

Safety data sheet
according to 1907/2006/EC, Article 31

Revision: 14.11.2012

Printing date 02.07.2013

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

1.1 Product identifier	
Trade name	Cathepsin B 1, Human Liver
Stock number:	J65308
CAS Number:	9047-22-7
1.2 Relevant identified uses of the substance or mixture and uses advised against.	
Identified use:	SU24 Scientific research and development
1.3 Details of the supplier of the safety data sheet	
Manufacturer/Supplier:	Alfa Aesar GmbH & Co.KG A Johnson Matthey Company Zeppelinstr. 7b 76185 Karlsruhe / Germany Tel: +49 (0) 721 84007 280 Fax: +49 (0) 721 84007 300 Email: tech@alfa.com www.alfa.com
Informing department:	Product safety Tel + +049 (0) 7275 988687-0
1.4 Emergency telephone number:	Carechem 24: +44 (0) 1235 239 670 (Multi-language emergency number) Poison Information Center Mainz www.giftinfo.uni-mainz.de Telephone: +49(0)6131/19240

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture	
Classification according to Regulation (EC) No 1272/2008	The substance is not classified as hazardous to health or the environment 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
Other hazards that do not result in classification	No information known.
2.2 Label elements	
Labelling according to Regulation (EC) No 1272/2008	Not applicable
Hazard pictograms	Not applicable
Signal word	Not applicable
Hazard statements	Not applicable
2.3 Other hazards	
Results of PBT and vPvB assessment	
PBT:	Not applicable.
vPvB:	Not applicable.

SECTION 3: Composition/information on ingredients

3.1 Substances	
CAS# Designation:	9047-22-7 Cathepsin B 1

SECTION 4: First aid measures

4.1 Description of first aid measures	
After inhalation	Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
After skin contact	Seek immediate medical advice. Instantly wash with water and soap and rinse thoroughly.
After eye contact	Seek immediate medical advice.
After swallowing	Rinse opened eye for several minutes under running water. Then consult doctor.
4.2 Most important symptoms and effects, both acute and delayed	Seek medical treatment.
4.3 Indication of any immediate medical attention and special treatment needed	No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media	
Suitable extinguishing agents	CO2, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.
5.2 Special hazards arising from the substance or mixture	
	If this product is involved in a fire, the following can be released: Decomposition products are unknown.
5.3 Advice for firefighters	
Protective equipment:	Wear self-contained breathing apparatus. Wear full protective suit.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures	
	Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation
6.2 Environmental precautions:	Do not allow material to be released to the environment without proper governmental permits. Do not allow product to reach sewage system or water bodies. Do not allow to enter the ground/soil.
6.3 Methods and material for containment and cleaning up:	Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Prevention of secondary hazards:	No special measures required.
6.4 Reference to other sections	See Section 7 for information on safe handling See section 8 for information on personal protection equipment. See Section 13 for information on disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling	
Information about protection against explosions and fires:	Keep containers tightly sealed. No information known.
7.2 Conditions for safe storage, including any incompatibilities	
Storage Requirements to be met by storerooms and containers:	Store in freezer (-20°C).
Information about storage in one common storage facility:	Protect from heat. Store away from oxidizing agents.

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Further information about storage conditions:

Store in freezer (-20°C).
Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.

7.3 Specific end use(s)

No further relevant information available.

SECTION 8: Exposure controls/personal protection**Additional information about design of technical systems:**

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

8.1 Control parameters**Components with critical values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Additional information:

No data

8.2 Exposure controls**Personal protective equipment****General protective and hygienic measures**

The usual precautionary measures should be adhered to in handling the chemicals.
Keep away from foodstuffs, beverages and food.
Instantly remove any soiled and impregnated garments.
Wash hands during breaks and at the end of the work.
Maintain an ergonomically appropriate working environment.
Use breathing protection with high concentrations.

Breathing equipment:**Protection of hands:**

Check protective gloves prior to each use for their proper condition.

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.

Material of gloves

Impervious gloves

Penetration time of glove material

Not determined

Eye protection:

Safety glasses

Body protection:

Protective work clothing.

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties****General Information****Appearance:**

Form: Liquid

Smell: Not determined

Odour threshold: Not determined.

pH-value: Not determined.

Change in condition

Melting point/Melting range: Not determined

Boiling point/Boiling range: Not determined

Sublimation temperature / start: Not determined

Inflammability (solid, gaseous) Not determined.

Ignition temperature: Not determined

Decomposition temperature: Not determined

Self-inflammability: Not determined.

Critical values for explosion:

Lower: Not determined

Upper: Not determined

Steam pressure: Not determined

Density Not determined

Relative density Not determined.

Vapour density Not determined.

Evaporation rate Not determined.

Solubility in / Miscibility with

Water: Not determined

Partition coefficient (n-octanol/water): Not determined.

Viscosity:

dynamic: Not determined.

kinematic: Not determined.

9.2 Other information

No further relevant information available.

SECTION 10: Stability and reactivity**10.1 Reactivity**

No information known.

10.2 Chemical stability

Stable under recommended storage conditions.

Thermal decomposition / conditions to be avoided:

No decomposition if used and stored according to specifications.

10.3 Possibility of hazardous reactions

Reacts with strong oxidizing agents

10.5 Incompatible materials:

Oxidizing agents

10.6 Hazardous decomposition products:Heat
No decomposition products known.**SECTION 11: Toxicological information****11.1 Information on toxicological effects**

Acute toxicity: No effects known.

LD/LC50 values that are relevant for classification:

No data

Skin irritation or corrosion:

May cause irritation

Eye irritation or corrosion:

May cause irritation

Sensitization:

No sensitizing effect known.

Germ cell mutagenicity:

No effects known.

Carcinogenicity:

No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

Reproductive toxicity:

No effects known.

Specific target organ system toxicity - repeated exposure:

No effects known.

Specific target organ system toxicity - single exposure:

No effects known.

Aspiration hazard:

No effects known.

Additional toxicological information:

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

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SECTION 12: Ecological information

12.1 Toxicity	No further relevant information available.
Aquatic toxicity:	No further relevant information available.
12.2 Persistence and degradability	No further relevant information available.
12.3 Bioaccumulative potential	No further relevant information available.
12.4 Mobility in soil	No further relevant information available.
Additional ecological information:	
General notes:	Do not allow material to be released to the environment without proper governmental permits. Water hazard class 1 (Self-assessment): slightly hazardous for water. Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system. Avoid transfer into the environment.
12.5 Results of PBT and vPvB assessment	
PBT:	Not applicable.
vPvB:	Not applicable.
12.6 Other adverse effects	No further relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods	Hand over to disposers of hazardous waste.
Recommendation	Must be specially treated under adherence to official regulations. Consult state, local or national regulations for proper disposal.
Uncleaned packagings:	
Recommendation:	Disposal must be made according to official regulations.

SECTION 14: Transport information

UN-Number	
ADR, ADN, IMDG, IATA	Not applicable
14.2 UN proper shipping name	
ADR, ADN, IMDG, IATA	Not applicable
14.3 Transport hazard class(es)	
ADR, ADN, IMDG, IATA	
Class	Not applicable
Packing group	
ADR, IMDG, IATA	Not applicable
14.5 Environmental hazards:	Not applicable.
14.6 Special precautions for user	Not applicable.
14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC	
Code	Not applicable.
UN "Model Regulation":	-

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture	
Australian Inventory of Chemical Substances	Substance is not listed.
Standard for the Uniform Scheduling of Drugs and Poisons	Substance is not listed.
National regulations	
Information about limitation of use:	For use only by technically qualified individuals.
Water hazard class:	Water hazard class 1 (Self-assessment): slightly hazardous for water.
Other regulations, limitations and prohibitive regulations	
ELINCS (European List of Notified Chemical Substances)	Substance is not listed.
Substances of very high concern (SVHC) according to REACH, Article 57	Substance is not listed.
REACH - Pre-registered substances	Substance is not listed.
15.2 Chemical safety assessment:	A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Department issuing data specification sheet:	Health, Safety and Environmental Department.
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) GHS: Globally Harmonized System of Classification and Labelling of Chemicals CAS: Chemical Abstracts Service (division of the American Chemical Society) LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent

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