class(es):</b>	6.1
<b>14.4. Packing group:</b>	III
Hazard label:	6.1 
Classification code:	T2
Special Provisions:	274 614
Limited quantity:	5 kg
Excepted quantity:	E1
Transport category:	2
Hazard No:	60
Tunnel restriction code:	E

**Inland waterways transport (ADN)**

<b>14.1. UN number:</b>	UN 2811
<b>14.2. UN proper shipping name:</b>	TOXIC SOLID, ORGANIC, N.O.S. (4-Chloro-D-phenylalanine)
<b>14.3. Transport hazard class(es):</b>	6.1
<b>14.4. Packing group:</b>	III
Hazard label:	6.1 
Classification code:	T2
Special Provisions:	274 614 802
Limited quantity:	5 kg
Excepted quantity:	E1

**Marine transport (IMDG)**

<b>14.1. UN number:</b>	UN 2811
<b>14.2. UN proper shipping name:</b>	TOXIC SOLID, ORGANIC, N.O.S. (4-Chloro-D-phenylalanine)
<b>14.3. Transport hazard class(es):</b>	6.1
<b>14.4. Packing group:</b>	III



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Hazard label: 6.1

Special Provisions: 223, 274  
 Limited quantity: 5 kg  
 Excepted quantity: E1  
 EmS: F-A, S-A


**Air transport (ICAO-TI/IATA-DGR)**

**14.1. UN number:** UN 2811  
**14.2. UN proper shipping name:** TOXIC SOLID, ORGANIC, N.O.S. (4-Chloro-D-phenylalanine)  
**14.3. Transport hazard class(es):** 6.1  
**14.4. Packing group:** III  
 Hazard label: 6.1



Special Provisions: A3 A5  
 Limited quantity Passenger: 10 kg  
 Passenger LQ: Y645  
 Excepted quantity: E1  
 IATA-packing instructions - Passenger: 670  
 IATA-max. quantity - Passenger: 100 kg  
 IATA-packing instructions - Cargo: 677  
 IATA-max. quantity - Cargo: 200 kg

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: No

**14.6. Special precautions for user**

Warning: Acute Toxicity.

**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**

Information according to 2012/18/EU (SEVESO III): H2 ACUTE TOXIC

**Additional information**

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

**National regulatory information**

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water hazard class (D): 3 - highly hazardous to water  
 Skin resorption/Sensitization: Causes allergic hypersensitivity reactions.

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**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%  
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>

**Relevant H and EUH statements (number and full text)**

H301 Toxic if swallowed.  
H317 May cause an allergic skin reaction.

**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.