

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifiers Product Name: Leupeptin Hemisulfate

Catalog Number: PI-010

1.2 Relevant identified uses of the substance or mixture and uses advised against Identified Uses:

Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet Company:

Isca Biochemicals Ltd. Tel:+44(0)1392 422205

26 Hanover Road, Exeter, EX1 2TL

Internet www.iscabiochemicals.com

Email info@iscabiochemicals.com

1.4 Emergency Telephone number

+ 44 (0)1392422205 (09.00 - 17.00 GMT)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to EC Regulation 1272/2008 [GHS/CLP]

Reproductive Toxicity – Category 2

2.2 Label elements

Pictogram



Signal word: Warning

Hazard Statement(s)

H361 Suspected of damaging fertility or the unborn child

Precautionary Statement(s)

P280 Wear protective gloves/protective clothing/eye protection/face protection

P308+313 If exposed or concerned: Get medical advice/attention

2.3 Other hazards - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Product Name: Leupeptin Hemisulfate

Formula: $C_{20}H_{38}N_6O_4 \cdot 1/2H_2SO_4$

Molecular Weight: 475.04.

CAS: 103476-89-7

4. FIRST AID MEASURES

4.1 Description of first aid measures General advice

Consult a doctor and show this safety data sheet.

If Inhaled

Remove to fresh air and monitor breathing. If breathing becomes difficult, give oxygen. If breathing stops, give artificial respiration. Consult a doctor.

In Case of Skin Contact

Immediately wash skin with copious amounts of soap and water for at least 15 minutes. Remove contaminated clothing and shoes and wash before reuse. Consult a doctor.

In Case of Eye Contact

Flush with copious amounts of water for at least 15 minutes. Consult a doctor.

If Swallowed

Rinse mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Consult a doctor

4.2 Most important symptoms and effects, both acute and delayed

To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

4.3 Indication of immediate medical attention and special treatment needed

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media Suitable extinguishing media Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture In combustion, may emit toxic fumes.

5.3 Precautions for fire-fighters

Wear suitable protective clothing to prevent contact with skin and eyes and self-contained breathing apparatus.

6. ACCIDENTIAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Do not take action without suitable protective clothing - see section 8 of SDS. Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid breathing vapours, mist, dust or gas.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Cover spillage with suitable absorbent material. Sweep up material and place in an appropriate container. Hold all material for appropriate disposal as described under section 13 of SDS.

6.4 Reference to other sections:

For required PPE see section 8. For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Use in a chemical fume hood, with air supplied by an independent system. Avoid inhalation, contact with eyes, skin and clothing. Avoid the formation of dust and aerosols. Use in a well-ventilated area. Keep away from sources of ignition. Avoid prolonged or repeated exposure.

7.2 Conditions for safe storage, including any incompatibilities.

Store in cool, well-ventilated area. Keep away from direct sunlight. Keep container tightly sealed until ready for use. Recommended storage temperature: Store desiccated at -20°C

7.3 Specific end uses

Use in a laboratory fume hood where possible. Refer to employer's COSHH risk assessment.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Appropriate engineering controls

Use in a fume hood where applicable. Ensure all engineering measures described under section 7 of SDS are in place.

Ensure laboratory is equipped with a safety shower and eye wash station.

Personal protective equipment

Eye/face protection Use appropriate safety glasses.

Skin protection

Use appropriate chemical resistant gloves (minimum requirement use standard BS EN 374:2003). Gloves should be inspected before use. Wash and dry hands thoroughly after handling.

Body protection

Wear appropriate protective clothing.

Respiratory protection

If risk assessment indicates necessary, use a suitable respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance:	White lyophilised solid	Vapor pressure:	No data available
Odor :	No data available	Vapor density:	No data available
Odor threshold:	No data available	Relative density:	No data available
Melting / freezing point:	No data available	Partition coefficient:	No data available
Boiling point / range:	No data available	Auto-ignition temperature:	No data available
Flash point:	No data available	Decomposition temperature:	No data available
Evaporation rate:	No data available	Viscosity:	No data available
Flammability (solid, gas):	No data available	Explosive properties:	No data available
Upper / lower flammability or explosive limits:	No data available		
Oxidising properties:	No data available		

9.2 Other safety information: No data available

10. STABILITY AND REACTIVITY

10.1 Reactivity

Stable under recommended transport or storage conditions.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions will not occur under normal transport or storage conditions. Decomposition may occur on exposure to conditions or materials listed below.

10.4 Conditions to avoid

Heat, moisture.

10.5 Incompatible materials

Strong acids/alkalis, strong oxidising/reducing agents.

10.6 Hazardous decomposition products

In combustion may emit toxic fumes. No known decomposition information.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

ORL-RAT LD50: >4g/kg; SCU-RAT LD50: >4g/kg; IVN-RAT LD50:125mg/kg; ORL-MUS LD50:1550mg/kg;

SCU-MUS LD50: 1405mg/kg; IVN-MUS LD50: 118mg/kg; ORL-RBT LD50: >1500mg/kg; SCU-RBT LD50:35mg/kg
IPR-RAT TDLo: 100mg/kg; UPR-RAT TDLo: 30mg/kg

Skin corrosion/irritation

Classified based on available data

Serious eye damage/irritation

Classified based on available data

Respiratory or skin sensitization

Classified based on available data

Germ cell mutagenicity

Classified based on available data

Carcinogenicity Classification

Classified based on available data

Reproductive toxicity

Classified based on available data

Specific target organ toxicity - single exposure

Classified based on available data

Specific target organ toxicity - repeated exposure

Classified based on available data

Aspiration hazard

Classified based on available data

Symptoms / Routes of exposure

Inhalation: There may be irritation of the throat with a feeling of tightness in the chest.

Ingestion: There may be irritation of the throat.

Skin: There may be mild irritation at the site of contact.

Eyes: There may be irritation and redness. Delayed / Immediate Effects: No known symptoms.

Additional Information

RTECS No: OH6240000

Exposure may cause irritation of eyes, mucous membranes, upper respiratory tract and skin. To the best of our knowledge, the chemical, physical and toxicological properties have not been fully investigated

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 :	No data available
12.6 Other adverse effects:	May be harmful to the aquatic environment.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Transfer to a suitable container and arrange for collection by specialized disposal company in accordance with National legislation.

Contaminated packaging

Dispose of in a regulated landfill site or other method for hazardous or toxic wastes in accordance with National legislation.

14. TRANSPORT INFORMATION

Classified according to the criteria of the UN Model Regulations as reflected in the IMDG Code, ADR, RID and IATA.

14.1 UN-Number	Does not meet the criteria for classification as hazardous for transport.
14.2 UN proper shipping name	Does not meet the criteria for classification as hazardous for transport.
14.3 Transport hazard class(es)	Does not meet the criteria for classification as hazardous for transport.
14.4 Packaging group	Does not meet the criteria for classification as hazardous for transport.
14.5 Environmental hazards	This product is not classified as environmentally hazardous according to the UN Model Regulations, nor a marine pollutant according to the IMDG Code.
14.6 Special precautions for users	No data available

15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 453/2010.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

No data available

California Proposition 65

Not applicable

15.2 Chemical safety assessment A Chemical Safety Assessment has not been made for this product.

16. OTHER INFORMATION

This company shall not be held liable for any damage resulting from handling or from contact with the above product. This material must only be handled by suitably qualified experienced scientists in appropriately equipped and authorized facilities. The above information is believed to be correct but does not purport to be all inclusive and should be used as a guide only for experienced personnel. Always consult your safety advisor and follow appropriate local and national safety legislature. The absence of warning must not, under any circumstance, be taken to mean that no hazard exists.

End of safety data sheet