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DATE: 12/13/94
 CUST#: 2-097-94816
 PO#: UNE-52366

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 1

SECTION 1. --- CHEMICAL IDENTIFICATION ---

PRODUCT #: A6144 NAME: ADENOSINE 5'-TRIPHOSPHATE DISODIUM FROM

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

CAS #: 51963-61-2
 MF: C10H14N5NA2O13P3
 ADDITIONAL INFORMATION
 CONTAINS ACETONE, CHEMICAL ABSTRACTS REGISTRY NUMBER 67-64-1.
 CONTAINS ETHYL ALCOHOL, CHEMICAL ABSTRACTS REGISTRY NUMBER 64-17-5.
 CONTAINS METHYL ALCOHOL, CHEMICAL ABSTRACTS REGISTRY NUMBER 67-56-1.

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):
 HEART
 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, GLOVES AND EYE/FACE
 PROTECTION.
 DO NOT BREATHE DUST.

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

IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES OR SKIN WITH COPIOUS
 AMOUNTS OF WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED
 CLOTHING AND SHOES.
 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

CUST#: 2-097-94816
 PO#: UNE-52366

PRODUCT #: A6144
 MF: C10H14N5NA2013P3

NAME: ADENOSINE 5'-TRIPHOSPHATE DISODIUM FROM

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

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

APPEARANCE AND ODOR
 SOLID.
 SOLUBILITY: WATER-SOLUBLE

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

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

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NAME: ADENOSINE 5'-TRIPHOSPHATE DISODIUM FROM
 CUST#: 2-097-94816
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CONDITIONS TO AVOID
 STABLE.
 INCOMPATIBILITIES
 STRONG OXIDIZING AGENTS
 HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS
 THERMAL DECOMPOSITION MAY PRODUCE TOXIC FUMES OF PHOSPHORUS OXIDES
 AND/OR PHOSPHINE.
 CARBON MONOXIDE, CARBON DIOXIDE
 NITROGEN OXIDES
 SODIUM/SODIUM 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
 NAUSEA, HEADACHE AND VOMITING
 NARCOTIC EFFECT
 MAY CAUSE CONVULSIONS.
 DERMATITIS
 TARGET ORGAN(S):
 HEART
 NERVES
 EYES
 LIVER
 KIDNEYS

TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND
 TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

SECTION 12. ----- ECOLOGICAL INFORMATION -----

DATA NOT YET AVAILABLE.

SECTION 13. ----- DISPOSAL CONSIDERATIONS -----

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

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PRODUCT #: A6144
MF: C10H14N5NA2O13P3

NAME: ADENOSINE 5'-TRIPHOSPHATE DISODIUM FROM

CUST#: 2-097-94816
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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.

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

CONTACT SIGMA CHEMICAL COMPANY FOR TRANSPORTATION INFORMATION.

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

TLV AND SOURCE
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).

FOR ETHYL ALCOHOL (ETHANOL):

ACGIH TLV-TWA: 1000 PPM (1880 MG/M3).
OSHA PEL: 8H TWA 1000 PPM (1900 MG/M3).

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).

MAY CONTAIN UP TO:

2.5% METHANOL, CAS NUMBER 67-56-1

2.5% ACETONE, CAS NUMBER 67-64-1

THESE PRODUCTS ARE SUBJECT TO SARA SECTION 313 REPORTING REQUIREMENTS.

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

THE ABOVE INFORMATION IS BELIEVED TO BE CORRECT BUT DOES NOT PURPORT TO
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