

## **MATERIAL SAFETY DATA SHEET**

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### **Section 1 - Product and Company Identification**

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**Product Identification:** PROTEINASE K SOLUTION  
**Date of MSDS:** 01/01/2006 **Technical Review Date:** 04/06/2006  
**FSC:** 6505 **NIIN:** LIIN: 00N092521  
**Submitter:** N NF  
**Status Code:** A  
**MFN:** 01  
**Article:** N  
**Kit Part:** N

### **Manufacturer's Information**

**Manufacturer's Name:** Genet Bio Co.  
**Manufacturer's Address1:** B-412, Migun Techno World II, Techno2-ro, Yuseong-gu  
**Manufacturer's Address2:** Daejeon  
**Manufacturer's Country:** South Korea  
**General Information Telephone:** 82-0502-523-3484  
**Emergency Telephone:** 82-0502-523-3485  
**Proprietary:** N  
**Reviewed:** Y  
**Published:** Y

### **Contractor Information**

**Contractor's Name:** Genet Bio  
**Contractor's Address1:** B-412, Migun Techno World II, Techno2-ro, Yuseong-gu  
**Contractor's Address2:** Daejeon, South Korea  
**Contractor's Telephone:** 82-0502-523-3485

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### **Section 2 - Composition/Information on Ingredients**

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**Ingredient Name:** BACILLUS SUBTILIS BPN; (PROTEOLYTIC ENZYME)  
**Ingredient CAS Number:** 1395-21-7 **Ingredient CAS Code:** T  
**RTECS Number:** C09450000 **RTECS Code:** T  
**=WT:** 20. **=WT Code:** M  
**=Volume:** **=Volume Code:**  
**>WT:** **>WT Code:**  
**>Volume:** **>Volume Code:**  
**<WT:** **<WT Code:**  
**<Volume:** **<Volume Code:**  
**% Low WT:** **% Low WT Code:**  
**% High WT:** **% High WT Code:**  
**% Low Volume:** **% Low Volume Code:**  
**% High Volume:** **% High Volume Code:**  
**% Text:**  
**% Enviromental Weight:**  
**Other REC Limits:** N/P  
**OSHA PEL:** N/P **OSHA PEL Code:**  
**OSHA STEL:** N/P **OSHA STEL Code:**  
**ACGIH TLV:** NOT ESTABLISHED **ACGIH TLV Code:** T  
**ACGIH STEL:** C0.00006 MG/M3 **ACGIH STEL Code:** T

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**EPA Reporting Quantity:**  
**DOT Reporting Quantity:**  
**Ozone Depleting Chemical:** N

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### Section 3 - Hazards Identification, Including Emergency Overview

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**Health Hazards Acute & Chronic:** A SMALL PERCENTAGE OF THE POPULATION WILL EXHIBIT ALLERGIC REACTIONS TO THE ENZYME. SYMPTOMS OF EXPOSURE MAY INCLUDE: FATIGUE, WEIGHT LOSS, COUGHING AND SHORTNESS OF BREATH.

**Signs & Symptoms of Overexposure:**

SEE HEALTH HAZARDS.

**Medical Conditions Aggravated by Exposure:**

NOT APPLICABLE.

**LD50 LC50 Mixture:** N/P

**Route of Entry Indicators:**

**Inhalation:** YES

**Skin:** YES

**Ingestion:** YES

**Carcinogenicity Indicators**

**NTP:** NO

**IARC:** NO

**OSHA:** NO

**Carcinogenicity Explanation:** THIS PRODUCT CONTAINS NO CARCINOGENS (NTP, IARC OR OSHA).

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### Section 4 - First Aid Measures

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**First Aid:**

EYES: FLUSH CONTAMINATED EYE(S) WITH LARGE VOLUMES OF WATER FOR AT LEAST 15 MINUTES. GET MEDICAL ATTENTION IF EYE(S) REMAIN IRRITATED. SKIN: FLUSH CONTAMINATED AREAS WITH LARGE VOLUMES OF WATER FOR AT LEAST 15 MINUTES AS CONTAMINATED CLOTHING IS REMOVED. GET MEDICAL ATTENTION IF AREA REMAINS IRRITATED. DO NOT WEAR CONTAMINATED CLOTHING UNTIL AFTER IT HAS BEEN PROPERLY CLEANED. INGESTION: KEEP VICTIM WARM AND CALM. GET IMMEDIATE MEDICAL ATTENTION. INHALATION: REMOVE VICTIM TO FRESH AIR. GIVE OXYGEN IF BREATHING BECOMES DIFFICULT. SHOULD BREATHING STOP, GIVE ARTIFICIAL RESPIRATION.

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### Section 5 - Fire Fighting Measures

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**Fire Fighting Procedures:**

USE NIOSH APPROVED SCBA AND FULL PROTECTIVE EQUIPMENT (FP N). IF POSSIBLE, HAVE THIS PRODUCT REMOVED FROM THE FIRE SCENE.

**Unusual Fire or Explosion Hazard:**

NOT APPLICABLE. NFPA HAZARD IDENTIFICATION RATING SYSTEM: HEALTH - 1; FIRE - 0; REACTIVITY - 0.

**Extinguishing Media:**

NO SPECIFIC INFORMATION IS KNOWN OF THE FLASH POINTS OR EXPLOSION LIMITS. USE MEDIA SPECIFIC FOR SITE CONDITIONS.

**Flash Point:** >200.C, 392.F **Flash Point Text:**

**Autoignition Temperature:**

**Autoignition Temperature Text:** N/P

**Lower Limit(s):** N/A

**Upper Limit(s):** N/A

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## Section 6 - Accidental Release Measures

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### Spill Release Procedures:

VENTILATE THE AREA. INITIATE CLEANING UP SPILL USING EQUIPMENT & MATERIAL AS NOTED IN "EXPOSURE CONTROL INFO" SECTION. IF PRODUCT IS DRY, MOP UP. IF PRODUCT IS IN SOLUTION, USE ABSORBENT MATERIAL TO CLEAN UP SPILLED SOLUTION. ONCE ABSORBENT IS SPENT, PLACE ALL CONTAMINATED DISPOSABLES INTO A SUITABLE CONTAINER, SEAL, LABEL AND HOLD FOR DISPOSAL.

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## Section 7 - Handling and Storage

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### Handling and Storage Precautions:

### Other Precautions:

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## Section 8 - Exposure Controls & Personal Protection

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### Respiratory Protection:

NIOSH APPROVED RESPIRATOR APPROPRIATE FOR EXPOSURE OF CONCERN (FP N). NONE REQUIRED IF VENTILATION IS ADEQUATE.

### Ventilation:

PROVIDE ADEQUATE LOCAL EXHAUST VENTILATION.

### Protective Gloves:

RUBBER OR CHEMICAL RESISTANT GLOVES.

**Eye Protection:** ANSI APPROVED CHEMICAL WORKERS GOGGLES (FP N).

**Other Protective Equipment:** ANSI APPROVED EYE WASH & DELUGE SHOWER (FP N). A LAB COAT SHOULD BE WORN.

**Work Hygienic Practices:** UPON COMPLETION OF WORK ACTIVITIES INVOLVING THIS PRODUCT. WASH ANY EXPOSED BODY AREAS THOROUGHLY WITH SOAP AND WATER.

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## Section 9 - Physical & Chemical Properties

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### HCC:

**NRC/State License Number:**

**Net Property Weight for Ammo:**

**Boiling Point: Boiling Point Text:** NOT APPLICABLE

**Melting/Freezing Point: Melting/Freezing Text:** N/P

**Decomposition Point: Decomposition Text:** N/P

**Vapor Pressure:** NOT APPLICABLE **Vapor Density:** N/A

**Percent Volatile Organic Content:**

**Specific Gravity:** NOT APPLICABLE

**Volatile Organic Content Pounds per Gallon:**

**pH:** N/P

**Volatile Organic Content Grams per Liter:**

**Viscosity:** N/P

**Evaporation Weight and Reference:** NOT APPLICABLE

**Solubility in Water:** SHOULD BE FAIRLY SOLUBLE

**Appearance and Odor:** LYOPHILIZATE.

**Percent Volatiles by Volume:** NOT APPLICABLE

**Corrosion Rate:** N/P

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## Section 10 - Stability & Reactivity Data

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**Stability Indicator:** YES

**Materials to Avoid:**

NOT APPLICABLE.

**Stability Condition to Avoid:**

PRODUCT IS STABLE UNDER NORMAL HANDLING AND STORAGE CONDITIONS. AVOID EXCESS HEAT, FLAME AND PRESSURE.

**Hazardous Decomposition Products:**

NOT APPLICABLE.

**Hazardous Polymerization Indicator:** NO

**Conditions to Avoid Polymerization:**

NOT APPLICABLE.

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## Section 11 - Toxicological Information

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**Toxicological Information:**

THIS PRODUCT CONTAINS HAZARDOUS INGREDIENT: PROTEOLYTIC ENZYME (1395-21-7) - 20%. THE TOXICOLOGICAL PROPERTIES OF THIS PRODUCT HAVE NOT BEEN DETERMINED.

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## Section 12 - Ecological Information

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None Listed

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## Section 13 - Disposal Considerations

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**Waste Disposal Methods:**

DISPOSE OF I/A/W ALL STATE, LOCAL AND FEDERAL REGULATIONS.

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## Section 14 - MSDS Transport Information

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None Listed

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## Section 15 - Regulatory Information

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None Listed

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## Section 16 - Other Information

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**Other Information:**

CHEMICAL NAME OF PRODUCT: WATER WHICH HAS BEEN TREATED WITH 0.1% DIETHYLPYROCARBONATE (DEPC) AND SUBSEQUENTLY AUTOCLAVED. THE HAZARDS IDENTIFIED WITH THIS PRODUCT ARE BASED ON THE HAZARDS OF THE INDIVIDUAL COMPONENT(S) AND NOT ON THE SOLUTION AS A WHOLE. THIS IS BASED ON THE SAF-T-DATA (TRADEMARK OF MALLINCKRODT BAKER, INC) RATINGS: HEALTH=1 (SLIGHT); FLAMMABILITY=1 (SLIGHT); REACTIVITY=1 (SLIGHT) ; CONTACT=1 (SLIGHT).

## HAZCOM Label Information

**Product Identification:** Proteinase K solution

**Assigned Individual:** N

**Company Name:** Genet Bio

**Health Emergency Telephone:** +82-0502-523-3484

**Label Required Indicator:** Y

**Date Label Reviewed:** 04/06/2006

**Status Code:** A

**Manufacturer's Label Number:**  
**Date of Label:**  
**Year Procured:** N/K  
**Organization Code:** F  
**Chronic Hazard Indicator:** Y  
**Eye Protection Indicator:** YES  
**Skin Protection Indicator:** YES  
**Respiratory Protection Indicator:** YES  
**Signal Word:** CAUTION  
**Health Hazard:** Slight  
**Contact Hazard:** Slight  
**Fire Hazard:** None  
**Reactivity Hazard:** None