Material Safety Data Sheet

For

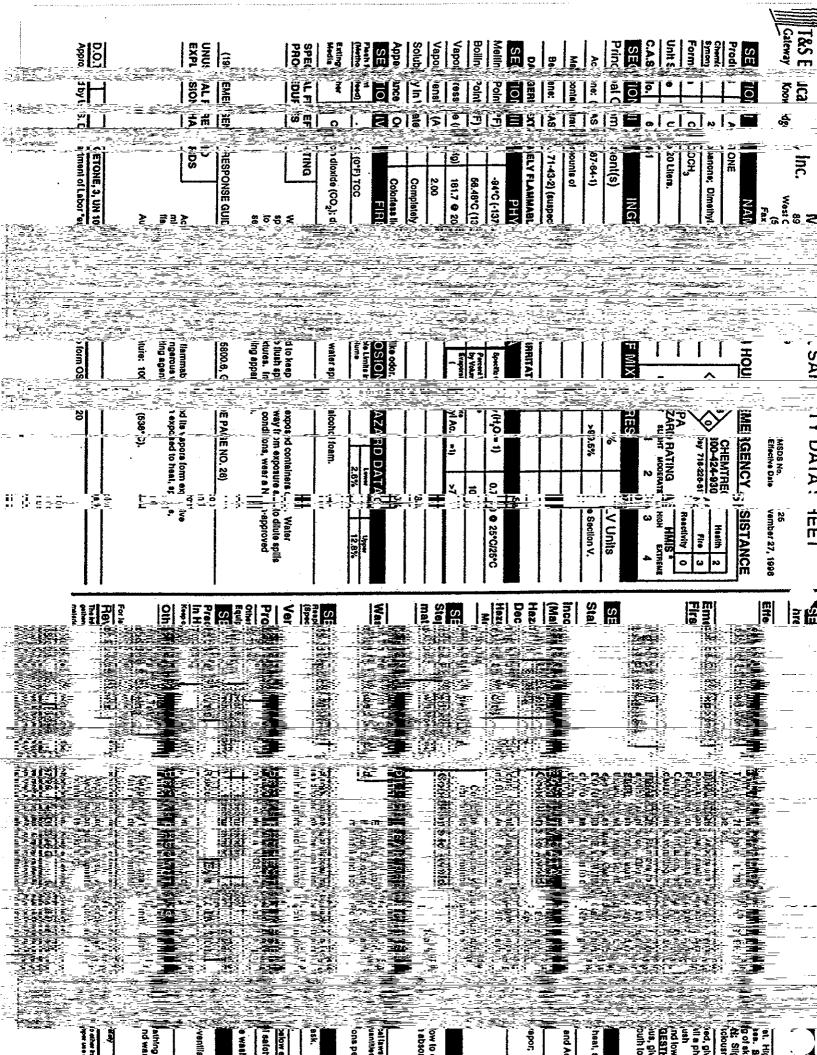
Determination of a Amino Acid (Sequence of a Pentide)

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.

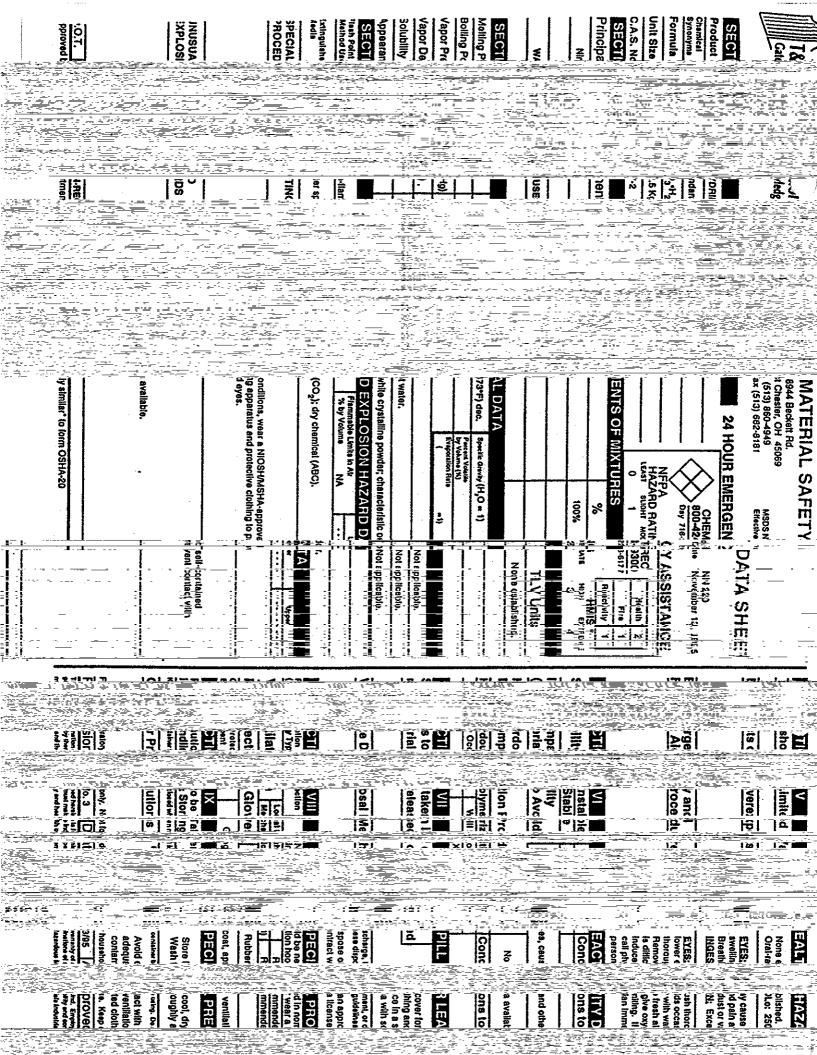
In the interest of safety, KemtecTM has provided dilute chemicals, where possible, and recommends using them in the commends are the same was a substant of the commends and is enhanced, chemical disposal is significantly reduced and is virtually eliminated.

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





ducational, Inc. PREFIGHTING PRES N HAZARDS 로 (*F) Ý e & Odor Water TERE SKIN AND EYE BURNS. MA DAROSIVE Component(s) Hy (Alre1) 3 /ED. DO NOT INHALE AS DUST O Sure (mm Hg) GENCY RESPONSE GUIDEBOOK 1310-73-2 up to 2.5 Kg. Caustic Soda; Lye SODIUM HYDROXIDE Use water spray on fire invol sopium HYDROXIDE, 801 Non-combustible (NA). X Ž **₹20°C** 318°C (604°F) White peliete, links 109 grams dissolve 1390°C (2534°F) POISON FIRE AN PHYSIC/ NGREDI West Cit contai Must i using water may s Conta molte causit is mai onds; ATA S O 22 6 F B ontect with michalitys of water its combratite in its first state. Flot or enter the fall its first and with water the fall its first and azard; shill so chiral entertains I SHA-approved #915
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lighty irritating art 4 0-100% ERGEWCY ASSISTANCE GE NO. SO) ETY DATA SHEET 0 = AG OFA MSDS (40) Sei: 650 ERective 1344 HJ no 10, 1996 Sie Section V. cible as solid. LV Units Jill 25°C File Hattle (N.P) 10.5 江田 1世界



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T&S Education: Gateway to Knowledge	
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Aminoscello Acid H ₂ NCH ₂ CO ₂ H up to 2.5 Kg. 58-40-6 N II Component(s)	Glycine	Principal	SECTION II	C.A.S. No.	Unit Size	Formula	Chemical Synenyme	Product	SECTION I
		Principal Component(s)	N III	56-40-6	up to 2.5 Kg.	н _г исн _г со _г н	Aminoaceilo Acid	GLYCINE	NI

LOW HAZARD FOR USUAL LABOR

	SECTION IV
White cn	Appearance & Odor
25 gramı	Solubility in Water
2.6	Vapor Density (Air≖1)
Negligibi	Vapor Pressure (mm Hg) Negligibi
Dacompo	Bolling Point (*F)
293°C (4	Meiting Point (°F)
	SECTION III

Flash Point Method Used) Carbon dloxide (

UNUSUAL FIRE AND EXPLOSION HAZARDS

SE Section Sec

SPE SPE

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Approved by U.S.

lially similar* to form OSHA-20

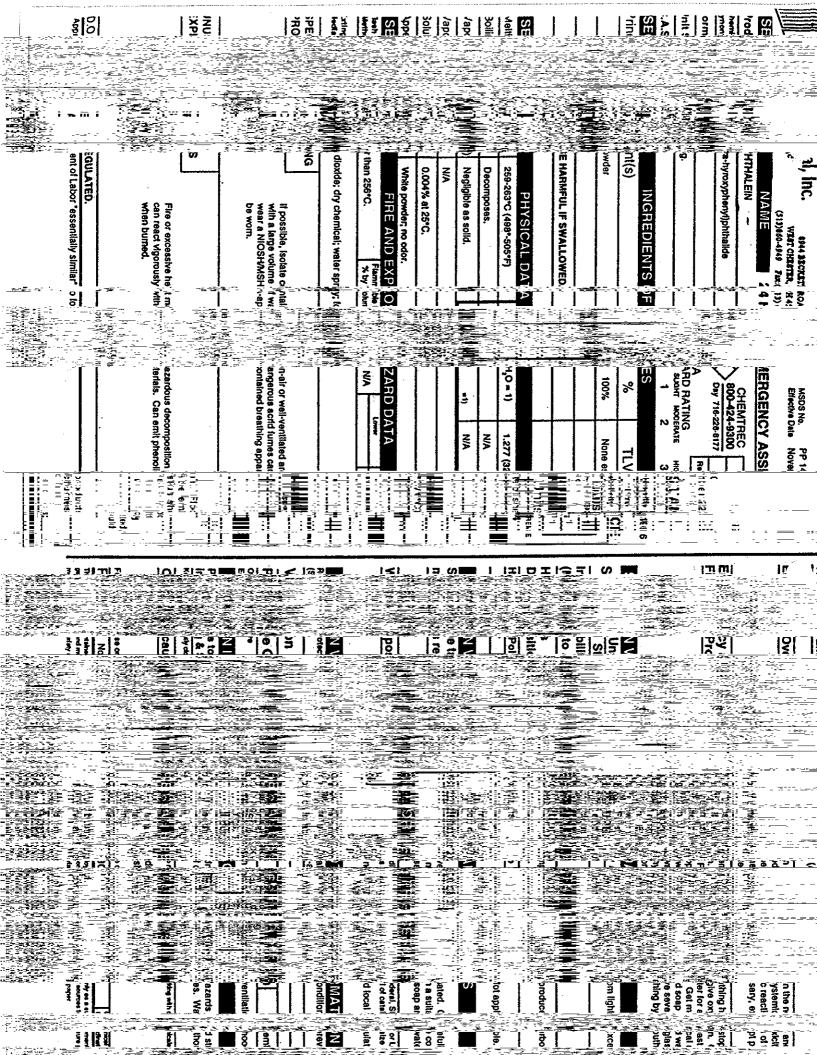
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SPECIAL FIREFIGHTING PROCEDURES

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Fishmable Lin the in Alv % by Volume Chamical (ABC): w; liter spray.	owder; no odor.	mL. water at 20°C.	(A)	AL DATA	TANON SON TONO	DIENTS OF M	7.5	24 HC	MATERIA L 8944 Beckett Rd 11 Chaster, OH 450 69 (513) 862-494 (513) 862-494
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Product Name: DNP-Peptide

Chemical Name: C

Synonyms:

KTECS: Not hazardous

stropous Comparents: - LAS #

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:

Taxicalacian monartics have not have thoroughly investigated

Skin and eye irritation:

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

Physical Hazards/Reactivity Data:

Hygroscepic. 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 firmes under fire conditions.

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

Nicers criteria for KTECS revisity 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:

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

Oscinations vine appearance in an area which is cool and dry. Keen away from flames and high heat.

gloves when handling. Avoid prolonged or repeated exposure to the solid with skin or lungs. Store in a cool, dry nlace, Avoid exposure to demnair or humid regions. If inhaled, remove to fresh air

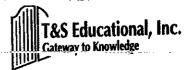
If spilled wipe up using rubber gloves. Rinse with water. Do not use naner towels. Re sure that wining materials are stored in a flame proof container.

The above information is believed to be correct, though not all inclusive. KEMTEC shall not be liable for damage or injury resulting train handling the above product. The materials provided by K.HM.140, are for use only in the procedures included in the kit and should be discarded in accordance with all applicable regulations within one year

te parenase.

Label Identity:

DNP-Glycine



Product Name: DNP Ghraine

Chemicai Name: DNP-Glychie

Synonymis. Disk Ground, is 2,4 dunu opnymy grychic

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 Keen 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.

Mana di ci. i alleggi a mai carca ai compani al manuel, lang a relimi are any la a sestanregistry. See actual entry in KI HCS 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

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 string to the string of the s

Product Name: Glycine

Chemical Name: Glycine, free base, Amino acid

Sympletical Circuit

RTECS: MB7600000 **Hazardous Components:** CAS # 56-10-6 Glycine

Health Hazard Data:

ORL-RAT LD50: 7930 mg/kg

YACHDS 5,1502,77

1350: 2500 mg/kg

EPA TSCA chemical inventory 1986

Toxicological properties have not been fully investigated.

Only colocted registry of toxis effects of chemical substance data is reported here. See RTECS complete information.

Health Hazard:

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

Toxicological properties have not been thoroughly investigated

aboratory experiments have shown mutagenic effects.

Skin and eye irritation:

illiant. Koch away from cycs. Do not broathe in dust

Physical Hazards/Reactivity Data: --

Hyorosconic Avoid exposure to room or damn 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.

Emite tovic firmes under fire conditions

Hise water spray, dry chemical nowder 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

Control Measures:

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

place Avaidante to do sir 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 including KEMTEC chall not be liable for damage of impry restiting from handing the above product. The materials provided by Kenyttec are to use only in the of purchase.

Label Identity:

Proline

7/12/01

Product Name:

Proline (C₆H₁₄N₄O₂) Proline, Amino acid

Chemical Name:

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 K LELY TO EXHIBITE WITO HALLOW

Health Hazard:

Toxicological properties have not been thoroughly investigated.

Skin and eve irritation:

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

Physical Hazards/Reactivity Data:

Hygroscopic. Avoid exposure to room or damp air.

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Incompatibilities:

Strong oxidizing agents.

Hazardous Combustion or Decomposition Products:

Carbon monoxide, and carbon dioxide and nitrogen oxides

Emits toxic fumes under fire conditions.

Hise water snray 'dry chemical nowder alcohol or nolymer foam.

Wear self contained breathing annaratis and protective clothing to prevent contact with skin and eve

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 with soap and copious amounts of water. If inhaled, remove to fresh air If not breathing give artificial recognition. If breathing is difficult give average. If smallowed 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 goodles and gloves when handling. Avoid prolonged or reneated exposure to the solid with

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

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L-lysine

Chemical Name:

L-lysine, Amino acid

Synonyms: Lysine-L

RTECS: OL5540000

Hazardous Components: L-lysine

CAS # 56-84-7-1

Proportion: White grantalline solid at room temperature MP 2120C to 2140C

T&S Educational. Inc.

Health Hazard Data:

Steven at Forovirings

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

Health Hazard:

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Skin and eye irritation:

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Physical Hazards/Reactivity Data:

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, earbon dioxide, dry chemical powder alcohol or polymer foam.

Wear calf contained breathing annalative and protective clothing in prevent contract with ckin and ever

Mosts pritorio for OSHA Medical Records rule: FEREAC 47 30420-82

Control Measures:

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 snilled wine no 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 minute risingly resulting from handling the choice or officer. The materials provided by Kemtec are for use only in the procedures.

Phenylalanine

Chemical Name:

Phenylalanine (C₉H₁₁NO₂)

RTECS: AY7535000

Hazardous Components: Phenylalanine

Properties: White crystalline solid at room temperature.

titulii i XX Faucational. Inc. ||||||| Gateway to Knowledge

Health Hazard Data:

CIRCLE RATE LUDIU 221 UDATE TOEA 220 ---/Ira

IMP-RAT LD30 3287 mg/kg

EPA TSCA chemical inventory, 1986

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:

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Mountains habanceresson amendment. Lauviaury captimans mise she was pro-

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 eves and skin.

Store at room temperature.

Incompatibilities:

Strong oxidizing agents.

I remember to be bushings and 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: was and high

heat. Use adequate ventuation when dispensing to minimum.

Avoid proloped of reneated exposure to the solid proloped of reneated exposure to the solid way.

skin or lunes. Store in a cool, dry place. Avoid exposure to damp an or numer regions.

It smiled. Wide no asing I about gloves. Actuse want have of with Water 110 not use dance towers. Descriptions wiping materials are stored in a flame proof container. May cause spontaneous comoustion.

The above information is believed to be correct, though not all inclusive. Kemtec shall not be held liable for damage or iniury resulting from handling the above product. The materials provided by Kemtec are for use only in the procedures INCINUCA IN THE KIR WILL SHOULD BE SUCCESSFUL TO THE PROPERTY OF THE PROPERTY

Arginine

Chemical Name:

Arginine (C₆H₁₄N₄O₂)

RTECS: HA2690000

Hazardous Components: Arginine

CAS # 17806-42-7

Properties: White crystalline solid



Health Hazard Data:

Toxicity Data and References:

EMI-KATIMION DIVINDE SUB-MUS LD50 2670 mg/kg

KSRNAM 4,135,70

EPA TSCA chemical inventory 1986

a more sens Only solve to registry of texio effects of chemicals whatever RTECS, have been presented here. See actual entry in RTECS for complete information.

Health Hazard:

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Skin and eye irritation:

Irritant Keen 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 roducing materials, etrong soids, etrong bases, etrong reducing age

Hazardous Combustion or Decomposition Products:

lemits toxic times under tire conditions.

May cause fire or explosion on contact with other materials.

First Aid:

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Iniquin with water droyfued derson is conscious, can a physician. Wash contaminate comme occore

reuse.

Control Measures:

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ove information is helieved to be correct, though not all inclusive... Kemtec shall not be held liable for damage or

it and should be discarded in accordance with all applicable regulation within one year of nurchase

DNP-Phenylalanine

Chemical Name:

DNP-Phenylalanine C₁₅H₁₃N₃O₆)

DTECS. Non hazardone

&S Educational, Inc.

dous Components: DNP-Phenylalanine CAS # 1655-54-5

Properties: Solid

Health Hazard Data:

Not hazardous

Only selected registry of toxic effects of chemical substances RTECS RTECS for complete information.

Health Hazard:

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Skin and eye irritation:

Irritant. Keen away from eves. Do not breathe in dust of this product

thysical Hazards/Reactivity Data:

Hyproscopic. Avoid exposure to room or damp air

Irritant to eyes and skin.

Store at room temperature.

Incompatibilities:

Strong avidizing agente strong acide strong hases strong reducing agents

Hazardous Combustion or Decomposition Products:

Carbon monoxide, carbon dioxide, and nitrogen oxides.

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

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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 with soan and conjous amounts of water. If inhaled remove to fresh sir athing give artificial respiration. If breathing is difficult, give exveen. If swallened wash out reuse.

Control Measures:

Keen container closed and stored in an area which is good and dry Ween away from flomes and high heat Hee adequate ventilation when dispensing or handling. Hee in hood Wear accordes and player when handling. Avoid prolonged or accorded over and

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



Material Safety Data Sheet ____

Chemtrec 800-424-9300 24 Hour Emergency Assistance

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MATERIAL SAFETY DATA SHEET

CATALOG #:

C0261

NAME:

CARBOXYPEPTIDASE A TYPE I FROM BOVINE PANCREAS

HAZARDS IDENTIFIED WITH THIS PRODUCT ARE THOSE ASSOCIATED WITH THE

FULLUWING CUMPUNENT(3). REPER TO THE WATLERING DATE IT DATE DATE DATE OF THE PROPERTY OF THE P WITH A SCHOOL ALLESS

CATALOG NUMBER

NAME

PERCENT

CARBOXYDEDTIDASE A TYPE I CRYSTAI I INF

< 11.00

TOLLIENE.

---- 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

DISSULVE IN MIX THE MATERIAL WITH A COMBUSTIBLE SOLVERT AND DURING A

CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND SCRUBBEK. OBSERVE ALL PEDERAL, STATE AND LOCAL ENVIRONMENTAL RESULTATIONS

LABEL PRECAUTIONARY STATEMENTS

TOXIC

TONICHY BULL ATION IN CONTACT WITH CVIN AND JE CWALLOWED

IDRITATING TO EVER RESEMBATORY SYSTEM AND SKIN

TARGET ORGANIST:

LIVER

KIDNEYS

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

EVENTUALITATION (ONLY THE EVENT OF A COORDER). 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 #: NAME:

C0261

CARBOXYPEPTIDASE A TYPE I FROM

BOVINE PANCREAS

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

CAS #- 11075-17-5

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TIVE BY INDIANA BEEN CONTRACT OF THE CONTRACT

IDDITATING TO EVEC BESDID ATODY SYSTEM AND SKIN

TARGET ORGAN(S):

LIVER

KIDNEYS

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

IMMEDIATE V (CUMVILLE LABEL WHERE DASSINGE):

WATER AND SEEK MEDICAL ADVICE.

WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES AND EYE/FACE

PROTECTION.

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

ESWALLOWED, WASH OUT MOOTH WITH WASTER TROVIEDS CORRECT IS CONSCION

CALL A PHYSICIAN.

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

FOR AT LEAST 15 MINUTES, REMOVE CONTAMINATED CLOTHING AND

IN CASE OF CONTACT WITH EYES FLISH WITH COPIOUS AMOUNTS OF WATER

. Doli Bilayoldan Santan Canada in Ana i THE EYELIDS WITH FINGERS. CALL A PHYSICIAN.

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

EXTINGUISHING MEDIA

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WATER SPRAY.
                                                      CARBON DIOXIDE, DRY CHEMICAL POWDER OR APPROPRIATE FOAM.
                                                    SPECIAL FIREFIGHTING PROCEDURES
                                                       <u>WEAR SELF CONTAINED BREATHING APPARATILS AND PROTECTIVE OF OTHING TO ________</u>
                                                      PREVENT CONTACT WITH SKIN AND EYES.
                                                      PARTICULAR DES PRODUCTIONS DE L'ANGES DE L'A
                                               WE HIS TRUE WAS ON CALCULATED TO BE TO CONTROL TO SELECT
                                                      RURRER 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.
                                               CENTIANIA CONTRACTORIA PER ANTERVANTATION
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                                                     STABLE.
HAZAKIJUIS I TIMBIIS UUN ÜR LIELIMPUSUUUN PKUJUULIS
                                                     NATUKÉ UF DECOMPUSITION PRODUCTS INUT KINU
                                                   HAZARDOUS POLYMERIZATION
                                                      WILL NOT OCCUR.
                                                 SECTION 11.....TOXICOLOGICAL INFORMATION:
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                                                      SENSITIVE INDIVIDUALS.
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                                                     INVESTIGATED.
                                                SECTION 12. ---- ECOLOGICAL INFORMATION ----
                                                     DATA NOT YET AVAILABLE.
                                                 SECTION 13. ----- DISPOSAL CONSIDERATIONS --
                   SEKVE ALI, PEDERAL, STATE AND LICAL ENVIRONMENTAL MELICIALITIES
                                                          TRUCKIBATOT TO CONSCIUNT.
                                                    TAINTAL I AR IMAT PREMIL AT TEMPART FOR TRAINSPORTATIONS INFORMATION
                                                SECTION 15..... RECIT ATORY INFORMATION
EURIPPAN INFERMATER
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                                                     WATER AND SEEK MEDICAL ADVICE.
                                                     S 36/37/39
                                                     WEAR SUTTABLE PROTECTIVE CLOTHING, CLAVES AND ETETACE
                                                     PROTECTION.
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