

# Safety Data Sheet

## Bacterial Protease

**CAROLINA**<sup>®</sup>  
www.carolina.com

### Section 1 Product Description

**Product Name:** Bacterial Protease  
**Recommended Use:** Science education applications  
**Synonyms:** Protease Enzyme, Alcalase  
**Distributor:** Carolina Biological Supply Company  
2700 York Road, Burlington, NC 27215  
1-800-227-1150  
**Chemical Information:** 800-227-1150 (8am-5pm (ET) M-F)  
**Chemtrec:** 800-424-9300 (Transportation Spill Response 24 hours)

### Section 2 Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

GHS Classification:

**Other Safety Precautions:** Not a dangerous substance according to GHS classification criteria.  
No known OSHA hazards.  
May cause irritation.  
May cause gastrointestinal discomfort.  
May cause irritation to respiratory tract.  
May cause irritation to skin.

### Section 3 Composition / Information on Ingredients

<u>Chemical Name</u>	<u>CAS #</u>	<u>%</u>
Protease	9014-01-1	100

### Section 4 First Aid Measures

#### Emergency and First Aid Procedures

**Inhalation:** In case of accident by inhalation: remove casualty to fresh air and keep at rest.  
**Eyes:** In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
**Skin Contact:** After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water.  
**Ingestion:** If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

### Section 5 Firefighting Procedures

**Extinguishing Media:** Use media suitable to extinguish surrounding fire.  
**Fire Fighting Methods and Protection:** Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.  
**Fire and/or Explosion Hazards:** N/A  
**Hazardous Combustion Products:** Carbon dioxide, Carbon monoxide

### Section 6 Spill or Leak Procedures

**Steps to Take in Case Material Is Released or Spilled:** No adverse health effects expected from the clean-up of spilled material. Follow personal protective equipment recommendations found in Section 8 of this (M)SDS. Ventilate the contaminated area. Remove soiled clothing and launder before reuse. Avoid the generation of dusts during clean-up.

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Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation. Avoid creating dusts. Cover material with absorbent and moisten and collect for disposal.

## Section 7 Handling and Storage

**Handling:** Avoid contact with skin and eyes.  
**Storage:** Keep container tightly closed in a cool, well-ventilated place.  
**Storage Code:** Green - general chemical storage

## Section 8 Protection Information

<u>Chemical Name</u>	<u>ACGIH</u>	<u>OSHA PEL</u>
	(TWA)	(TWA)
	(STEL)	(STEL)
No data available	N/A	N/A

### Control Parameters

**Engineering Measures:** No exposure limits exist for the constituents of this product. General room ventilation might be required to maintain operator comfort under normal conditions of use.

**Personal Protective Equipment (PPE):** Lab coat, apron, eye wash, safety shower.

**Respiratory Protection:** No respiratory protection required under normal conditions of use.

**Eye Protection:** Wear chemical splash goggles when handling this product. Have an eye wash station available.

**Skin Protection:** Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

**Gloves:** Natural latex,, Impervious rubber, Neoprene, Nitrile, Polyethylene

## Section 9 Physical Data

<b>Formula:</b> N/A	<b>Vapor Pressure:</b> N/A
<b>Molecular Weight:</b> N/A	<b>Evaporation Rate (BuAc=1):</b> N/A
<b>Appearance:</b> Off-white granules, fermentation odor.	<b>Vapor Density (Air=1):</b> >1
<b>Odor:</b> No data available	<b>Specific Gravity:</b> >1
<b>Odor Threshold:</b> No data available	<b>Solubility in Water:</b> Soluble
<b>pH:</b> No data available	<b>Log Pow (calculated):</b> No data available
<b>Melting Point:</b> No data available	<b>Autoignition Temperature:</b> No data available
<b>Boiling Point:</b> No data available	<b>Decomposition Temperature:</b> No data available
<b>Flash Point:</b> No data available	<b>Viscosity:</b> No data available
<b>Flammable Limits in Air:</b> N/A	<b>Percent Volatile by Volume:</b> N/A

## Section 10 Reactivity Data

**Reactivity:** No data available  
**Chemical Stability:** Stable under normal conditions.  
**Conditions to Avoid:** None known.  
**Hazardous Polymerization:** Will not occur

## Section 11 Toxicity Data

**Routes of Entry:** Inhalation, ingestion, eye or skin contact.  
**Symptoms (Acute):** Respiratory disorders, Eye disorders  
**Delayed Effects:** No data available

### Acute Toxicity:

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Oral LD50</u>	<u>Dermal LD50</u>	<u>Inhalation LC50</u>
Protease	9014-01-1	Oral LD50 Rat > 2000 mg/kg	Not determined	Not determined

### Carcinogenicity:

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<b>Chemical Name</b> No data available	<b>CAS Number</b> 9014-01-1	<b>IARC</b> Not listed	<b>NTP</b> Not listed	<b>OSHA</b> Not listed
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## Chronic Effects:

**Mutagenicity:** No evidence of a mutagenic effect.  
**Teratogenicity:** No evidence of a teratogenic effect (birth defect).  
**Sensitization:** No evidence of a sensitization effect.  
**Reproductive:** No evidence of negative reproductive effects.  
**Target Organ Effects:**  
**Acute:** See Section 2  
**Chronic:** N/A

## Section 12 Ecological Data

**Overview:** This material is not expected to be harmful to the ecology.  
**Mobility:** No data  
**Persistence:** No data  
**Bioaccumulation:** No data  
**Degradability:** No data  
**Other Adverse Effects:** No data

<b>Chemical Name</b> N/A	<b>CAS Number</b> 9014-01-1	<b>Eco Toxicity</b>
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## Section 13 Disposal Information

**Disposal Methods:** Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.  
**Waste Disposal Code(s):** Not Determined

## Section 14 Transport Information

<b>Ground - DOT Proper Shipping Name:</b> N/A	<b>Air - IATA Proper Shipping Name:</b> Not regulated for air transport by IATA.
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## Section 15 Regulatory Information

**TSCA Status:** All components in this product are on the TSCA Inventory.

<b>Chemical Name</b>	<b>CAS Number</b>	<b>§ 313 Name</b>	<b>§ 304 RQ</b>	<b>CERCLA RQ</b>	<b>§ 302 TPQ</b>	<b>CAA 112(2) TQ</b>
No data available	9014-01-1	No	No	No	No	No

## Section 16 Additional Information

**Revised:** 09/03/2014

**Replaces:** 09/03/2014

**Printed:** 04-21-2015

The information provided in this (Material) Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the (Material) Safety Data Sheet.

### Glossary

ACGIH	American Conference of Governmental Industrial Hygienists	NTP	National Toxicology Program
CAS	Chemical Abstract Service Number	OSHA	Occupational Safety and Health Administration
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	PEL	Permissible Exposure Limit
DOT	U.S. Department of Transportation	ppm	Parts per million
IARC	International Agency for Research on Cancer	RCRA	Resource Conservation and Recovery Act
N/A	Not Available	SARA	Superfund Amendments and Reauthorization Act
		TLV	Threshold Limit Value
		TSCA	Toxic Substances Control Act
		IDLH	Immediately dangerous to life and health