MATERIAL SAFETY DATA SHEET

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

PRODUCT #: R 0378
NAME: D-RIBULOSE 1,5-DIPHOSPHATE SODIUM HYDRATE

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

CAS #: 100321-97-7
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
EXTINGUISHING MEDIA
WATER SPRAY.
CARBON DIOXIDE, DRY CHEMICAL POWDER OR APPROPRIATE FOAM.

SPECIAL FIRE-FIGHTING 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 ODOR
SOLID:
WATER-SOLUBLE

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

STABILITY

CONTINUED ON NEXT PAGE
PRODUCT #: R 0678
NAME: D-RIbose 1,5-DIPHOSPHATE SODIUM HYDRATE

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

SECTION 11. TOXICOLOGICAL INFORMATION

ACUTE EFFECTS:
HARMFUL IF SWALLOWED, INHALED, OR ABSORBED THROUGH SKIN.
CAUSES EYES 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 CONTINUED ON NEXT PAGE
MATERIAL SAFETY DATA SHEET

PRODUCT #: R0578
NAME: D-RIBULOSE 1,5-DIPHOSPHATE SODIUM HYDRATE

SECTION 1. CHEMICAL INCIDENTS AND SAFE HANDLING INSTRUCTIONS

SECTION 2. EXPOSURE CONTROLS AND PERSONAL PROTECTION

SECTION 3. STABILITY AND REACTIVITY

SECTION 4. FIRST AID AND FIRE FIGHTING MEASURES

SECTION 5. DRUG INTERACTIONS

SECTION 6. TOXICOLOGICAL PROPERTIES

SECTION 7. HUMAN HEALTH EFFECTS

SECTION 8. ACCIDENTAL RELEASE MEASURES

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

SECTION 10. STABILITY AND REACTIVITY

SECTION 11. ENVIRONMENTAL INFORMATION

SECTION 12. DISPOSAL CONSIDERATIONS

SECTION 13. OTHER INFORMATION

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