

# Material Safety Data Sheet

For

Determination of a Amino Acid  
(Sequence of a Peptide)

8-160

Please note that an MSDS is included only for those products that are chemicals. Some materials household products, e.g. soap, are not considered chemicals.

In the interest of safety, Kemtec™ has provided dilute chemicals, where possible, and recommends using them in small amounts. By using Kemtec™ dilute chemicals, safety is enhanced, chemical disposal is significantly reduced and is virtually eliminated.

KEMTEC™/T&S Educational, Inc.  
8944 BECKETT ROAD  
WEST CHESTER, OHIO 45069  
(513) 860-4949





**Educational, Inc.**  
 894 West Cl...  
 51...  
 Fax (...)

**ERI**  
 Keith R...  
 OH...  
 D-494...  
 82-91

**ETD DATA SHEET**

MSDS No. 1501 550  
 Effective Date: 10/10/1993

**EMERGENCY ASSISTANCE**

**CHEMTRIX**  
 800-424-9300  
 Dry 714-224-1777

Health	3
Flam	0
Reactivity	2

**AD FATH'G**  
 HAZARD INDEX  
 HIGH EXPLOSIVE

1	2	3	4
---	---	---	---

**S** ...  
 % ...  
 0-100% ...  
 \$16 Section V.

**FLV Units**

<b>O = 1</b>	2-1317 at 25°C
	Not available as solid.
	Not available (N.A.)

**HAZARD DATA**

SHA-approved self-  
 full protective clothing.  
 ton. Flood with water.  
 this material. Contact with  
 ighly irritating skin.

AGE NO. 393

Contact with acids, alkalis or water  
 may combine with hydrochloric  
 acids to form hydrogen chloride  
 gas. Contact with water liberates  
 heat and may cause skin irritation.

**NAME**

**SODIUM HYDROXIDE**

Caustic Soda; Lye

NaOH

up to 2.5 Kg.

1310-73-2

**INGREDIENT**

Component(s)

oxide

**POISON**

IRITATE SKIN AND EYE BURNS. MA

DO NOT INHALE AS DUST O

**PHYSICAL**

mp (°F) 318°C (604°F)

bp (°F) 1390°C (2534°F)

solubility (mm Hg) < 20°C

viscosity (cP) N/A

Water 109 grams dissolve

Appearance & Odor White pellets, flake.

**FIRE HAZARD**

Non-combustible (NA).

Use water spray on fire involt

**FIRE FIGHTING**

In fire contain. Must use water from other side.

**AGENCY RESPONSE GUIDEBOOK**

**FIRE AND HAZARD**

Not or may cause molten metal splash or cause skin irritation.

**SODIUM HYDROXIDE, SOL**

Department of Labor, essential

UN 1501

ERG 1501

PL 1501

SI 1501

Ex 1501

1501

1501



T&E  
Calvin

# MATERIAL SAFETY

8944 Beckert Rd.  
Chester, OH 45069  
(513) 860-4949  
fax (513) 682-8181

MSDS N  
Effective

## 24 HOUR EMERGEN



CHEMICAL  
800-422-7121  
Day 718

MSDS N  
November 19, 1995

## DATA SHEET

HAZARD RATINGS  
Health 2  
Flame 1  
Reactivity 1  
Instability 1

### PERCENTS OF MIXTURES

Component	Percentage
1	100%

### PHYSICAL DATA

Specific Gravity (H <sub>2</sub> O = 1)	
Percent Volatile by Volume (%)	
Evaporation Rate	

### EXPLOSION HAZARD

Flammable Limits in Air	NA
% by Volume	NA

(CO<sub>2</sub>): dry chemical (ABC).

Conditions, wear a NIOSH/MSHA-approved respirator and protective clothing to protect eyes.

available.

Similar to form OSHA-20

### EYES

None or  
Oral

### HAZ

Published  
No: 280

EYES, swelling, pain at site of contact. Flush with water for 15 minutes. Call physician.

Call physician immediately if irritation persists. Do not use if irritation persists.

EYES, lower eyelids. Flush with water for 15 minutes. Call physician.

Call physician immediately if irritation persists. Do not use if irritation persists.

EYES, irritation. Flush with water for 15 minutes. Call physician.

Call physician immediately if irritation persists. Do not use if irritation persists.

EYES, irritation. Flush with water for 15 minutes. Call physician.

Call physician immediately if irritation persists. Do not use if irritation persists.

EYES, irritation. Flush with water for 15 minutes. Call physician.

Call physician immediately if irritation persists. Do not use if irritation persists.

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Call physician immediately if irritation persists. Do not use if irritation persists.

EYES, irritation. Flush with water for 15 minutes. Call physician.

Call physician immediately if irritation persists. Do not use if irritation persists.

EYES, irritation. Flush with water for 15 minutes. Call physician.

Call physician immediately if irritation persists. Do not use if irritation persists.



3M, Inc.

6944 SECRET ROAD  
WEST CHESTER, PA 19380  
(317) 666-4949 Fax: (317) 666-4948

MSDS No. 10000000  
Effective Date: November 1999

**EMERGENCY ASSISTANCE**

CHEMTREC  
800-424-9300  
Day 716-226-8177

**HAZARD RATING**

SLIGHT MODERATE  
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**IDENTIFICATION**

NAME: 141

HTHALEIN

2-hydroxyphenyl]phthalide

9.

**INGREDIENTS**

1(s)

under

HARMFUL IF SWALLOWED.

**PHYSICAL DATA**

259-263°C (498°-505°F)

Decomposes.

Negligible as solid.

N/A

0.004% at 25°C.

White powder; no odor.

**FIRE AND EXP**

than 256°C.

dioxide; dry chemical; water spray; foaming

It is possible, isolate chemical with a large volume of water. Wear a NIOSH-approved respirator when worn.

Fire or excessive heat can react vigorously with oxidizing materials when burned.

Regulated.

Amount of labor essentially similar to other

amount of labor

amount of labor

amount of labor

amount of labor

amount of labor

amount of labor

amount of labor

amount of labor

amount of labor

amount of labor

**HAZARD DATA**

N/A

N/A

N/A

N/A

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**EXPOSURE CONTROLS**

Engineering controls

Administrative controls

Personal protective equipment

Respiratory protection

Hand protection

Foot protection

Eye protection

Ear protection

Other protective measures

First aid measures

Spill and leak procedures

Disposal methods

Stability

Reactivity

Toxicity

Ecotoxicity

Environmental fate

Environmental transport

Environmental effects

Environmental monitoring

Environmental assessment

Environmental management

Environmental reporting

Environmental communication

Environmental documentation

Environmental record keeping

Environmental compliance

Environmental liability

Environmental risk management

Environmental policy

Environmental strategy

**REGULATORY INFORMATION**

OSHA

NIOSH

EPA

DOT

ICAO

IMO

WTO

WHO

UN

EU

WHO

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**OTHER INFORMATION**

Preparation

Storage

Shipping

Handling

Disposal

Recycling

Recovery

Reuse

Renewal

Restoration

Rehabilitation

Reclamation

Reconstruction

Recreation

Recreation

Recreation

Recreation

Recreation

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Recreation

Label Identity: DNP Peptide

**Product Name:** DNP-Peptide

**Chemical Name:** C

**Synonyms:**

**RTECS:** Not hazardous

**Hazardous Components:** DNP Peptide CAS #

**Properties:** Solid

**Health Hazard Data:**

Not hazardous

Only selected registry of toxic effects of chemical substances data is reported here. See RTECS entry for complete information.

**Health Hazard:**

Toxicological properties have not been thoroughly investigated

**Skin and eye irritation:**

Irritant. Keep away from eyes. Do not breathe in dust of this product.

**Physical Hazards/Reactivity Data:**

Hygroscopic. Avoid exposure to room or damp air.

Irritant to eyes and skin.

Store at room temperature.

**Incompatibilities:**

Strong oxidizing agents.

**Hazardous Combustion or Decomposition Products:**

Carbon monoxide, and carbon dioxide and nitrogen oxides

Emits toxic fumes under fire conditions.

Use water spray, dry chemical powder alcohol or polymer foam

Meets criteria for RTECS registry of toxic effects of chemical substances. Data is presented here only as a selected registry. See actual entry in RTECS for complete information.

**Control Measures:**

Keep container closed and stored in an area which is cool and dry. Keep away from flames and high heat.

Use adequate ventilation when dispensing or handling. Use gloves when handling. Avoid prolonged or repeated exposure to the solid with skin or lungs. Store in a cool, dry place. Avoid exposure to damp air or humid regions. If inhaled, remove to fresh air.

If spilled, wipe up using rubber gloves. Rinse with water. Do not use paper towels. Be sure that wiping materials are stored in a flame proof container.

The above information is believed to be correct, though not all inclusive. KEMTEC shall not be liable for damage or injury resulting from handling the above product. The materials provided by KEMTEC are for use only in the procedures included in the kit and should be discarded in accordance with all applicable regulations within one year of purchase.



**Label Identity:** DNP-Glycine



**Product Name:** DNP-Glycine

**Chemical Name:** DNP-Glycine

Synonyms: DNP-Glycine, N-(2,4-dinitrophenyl)glycine

**RTECS:** MC0070000

**Hazardous Components:** DNP-Glycine CAS # 1084-76-0

**Properties:** Solid

**Health Hazard Data:**

Not hazardous

Only selected registry of toxic effects of chemical substances data is reported here. See RTECS entry for complete information.

**Health Hazard:**

Toxicological properties have not been thoroughly investigated.

**Skin and eye irritation:**

Irritant. Keep away from eyes. Do not breathe in dust of this product.

**Physical Hazards/Reactivity Data:**

Hygroscopic. Avoid exposure to room or damp air.

Irritant to eyes and skin.

Store at room temperature.

**Incompatibilities:**

Strong oxidizing agents.

**Hazardous Combustion or Decomposition Products:**

Carbon monoxide, and carbon dioxide and nitrogen oxides.

Emits toxic fumes under fire conditions.

Use water spray, dry chemical powder alcohol or polymer foam.

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

Most criteria for RTECS lists of toxic effects of chemical substances. Data is not listed in registry. See actual entry in KEMTEC for complete information.

**Control Measures:**

Keep container closed and stored in an area which is cool and dry. Keep away from flames and high heat. Use adequate ventilation when dispensing or handling. Use in hood. Do not take internally. Wear goggles and gloves when handling. Avoid prolonged or repeated exposure to the solid with skin or lungs. Store in a cool dry place. Avoid exposure to damp air or humid regions. If spilled, remove to fresh air.

If spilled, wipe up using rubber gloves. Rinse with water. Do not use paper towels. Be sure that wiping materials are stored in a flame proof container.

The above information is believed to be correct, though not all inclusive. KEMTEC shall not be liable for damage to persons or property. This information is for informational purposes only. It is not intended to be used as a substitute for safety procedures included in the kit and should be discarded in accordance with all applicable regulations within one year of purchase.





**Product Name:** Glycine

**Chemical Name:** Glycine, free base, Amino acid

**Synonyms:** Glycine L

**RTECS:** MB7600000

**Hazardous Components:**

Glycine CAS # 56-10-6

**Health Hazard Data:**

ORI-RAT LD50: 7930 mg/kg

YACHDS 5.1502.77

VN-RAT LD50: 2000 mg/kg

YACHDS 5.1502.77

EPA TSCA chemical inventory 1986

Toxicological properties have not been fully investigated.

Only selected registry of toxic effects of chemical substances data is reported here. See RTECS entry for complete information.

**Health Hazard:**

May be harmful by inhalation, ingestion, or skin absorption. May cause skin irritation.

Toxicological properties have not been thoroughly investigated.

Laboratory experiments have shown mutagenic effects.

**Skin and eye irritation:**

Irritant. Keep away from eyes. Do not breathe in dust of this product.

**Physical Hazards/Reactivity Data:**

Hygroscopic. Avoid exposure to room or damp air.

Irritant to eyes and skin.

Store at room temperature.

**Incompatibilities:**

Strong oxidizing agents.

**Hazardous Combustion or Decomposition Products:**

Carbon monoxide, and carbon dioxide and nitrogen oxides.

Emits toxic fumes under fire conditions.

Use water spray, dry chemical powder, alcohol or polymer foam.

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

Meets criteria for RTECS registry of toxic effects of chemical substances. Data is presented here only as a selected registry. See actual entry in RTECS for complete information.

**Control Measures:**

Keep container closed and stored in an area which is cool and dry. Keep away from flames and high heat.

gloves when handling. Avoid prolonged or repeated exposure to dusts or vapors of this product. Avoid exposure to damp air or humid regions. If inhaled, remove to fresh air.

If spilled, wipe up using rubber gloves. Rinse with water. Do not use paper towels. Be sure that wiping materials are stored in a flame proof container.

The above information is believed to be correct, though not all inclusive. KEMTEC shall not be liable for damage or injury resulting from handling the above product. The materials provided by KEMTEC are for use only in the procedure included in the kit and should be discarded in accordance with all applicable regulations within one year of purchase.

**Label Identity:**

**Proline**

7/12/01

**Product Name:** Proline (C<sub>6</sub>H<sub>14</sub>N<sub>4</sub>O<sub>2</sub>)

**Chemical Name:** Proline, Amino acid



Gateway to Knowledge

**Hazardous Components:** Proline CAS # 147-85-3

**Properties:** White crystalline solid at room temperature. MP>245°C decomposes

**Health Hazard Data:**

Not hazardous

EPA Genetox Program, 1986, negative, host mediated assay

EPA TSCA chemical inventory 1986

Only selected registry of toxic effects of chemical substances RTECS have been presented here. See actual entry in

RTECS for complete information.

**Health Hazard:**

Toxicological properties have not been thoroughly investigated.

**Skin and eye irritation:**

Irritant. Keep away from eyes. Do not breathe in dust of this product.

**Physical Hazards/Reactivity Data:**

Hygroscopic. Avoid exposure to room or damp air.

Irritant to eyes and skin.

Store at room temperature.

**Incompatibilities:**

Strong oxidizing agents.

**Hazardous Combustion or Decomposition Products:**

Carbon monoxide, and carbon dioxide and nitrogen oxides.

Emits toxic fumes under fire conditions.

Use water spray, dry chemical powder, alcohol or polymer foam.

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

**First Aid:**

In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes. In case of contact, immediately wash skin with soap and copious amounts of water. If inhaled, remove to fresh air.

If not breathing give artificial respiration. If breathing is difficult give oxygen. If swallowed, wash out mouth with water provided person is conscious. call a physician. Wash contaminated clothing before

**Control measures:**

Keep container closed and stored in an area which is cool and dry. Keep away from flames and high heat. Use adequate ventilation when dispensing or handling. Use in hood. Do not take internally.

Wear goggles and gloves when handling. Avoid prolonged or repeated exposure to the solid with

If spilled, wipe up using rubber gloves. Rinse with water. Do not use paper towels. Be sure that wiping materials are stored in a flame proof container. May cause spontaneous combustion.

The above information is believed to be correct, insofar as it is inclusive. Kemtec shall not be held liable for damage to

property resulting from handling the above product. The materials provided by Kemtec are for use only in the procedures

included in the kit and should be discarded in accordance with an applicable regulation within one year of purchase.

Product Name: L-lysine  
Chemical Name: L-lysine, Amino acid  
Synonyms: Lysine-L

RTECS: OL5540000

Hazardous Components: L-lysine CAS # 56-84-7-1

Properties: White crystalline solid at room temperature MP 212°C to 214°C



Health Hazard Data:

EPA Genetox program 1986, negative, Sperm morphology-human  
EPA TSCA chemical inventory, 1986

Health Hazard:

Toxicological properties have not been thoroughly investigated.

Skin and eye irritation:

Irritant. Keep away from skin, clothing, and eyes. Do not breathe in dust of this product.

Physical Hazards/Reactivity Data:

Hazardous. Avoid exposure to room or damp air.

Irritant to eyes and skin.  
Store at room temperature.

Incompatibilities:

Carbon monoxide, and carbon dioxide and nitrogen oxides.

Hazardous Combustion or Decomposition Products:

Use water spray, carbon dioxide, dry chemical powder alcohol or polymer foam.

Wear self contained breathing apparatus and protective clothing in prevent contact with skin and eyes.

Meets criteria for OSHA Medical Records rule: EEREAC 47 30420-82

Control Measures:

Keep container closed and stored in an area which is cool and dry. Keep away from flames and high heat. Use adequate ventilation when dispensing or handling. Use in hood. Do not take internally. Wear goggles and gloves when handling. Avoid prolonged or repeated exposure to the solid with skin or lungs. Store in a cool, dry place. Avoid exposure to damp air or humid regions. If spilled, wipe up using rubber gloves. Rinse with water. Do not use paper towels. Be sure that

The above information is believed to be correct, though not all inclusive. Kemtec shall not be held liable for damage or injury resulting from handling the above product. The materials provided by Kemtec are for use only in the procedures

**Label Identity:**

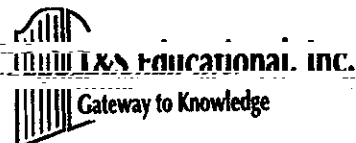
Phenylalanine

7/12/01

**Product Name:** Phenylalanine  
**Chemical Name:** Phenylalanine (C<sub>9</sub>H<sub>11</sub>NO<sub>2</sub>)  
**RTECS:** AY7535000

**Hazardous Components:** Phenylalanine CAS # 63-91-2

**Properties:** White crystalline solid at room temperature.



**Health Hazard Data:**

IMP-KAT LD50 5287 mg/kg  
EPA TSCA chemical inventory, 1986  
NETOD7 1.79.79  
Toxicological properties have not been fully investigated.

Only selected registry of toxic effects of chemical substances RTECS, have been presented here. See actual entry in RTECS for complete information.

**Health Hazard:**

Irritant. May cause irritation.  
Laboratory experiments have shown physiological effects.

**Skin and eye irritation:**

Irritant. Keep away from eyes. Do not breathe in dust of this product.

**Physical Hazards/Reactivity Data:**

Hygroscopic. Avoid exposure to room or damp air.  
Irritant to eyes and skin.  
Store at room temperature.

**Incompatibilities:**

Strong oxidizing agents.

**Decomposition Products:**  
Carbon monoxide, carbon dioxide, and nitrogen oxides.  
Emits toxic fumes under fire conditions.  
Use water spray, dry chemical powder alcohol or polymer foam.

**Control Measures:**

Keep away from flames and high heat. Use adequate ventilation which is exhausting to outdoors. Avoid prolonged or repeated exposure to the solid which is cool and dry. Keep away from flames and high heat. Use adequate ventilation which is exhausting to outdoors. Avoid prolonged or repeated exposure to the solid which is cool and dry. Avoid exposure to damp air or humid regions. skin or linens. Store in a cool, dry place. Avoid exposure to damp air or humid regions. Wiping materials are stored in a flame proof container. May cause spontaneous combustion.

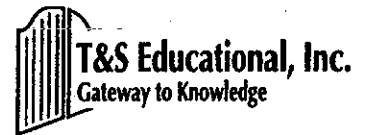
The above information is believed to be correct, though not all inclusive. Kemtec shall not be held liable for damage or injury resulting from handling the above product. The materials provided by Kemtec are for use only in the procedures included in the kit and should be used in accordance with the instructions of each component.

Label Identity:

Arginine

7/12/01

**Product Name:** Arginine  
**Chemical Name:** Arginine (C<sub>6</sub>H<sub>14</sub>N<sub>4</sub>O<sub>2</sub>)  
**RTECS:** HA2690000  
**Hazardous Components:** Arginine CAS # 17806-42-7  
**Properties:** White crystalline solid



**Health Hazard Data:**

**Toxicity Data and References:**

OPD 50 5510 " KSRNAM 4,135,70  
SUB-MUS LD50 2670 mg/kg KSRNAM 4,135,70  
EPA TSCA chemical inventory 1986

Only selected registry of toxic effects of chemical substances RTECS have been presented here. See actual entry in RTECS for complete information.

**Health Hazard:**

May be harmful if swallowed, inhaled, or absorbed through skin. Causes eye and skin irritation. Material's physical and toxicological properties have not been thoroughly investigated.

**Skin and eye irritation:**

Irritant. Keep away from skin, clothing, and eyes.

**Physical Hazards/Reactivity Data:**

Hygroscopic. Avoid exposure to room or damp air.  
Irritant to eyes and skin.

**Incompatibilities:**

Strong reducing materials, strong acids, strong bases, strong oxidizing agents

**Hazardous Combustion or Decomposition Products:**

Emits toxic fumes under fire conditions.  
May cause fire or explosion on contact with other materials.

**First Aid:**

In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes. In case of contact, immediately wash skin with soap and copious amounts of water. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If swallowed, wash out mouth with water provided person is conscious, call a physician. Wash contaminated clothing before reuse.

**Control Measures:**

Keep container closed and store in air area which is cool and dry. Keep away from flames and high heat. Use adequate ventilation when dispensing or handling. Use in hood. Do not take internally. If spilled, wipe up using rubber gloves. Rinse with water. Do not use paper towels. Be sure that wiping materials are stored away from contact.

The above information is believed to be correct though not all inclusive. Kemtec shall not be held liable for damage or included in the kit and should be discarded in accordance with all applicable regulation within one year of purchase.

**Product Name:** DNP-Phenylalanine  
**Chemical Name:** DNP-Phenylalanine  $C_{15}H_{13}N_3O_6$

**RTECS:** Non hazardous

**Hazardous Components:** DNP-Phenylalanine, CAS # 1655-54-5

**Properties:** Solid

**Health Hazard Data:**  
Not hazardous

Only selected registry of toxic effects of chemical substances RTECS have been presented here. See actual entry in RTECS for complete information.

**Health Hazard:**

Toxicological data for this chemical has been thoroughly investigated.

**Skin and eye irritation:**

Irritant. Keep away from eyes. Do not breathe in dust of this product.

**Physical Hazards/Reactivity Data:**

Hygroscopic. Avoid exposure to room or damp air.

Irritant to eyes and skin.

Store at room temperature.

**Incompatibilities:**

Strong oxidizing agents, strong acids, strong bases, strong reducing agents.

**Hazardous Combustion or Decomposition Products:**

Carbon monoxide, carbon dioxide, and nitrogen oxides.

Emits toxic fumes under fire conditions.

Use water spray, dry chemical powder alcohol or polymer foam.

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

**First Aid:**

In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes. In case of contact, immediately wash skin with soap and copious amounts of water. If inhaled, remove to fresh air.

If not breathing give artificial respiration. If breathing is difficult, give oxygen. If swallowed, wash out mouth with water provided person is conscious, call a physician. Wash contaminated clothing before reuse.

**Control Measures:**

Keep container closed and stored in an area which is cool and dry. Keep away from flames and high heat. Use adequate ventilation when dispensing or handling. Use in hood. Do not take internally.

Wear goggles and gloves when handling. Avoid prolonged or repeated exposure to the solid with skin or lungs. Store in a cool, dry place. Avoid exposure to damp air or humid regions.

If spilled, wipe up using rubber gloves. Rinse with water. Do not use paper towels. Be sure that wiping materials are stored in a flame proof container. May cause spontaneous combustion.

The above information is believed to be correct, though not all inclusive. Vendor shall not be held liable for damage or injury resulting from handling the above product. The user shall be held liable for any damage or injury resulting from handling the above product. This information is provided for use only in the procedures included in the kit and should be discarded in accordance with all applicable regulation within one year of purchase.

**Section 1: Identification**

**Section 6: Accidental Release Measures**

Product Name: 37% Laboratory

Formula: HCHO

C.A.S. CAS# 50-00-0

**Section 7: Handling and Storage**

Store in a cool dry well ventilated area out of direct sunlight. Keep away from heat and flame. Do not get in eyes, on skin, or on clothing.

**Section 8: Exposure Controls/Personal Protection**

Mechanical: Protective NIOSH Approved

Eye Goggles and face Protection Shield

Other Protective Equipment: Wear appropriate

**Section 9: Physical and Chemical Properties**

**Section 3: Hazard Identification**

Keep away from heat and ignition sources. Harmful if swallowed. Avoid breathing vapors. Use with adequate ventilation. Avoid contact with skin and clothes. Wash thoroughly after handling. Keep container closed.

Volume:

Evaporation Rate: N/A

Evaporation Standard: N/A

Keep away from heat and ignition sources. Harmful if swallowed. Avoid breathing vapors. Use with adequate ventilation. Avoid contact with skin and clothes. Wash thoroughly after handling. Keep container closed.

Temperature:

Upper Flamm. Limit:

Lower Flamm. Limit:

**FIRST AID: CALL A PHYSICIAN. SKIN:** In case of contact, immediately wash with water. Do not use harsh soaps. Remove contaminated clothing and shoes. Thoroughly clean clothing and shoes before reuse. Breathing and shower thoroughly. Wear clean, dry clothes and shoes.

Flash Point: 30 C

**Section 10: Stability and Reactivity Information**

Stability: Stable

Hazardous Decomposition Products:

**Section 5: Fire Fighting Measures**

Hazardous Polymerization: Will Not Occur

Fire Extinguisher: Carbon Dioxide, dry chemical powder or appropriate foam

**Section 11: Additional Information**

Toxic Carcinogen: Flammable Conditions aggravated target organs

absorbed through skin. Irritation or burns to skin, eyes, mucous

coughing, chest pains, pulmonary edema, GI tract disturbance. Effects

DOT Classification: Formaldehyde Solution, 3, 8, UN1108, PGIII, 8





MATERIAL SAFETY DATA SHEET

CATALOG #: C0261
NAME: CARBOXYPEPTIDASE A TYPE I FROM BOVINE PANCREAS
HAZARDS IDENTIFIED WITH THIS PRODUCT ARE THOSE ASSOCIATED WITH THE FOLLOWING COMPONENT(S). REFER TO THE MATERIAL SAFETY DATA SHEET(S) FOR THE IDENTIFIED HAZARD(S).

Table with 3 columns: CATALOG NUMBER, NAME, PERCENT. Row 1: CARBOXYPEPTIDASE A TYPE I CRYSTALLINE, TOU IIENE, < 11.00

----- MULTIPLE COMPONENT SPILL OR LEAK PROCEDURES -----
STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED

RUBBER GLOVES.
ABSORB ON SAND OR VERMICULITE AND PLACE IN CLOSED CONTAINERS FOR DISPOSAL.
VENTILATE AREA AND WASH SPILL SITE AFTER MATERIAL PICKUP IS COMPLETE.
WASTE DISPOSAL METHOD

DISSOLVE OR MIX THE MATERIAL WITH A COMBUSTIBLE SOLVENT AND BURN IN A CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND SCRUBBER.
OBSERVE ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS.

LABEL PRECAUTIONARY STATEMENTS

TOXIC
TOXIC BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED
IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN

TARGET ORGAN(S):

LIVER
KIDNEYS

IN CASE OF ACCIDENT OR IF YOU FEEL UNWELL, SEEK MEDICAL ADVICE.

IMMEDIATELY (SHOW THE LABEL WHERE POSSIBLE),
IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE.
WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES AND EYE/FACE PROTECTION.

SECTION 1. ----- CHEMICAL IDENTIFICATION -----

CATALOG #: C0261
NAME: CARBOXYPEPTIDASE A TYPE I FROM BOVINE PANCREAS

SECTION 2. ----- COMPOSITION/INFORMATION ON INGREDIENTS -----

CAS #: 11075-17-5

TOXIC

TOXIC BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED
IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN

TARGET ORGAN(S):

LIVER
KIDNEYS

IN CASE OF ACCIDENT OR IF YOU FEEL UNWELL, SEEK MEDICAL ADVICE

IMMEDIATELY (SHOW THE LABEL WHERE POSSIBLE),

WATER AND SEEK MEDICAL ADVICE.
WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES AND EYE/FACE PROTECTION.

SECTION 4. ----- FIRST-AID MEASURES -----

IF SWALLOWED, WASH OUT MOUTH WITH WATER. DO NOT INDUCE VOMITING.
CALL A PHYSICIAN.
IN CASE OF SKIN CONTACT, FLUSH WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. REMOVE CONTAMINATED CLOTHING AND

CALL A PHYSICIAN

IN CASE OF CONTACT WITH EYES, FLUSH WITH COPIOUS AMOUNTS OF WATER

SECTION 5. ----- FIRE FIGHTING MEASURES -----

EXTINGUISHING MEDIA

WATER SPRAY.  
CARBON DIOXIDE, DRY CHEMICAL POWDER OR APPROPRIATE FOAM.  
SPECIAL FIREFIGHTING PROCEDURES  
WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO  
PREVENT CONTACT WITH SKIN AND EYES.

WEAR RESPIRATOR, CHEMICAL RESISTANT GOGGLES, OTHER PROTECTIVE CLOTHING  
AND RUBBER GLOVES.  
ABSORB ON SAND OR VERMICULITE AND PLACE IN CLOSED CONTAINERS FOR  
DISPOSAL.

**SECTION 7. . . . . HANDLING AND STORAGE. . . . .**

REFER TO SECTION 8.

**SECTION 8. . . . . EXPOSURE CONTROLS/PERSONAL PROTECTION. . . . .**

WEAR APPROPRIATE NIOSH/MSHA-APPROVED RESPIRATOR, CHEMICAL-RESISTANT  
GLOVES, SAFETY GOGGLES, OTHER PROTECTIVE CLOTHING.  
MECHANICAL EXHAUST.  
STORE IN A COOL DRY PLACE.

**SECTION 9. . . . . PHYSICAL AND CHEMICAL PROPERTIES. . . . .**

APPEARANCE AND ODOR  
SUSPENSION.

**SECTION 10. . . . . STABILITY AND REACTIVITY. . . . .**

STABLE.

**HAZARDOUS INFORMATION ON DECOMPOSITION PRODUCTS**

NATURE OF DECOMPOSITION PRODUCTS NOT KNOWN.  
HAZARDOUS POLYMERIZATION  
WILL NOT OCCUR.

**SECTION 11. . . . . TOXICOLOGICAL INFORMATION. . . . .**

ACUTE EFFECTS

SENSITIVE INDIVIDUALS.

THE TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY  
INVESTIGATED.

**SECTION 12. . . . . ECOLOGICAL INFORMATION. . . . .**

DATA NOT YET AVAILABLE.

**SECTION 13. . . . . DISPOSAL CONSIDERATIONS. . . . .**

OBSERVE ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS.

**SECTION 15. . . . . REGULATORY INFORMATION. . . . .**

R 23/24/25

TOXIC BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED

R 36/37/38

IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN

S 45

IN CASE OF ACCIDENT OR IF YOU FEEL UNWELL, SEEK MEDICAL ADVICE

AND SHOW THE LABEL WHEN POSSIBLE

S 26

IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF  
WATER AND SEEK MEDICAL ADVICE.

S 36/37/39

WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES AND EYE/FACE  
PROTECTION.

**SECTION 16. . . . . OTHER INFORMATION. . . . .**

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