Safety Data Sheet

MEGA B17-8

Section 1 – Identification of the substance/mixture and of the company/undertaking

1.1 product identifier
Product Name: Cellulase Enzyme
Product Code: Mega B17-8
1.2 Relevant identified uses of the substance or mixture and uses advised against
Relevant identified uses of the substance or mixture:
Auxiliary agents
Microbiological enzyme preparation with inert diluent
Sector of use [SU]:
SU 0- Other
SU 5- Manufacture of textiles, leather, fur
Chemical product category [PC]:
PC 0- Other
PC19- Intermediate
PC34- Textiles dyes, finishing and impregnating products, including bleaches and other processing aids
Process category [PROC]:
PROC 4- Use in batch and other process (synthesis) where opportunity for exposure arises
PROC 9- Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Article Categories [AC]:
AC 5- Fabrics, textiles and apparel
Environmental Release Category [ERC]:
ERC 4- Industrial use of processing aids in processes and products, not becoming part of articles
Uses advised against:
No information available at present.
1.3 Details of the Supplier of the safety data sheet:
Peli Bio-Chem Technology (Shanghai) Co., LTD
818 Long Hua East Road,
Greenland CBD Room 1305,
Shanghai 200023, China.
1.4 Emergency telephone number:

Phone: +86-21-6345-1884

Section 2 – Hazards Identification

2.1 Classification of the substance or mixture
2.1.1 Classification according to Regulation (EC) 1272/2008 (CLP):
Hazard class: Resp. Sens.
Hazard category: 1
Hazard statement: H334-May cause allergy or asthma symptoms or breathing difficulties if inhaled.
2.2 Label elements
In compliance with EC regulation No. 1272/2008 and its amendments:

Danger

H334-May cause allergy or asthma symptoms or breathing difficulties if inhaled.
P261-Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray
P284-Wear respiratory protection.
P304+P340-IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308+P313-IF exposed or concerned: Get medical advice/attention
P342+P311-If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

Cellulase
Enzymatic proteins (by-product, not otherwise specified)
1,2-benzisothiazol-3(2H)-one

2.3 Other hazard:
No data available.

Section 3 – Composition/information on ingredients

3.1 Substance:
No substances fulfill the criteria set forth in Annex II section A of the REACH regulation (EC) 1907/2006.

3.2 Mixtures
Composition:

Cellulase	
Pre-Registration number(REACH)	17-2120001352-78-0000
Index	647-002-00-3
EINECS, ELINCS, NLP	232-734-4
CAS	CAS 9012-54-8
content%	1-10
Classification according to Regulation (EC) 1272/2008 (CLP)	Resp. Sens. 1 .H334

Enzymatic proteins(by product, not otherwise specified)	
Registration number(REACH)	--
Index	---
EINECS, ELINCS, NLP	-
CAS	CAS N.V.
content%	1-5
Classification according to Regulation (EC) 1272/2008 (CLP)	Resp. Sens. 1 .H334

1,2-benzisothiazol-3(2H)-one	
Registration number(REACH)	--
Index	613-088-00-6
EINECS, ELINCS, NLP	220-120-9
CAS	CAS 2634-33-5
content%	0.005-<0,05
Classification according to Directive 67/548/EEC	Harmful, Xn, R22 Irritant, Xi, R38 Irritant, Xi, R41 Sensitizing, R43 dangerous for the environment. N. R50
Classification according to Regulation (EC) 1272/2008 (CLP)	Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1，H318 Skin Sens. 1，H317 Aquatic Acute 1，H400(M=10)

Section 4 - First Aid Measures

As a general rule, in case of doubts or if symptoms persist, always call a doctor.
Never induce swallowing in an unconscious person.

4.1 Description of first aid measures

Inhalation: Remove from contaminated area to fresh air. Seek medical attention if allergic response exhibited.

Eye Contact: Flush eyes with low pressure water for at least 15 minutes. If irritation persists seek medical attention.

Skin: Wash skin with soap and water. Remove contaminated clothes and wash.

Swallowing: Do not give patient anything orally.
In the event of swallowing, if the quantity is small (no more than one mouthful), rinse the mouth with water and consult a doctor.

4.2 Most important symptoms and effects, both acute and delayed

Irritation of the eyes
With long-term contact:
Irritation of the skin.
Sensitive individuals:
Allergic reaction
In case of sensitivity, concentrations below the limit value may already result in asthmatic symptoms.
Respiratory distress
Delayed effects from exposure can be expected.
In certain cases, the symptoms of poisoning may only appear after an extended period/after several hours.

4.3 Indication of any immediate medical attention and special treatment needed

No data available.

Section 5 – Firefighting Measures

Non-flammable.

5.1 Extinguishing media

Suitable extinguishing media

Adapt to the nature and extent of fire.
Water jet spray/foam/CO_2/dry extinguisher

Unsuitable extinguishing media

High volume water jet

5.2 Special hazards arising from the substance or mixture

In case of fire the following can develop:
Oxides of carbon
Oxides of nitrogen

Toxic pyrolysis products.

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes.
Protective respirator with independent air supply.
According to size of fire
Full protection, if necessary
Dispose of contaminated extinction water according to official regulations.

Section 6 – Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Consult the safety measures listed under headings 7 and 8.

6.2 Environmental precautions

Contain and control the leaks or spills with non-combustible absorbent materials such as sand, earth, vermiculite, diatomaceous earth in drums for waste disposal.

6.3 Methods and material for containment and cleaning up

Soak up with absorbent material (e.g. universal binding agent, sand, diatomaceous earth, sawdust) and dispose of according to Section 13.
Flush residue using copious water.
Clean soiled bottles immediately.

6.4 Reference to other sections

For personal protective equipment see Section 8 and for disposal instructions see Section 13.

Section 7 – Handling and Storage

In addition to information given in this section, relevant information can also be found in section 8 and 6.1.

7.1 Precautions for safe handling

Always wash hands after handling.
Remove and wash contaminated clothing before re-using.

7.1.1 General recommendations

Ensure good ventilation.
Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.
Observe directions on label and instructions for use.
Use working methods according to operating instructions.
No contact with products of this type in case of allergies, asthma and chronic respiratory tract disorders.

7.1.2 Notes on general hygiene measures at the workplace

General hygiene measures for the handling of chemicals are applicable.
Wash hands before breaks and at end of work.
Keep away from food, drink and animal feeding stuffs.

Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

7.2 Conditions for safe storage, including any incompatibilities

Avoid freezing. Store below 24°C.

7.3 Specific end use(s)

No data available.

Section 8 - Exposure Controls / Personal Protection

8.1 Control parameters

8.2 Exposure controls

8.2.1 Appropriate engineering controls

Ensure good ventilation. This can be achieved by local suction or general air extraction.
If this is insufficient to maintain the concentration under the WEL or AGW values, suitable breathing protection should be worn.
Applies only if maximum permissible exposure values are listed here.

8.2.2 Individual protection measures, such as personal protective equipment

General hygiene measures for the handling of chemicals are applicable.
Wash hands before breaks and at end of work.
Keep away from food, drink and animal feeding stuffs.
Remove contaminated clothing and protective equipment before entering areas in which food is consumed.
Eye/face protection:
Tight fitting protective goggles with side protection (EN 166) with side protection, with danger of projections
Skin protection-Hand protection:
Rubber gloves (EN 374).
Protective nitrite gloves (EN 374)
Minimum layer thickness in mm:
>=0,4
Permeation time (penetration time) in minutes:
>=480
The breakthrough times determined in accordance with EN 374 Part 3 were not obtained under practical conditions.
The recommended maximum wearing time is 50% of breakthrough time.
Protective hand cream recommended.
Skin protection-Other:
Protective working garments (e.g. safety shoes EN ISO 20345, long-sleeved protective working garments)
Respiratory protection:
Normally not necessary.
If fumes build up, use suitable breathing mask.

with formation of mist.
Filter A2 P2 (EN 14387), code color brown, white
Observe wearing time limitations for respiratory protection equipment.
Thermal hazards:
Not applicable
Additional information on hand protection-No tests have been performed.
In the case of mixtures, the selection has been made according to the knowledge available and the information about the contents.
Selection of materials derived from glove manufacturer's indications.
Final selection of glove material must be made taking the breakthrough times, permeation rates and degradation into account.
Selection of a suitable glove depends not only on the material but also on other quality characteristics and varies from manufacturer to manufacturer.
In the case of mixtures, the resistance of glove materials cannot be predicted and must therefore be tested before use.
The exact breakthrough time of the glove material can be requested from the protective glove manufacturer and must be observed.

8.2.3 Environmental exposure controls

No information available at present.

Section 9 - Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

General Information:

Physical State:	Liquid
Color:	Brownish Red
Odor:	Slight fermentation odor
Solubility in water:	Soluble
Odor threshold:	Not determined
pH-value:	5.5-7.0
Melting point/freezing point:	Not determined
Initial boiling point and boiling range:	Not determined
Flash point:	Not determined
Evaporation rate:	Not determined
Flammability (solid, gas):	n.a.
Lower explosive limit:	n.a.
Upper explosive limit:	n.a.
Vapor pressure:	Not determined
Vapor density (air=1):	Not determined
Density:	1.0-1.1 g/mL
Bulk density:	n.a.

Solubility(ies):	Not determined
Water solubility:	Mixable
Partition coefficient (n-octanol/water):	Not determined
Auto-ignition temperature:	Not determined
Decomposition temperature:	Not determined
Viscosity:	Not determined
Explosive properties:	Product is not explosive.
Oxidizing properties:	No

9.2 Other information

Miscibility:	Not determined
Fat solubility/solvent:	Not determined
Conductivity:	Not determined
Surface tension:	Not determined
Solvents content:	Not determined

Section 10 – Stability and Reactivity Data

10.1 Reactivity
No data available
10.2 Chemical stability
Stable with proper storage and handling.
10.3 Possibility of hazardous reactions
No dangerous reactions are known.
10.4 Conditions to avoid
See also section 11.
Strong heat
10.5 Incompatible materials
Avoid contact with other chemicals.
Avoid contact with oxidizing agents.
Avoid contact with strong alkalis.
Avoid contact with strong acids.
10.6 Hazardous decomposition products
See also section 5.2
No decomposition when used as directed.

Section 11 – Toxicological Information

Possibly more information on health effects, see Section 2.1 (classification).

Mega B17-8						
Toxicity/effect	End point	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:						n.d.a.
Acute toxicity, by dermal route:						n.d.a.
Acute toxicity, by inhalation:						n.d.a.
Skin corrosion /irritation:						n.d.a.
Serious eye damage/irritation:						n.d.a.
Respiratory or skin sensitization:						n.d.a.
Germ cell mutagenicity:						n.d.a.
Carcinogenicity:						n.d.a.
Reproductive toxicity:						n.d.a.
Specific target organ toxicity-single exposure (STOT-SE):						n.d.a.
Specific target organ toxicity-repeated exposure (STOT-SE):						n.d.a.
Aspiration hazard:						n.d.a.
Respiratory tract irritation:						n.d.a.
Repeated dose toxicity:						n.d.a.
Symptoms:						n.d.a.

Other information						Classification according to calculation procedure

Cellulase						
Toxicity/effect	End point	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>2000	mg/kg	Rat		
Skin corrosion /irritation:					OECD 404 (Acute Dermal Irritation /Corrosion)	Not irritant
Serious eye damage/ irritation:					OECD 405 (Acute Eye irritation /Corrosion)	Not irritant
Respiratory or skin sensitization:						Yes (inhalation) Experiences on persons.
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative

Aspiration hazard:						No
Symptoms:						asthmatic symptoms , breathing difficulties

1,2-benzisothiazol-3(2H)-one						
Toxicity/effect	End point	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	375	mg/kg	Rat		
Acute toxicity, by oral route:	ATE	500	mg/kg			
Acute toxicity, by dermal route:	LD50	4115	mg/kg	Rat		
Acute toxicity, by inhalation:	LC50	0.25	mg/l/4h	Rat		Dust Does not conform with EU classificati on.
Skin corrosion/ irritation:						Irritant
Serious eye damage/ irritation:						Intensively irritant
Respiratory or skin sensitization:				Guinea pig		Sensitizing (skin contact)
Germ cell mutagenicity						Negative

Section 12 – Ecological Information

Possibly more information on environmental effects, see Section 2.1 (classification)

Mega B17-8							
Toxicity/effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Toxicity to fish:							n.d.a.
Toxicity to daphnia:							n.d.a.
Toxicity to algae:							n.d.a.
Persistence and degradability:							n.d.a.
Bioaccumulative potential:							n.d.a.
Mobility in soil:							n.d.a.
Results of PBT and VPVB assessment							n.d.a.
Other adverse effects:							n.d.a.

Cellulase							
Toxicity/effect	Endpoint	Time	Value	Unit	Organism	test method	Notes
Toxicity to fish:	LC50	96h	>39.5	mg/l	OECD 203 (Fish, Acute Toxicity Test)		
Toxicity to daphnia:	EC50	48h	>39.5	mg/l	OECD 202 (Daphnia sp. Acute Immobilisation Test)		

Persistence and degradability:					OECD 301 B (Ready Biodegradability-Co2 Evolution Test)		Readily biodegradable
Bioaccumulative potential:	Log Pow		<0				

1,2-benzisothiazo1:3(2H)-one							
Toxicity/ effect	End point	Time	Value	Unit	Organism	test method	Notes
Toxicity to fish:	LC50	96h	1.3-1.6	mg/l	Salmo gairdneri		
Toxicity to fish:	LC50	96h	2.18	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	
Toxicity to fish:	LC50	96h	3.4	mg/l	Lepomis macrochirus		
Toxicity to daphnia:	EC50	48h	1.5-3.3	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilis-ation Test)	
Toxicity to algae:	EC50	72h	0.11	mg/l	Pseudokirchnerie lla subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
Toxicity to algae:	EC50	72h	0.15	mg/l	Chlorella vulgaris		
Toxicity to algae:	EC50	96h	0.055	mg/l	Pseudokirchnerie lla subcapitata		

Bioaccu-mulative potential:	Log Pow		1.11	mg/l			
Toxicity to bacteria	EC50	16H	0.4	mg/l	Pseudomon as putida		

Section 13 –Disposal Considerations

13.1 Waste treatment methods
For the substance 1 mixture 1 residual amounts
EC disposal code no.:
The waste codes are recommendations based on the scheduled use of this product.
Owing to the user's specific conditions for use and disposal, other waste codes may be allocated under certain circumstances. (2001/118/EC, 2001/119/EC, 2001/573/EC)
04 02 15 waste from finishing containing organic solvents
Recommendation:
Pay attention to local and national official regulations
E.g. suitable incineration plant.
E.g. dispose at suitable refuse site.
For contaminated packing material
Pay attention to local and national official regulations
Empty container completely.
Uncontaminated packaging can be recycled.
Dispose of packaging that cannot be cleaned in the same manner as the substance.
15 01 01 paper and cardboard packaging
15 01 02 plastic packaging

Section 14 – Transport Information

General statements

UN number:	n.a.

Transport by road/by rail (ADR/RID)

UN proper shipping name:	n.a.
Transport hazard class(es):	n.a.
Packing group:	n.a.
Classification code:	n.a.
LQ (ADR 2013):	n.a.
LQ (ADR 2009):	n.a.
Environmental hazards:	Not applicable

Tunnel restriction code:

Transport by sea (International Maritime Code for Dangerous Goods)

UN proper shipping name:	
Transport hazard class(es):	n.a.
Packing group:	n.a.
Marine Pollutant:	n.a.
Environmental hazards:	Not applicable

Transport by air (International Air Transport Association)

UN proper shipping name:	
Transport hazard class(es):	n.a.
Packing group:	n.a.
Environmental hazards:	Not applicable

Special precautions for user

Unless specified otherwise, general measures for safe transport must be followed.

Transport in bulk according to Annex II of MARPOL 73/78 and the International Bulk Chemical Code

Non-dangerous material according to Transport Regulations.

Section 15 – Regulatory Information

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

For classification and labeling see Section 2.

Observe restrictions:

Comply with trade association/occupational health regulations.

Observe youth employment law (German regulation).

Observe law on protection of expectant mothers (German regulation).

Regulation (EC) No 190712006, Annex XVII

Directive 20101751EU (Volatile organic compounds): n.a.

15.2 Chemical safety assessment

No data available

Section 16 – Additional Informations

Classification and processes used to derive the classification of the mixture in accordance with the ordinance (EG) 1272/2008 (CLP):

The following phrases represent the posted R phrases/H phrases, Hazard Class and Risk Category Code (GHSICLP) of the product and the constituents (specified in Section 2 and 3).
22 Harmful if swallowed.
38 Irritating to skin.
41 Risk of serious damage to eyes.
42 May cause sensitization by inhalation.
43 May cause sensitization by skin contact.
50 Very toxic to aquatic organisms.
H302 Harmful if swallowed.
H315 Causes skin irritation.

Classification in accordance with regulation (EC) No.1272/2008 (CLP)	Evaluation method used
Resp. Sens. 1, H334	Classification according to calculation procedure.

H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H400 Very toxic to aquatic life.
Resp. Sens.—Respiratory sensitization
Acute Tox.—Acute toxicity-oral
Skin Irrit.—Skin irritation
Eye Dam.—Serious eye damage
Skin Sens.—Skin sensitization
Aquatic Acute—Hazardous to the aquatic environment-acute

Any abbreviations and acronyms used in this document

ACGIH American Conference of Governmental Industrial Hygienists
ADR Accord europeen relatif au transport international des marchandises Dangereuses par Route(=European Agreement concerning the International Carriage of Dangerous Goods by Road)
AOEL Acceptable Operator Exposure Level
AOX Adsorbable organic halogen compounds
approx. approximately
Art., Art. no. Article number
ATE Acute Toxicity Estimate according to Regulation (EC) 127212008 (CLP)
CAS Chemical Abstracts Service
CLP Classification, Labelling and Packaging (REGULATION (EC) No 127212008 on classification, labelling and packaging of substances and mixtures)
e.g. for example (abbreviation of Latin 'exempli gratia'), for instance
EC European Community
EEC European Economic Community
EINECS European Inventory of Existing Commercial Chemical Substances
ELINCS European List of Notified Chemical Substances
EN European Norms
ERC Environmental Release Categories
EU European Union
incl. including, inclusive
LC lethal concentration
LC50 lethal concentration 50 percent kill
LCLo lowest published lethal concentration
LD Lethal Dose of a chemical
LD50 Lethal Dose, 50% kill
LDLo Lethal Dose Low

LQ Limited Quantities
MARPOL International Convention forthe Prevention of Marine Pollution from Ships
n.a. not applicable
n.c. not checked
n.d.a. no data available
OECD Organisation for Economic Co-operation and Development
PC Chemical product category
PROC Process category
REACH Registration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No 1907/2006 concerning
the Registration, Evaluation, Authorisation and Restriction of Chemicals)
REACH-IT List-No. 9xx-xxx-x No. is automatically assigned, e.g. to pre-registrations without a CAS No. or other numerical identifier. List Numbers do not have any legal significance, ratherthey are purely technical identifiers for processing a submission
via REACH-IT.
RID Reglement concernant 1e transport International ferroviaire de merchandises Dangereuses(=Regulation concerning the International Carriage of Dangerous Goods by Rail)
SU Sector of use