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BIOCHEMICALS AND DIAGNOSTIC REAGENTS

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DATE: 09/27/94
CUST#: 2-097-94816
PO#: UNE-51497

M A T E R I A L S A F E T Y D A T A S H E E T PAGE 1

SECTION 1. --- CHEMICAL IDENTIFICATION ---

PRODUCT #: R0878 NAME: D-RIBULOSE 1,5-DIPHOSPHATE SODIUM HYDRATE

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

CAS #: 108321-97-7
MF: C5H12O11P2
ADDITIONAL INFORMATION
CONTAINS METHYL ALCOHOL, CHEMICAL ABSTRACTS REGISTRY NUMBER 67-56-1.
CONTAINS ETHYL ALCOHOL, CHEMICAL ABSTRACTS REGISTRY NUMBER 64-17-5.
CONTAINS ACETONE, CHEMICAL ABSTRACTS REGISTRY NUMBER 67-64-1.

SECTION 3. --- HAZARDS IDENTIFICATION ---

LABEL PRECAUTIONARY STATEMENTS
TOXIC
TOXIC BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED.
IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN.
TARGET ORGAN(S):
EYES
NERVES
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.
DO NOT BREATHE DUST.

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

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.

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

CONTINUED ON NEXT PAGE

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M A T E R I A L S A F E T Y D A T A S H E E T P A G E 2

PRODUCT #: R0870
MF: C5H12O11P2

NAME: D-RIBULOSE 1,5-DIPHOSPHATE SODIUM
HYDRATE

CUST#: 2-097-94816
PO#: UNE-51497

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.
UNUSUAL FIRE AND EXPLOSIONS HAZARDS
EMITS TOXIC FUMES UNDER FIRE CONDITIONS.

SECTION 6. ----- ACCIDENTAL RELEASE MEASURES -----

WEAR RESPIRATOR, CHEMICAL SAFETY GOGGLES, RUBBER BOOTS AND HEAVY
RUBBER GLOVES.
SWEEP UP, PLACE IN A BAG AND HOLD FOR WASTE DISPOSAL.
AVOID RAISING DUST.
VENTILATE AREA AND WASH SPILL SITE AFTER MATERIAL PICKUP IS COMPLETE.

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.
SAFETY SHOWER AND EYE BATH.
MECHANICAL EXHAUST REQUIRED.
WASH THOROUGHLY AFTER HANDLING.

SECTION 9. ----- PHYSICAL AND CHEMICAL PROPERTIES -----

APPEARANCE AND ODDR
SOLID.
SOLUBILITY: WATER-SOLUBLE

SECTION 10. ----- STABILITY AND REACTIVITY -----

STABILITY

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M A T E R I A L S A F E T Y D A T A S H E E T P A G E 3

PRODUCT #: R 0878
 MF: C5H12O11P2

NAME: D-RIBULOSE 1,5-DIPHOSPHATE SODIUM
 HYDRATE

CUST#: 2-097-94816
 PO#: UNE-51497

STABLE.
 INCOMPATIBILITIES
 STRONG OXIDIZING AGENTS
 HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS
 TOXIC FUMES OF:
 CARBON MONOXIDE, CARBON DIOXIDE
 PHOSPHOROUS OXIDES
 HAZARDOUS POLYMERIZATION
 WILL NOT OCCUR.

SECTION 11. ----- TOXICOLOGICAL INFORMATION -----

ACUTE EFFECTS
 HARMFUL IF SWALLOWED, INHALED, OR ABSORBED THROUGH SKIN.
 CAUSES EYE AND SKIN IRRITATION.
 MATERIAL IS IRRITATING TO MUCOUS MEMBRANES AND UPPER
 RESPIRATORY TRACT.
 EXPOSURE CAN CAUSE:
 CNS DEPRESSION
 GASTROINTESTINAL DISTURBANCES
 NARCOTIC EFFECT
 DAMAGE TO THE EYES
 DAMAGE TO THE LIVER
 DAMAGE TO THE HEART
 DAMAGE TO THE KIDNEYS
 MAY CAUSE CONVULSIONS.
 TARGET ORGAN(S):
 EYES
 NERVES
 LIVER
 KIDNEYS
 THE TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY
 INVESTIGATED.

SECTION 12. ----- ECOLOGICAL INFORMATION -----
 DATA NOT YET AVAILABLE.

SECTION 13. ----- DISPOSAL CONSIDERATIONS -----
 DISSOLVE OR MIX THE MATERIAL WITH A COMBUSTIBLE SOLVENT AND BURN IN A

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M A T E R I A L S A F E T Y D A T A S H E E T P A G E 4

PRODUCT #: R0878
 MF: C5H12O11P2

NAME: D-RIBULOSE 1,5-DIPHOSPHATE SODIUM
 HYDRATE

CUST#: 2-097-94816
 PO#: UNE-51497

CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND SCRUBBER.
 OBSERVE ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS.

SECTION 14. ----- TRANSPORT INFORMATION -----

CONTACT SIGMA CHEMICAL COMPANY FOR TRANSPORTATION INFORMATION.

SECTION 15. ----- REGULATORY INFORMATION -----

TLV AND SOURCE

FOR METHYL ALCOHOL - SKIN:
 ACGIH TLV-TWA: 200 PPM (260 MG/M3); STEL: 250 PPM (310 MG/M3).
 OSHA PEL: 8 H TWA 200 PPM (260 MG/M3); STEL: 250 PPM (310 MG/M3).

FOR ETHYL ALCOHOL (ETHANOL):
 ACGIH TLV-TWA: 1000 PPM (1980 MG/M3).
 OSHA PEL: 8H TWA 1000 PPM (1900 MG/M3).

FOR ACETONE:
 ACGIH TLV-TWA: 750 PPM (1780 MG/M3); STEL 1000 PPM (2380 MG/M3).
 OSHA PEL: 8H TWA 750 PPM (1800 MG/M3); STEL 1000 PPM (2400 MG/M3).

MAY CONTAIN UP TO:
 4.0% METHANOL 67-56-1
 1.0% ACETONE 67-64-1

THESE PRODUCTS ARE SUBJECT TO SARA SECTION 313 REPORTING REQUIREMENTS.

SECTION 16. ----- OTHER INFORMATION -----

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