Valid 02/1999 - 04/1999

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## MATERIAL SAFETY DATA SHEET

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SECTION 1. - - - - - - CHEMICAL IDENTIFICATION- - -
    CATALOG #:
                          E5134
                          EDTA MOLECULAR BIOLOGY REAGENT
    NAME:
                          DISODIUM DIHYDRATE
SECTION 2. - - - - COMPOSITION/INFORMATION ON INGREDIENTS - - - - -
    CAS #: 6381-92-6
    MF: C10H14N2NA2O8
  SYNONYMS
    CHELADRATE * CHELAPLEX III * CHELATON III * COMPLEXON III * E.D.T.A.
    DISODIQUE (FRENCH) * DINATRIUM ETHYLENDIAMINTETRAACETAT (CZECH) *
    DISODIUM DIACID ETHYLENEDIAMINETETRAACETATE * DISODIUM DIHYDROGEN
    ETHYLENEDIAMINETETRAACETATE * DISODIUM DIHYDROGEN(ETHYLENEDINITRILO)
    TETRAACETATE * DISODIUM EDATHAMIL * DISODIUM EDETATE * DISODIUM EDTA *
     DISODIUM ETHYLENEDIAMINETETRAACETATE * DISODIUM
    ETHYLENEDIAMINETETRAACETIC ACID * DISODIUM (ETHYLENEDINITRILO)
    TETRAACETATE * DISODIUM (ETHYLENEDINITRILO)TETRAACETIC ACID *
    DISODIUM SALT OF EDTA * DISODIUM SEQUESTRENE * DISODIUM TETRACEMATE *
    DISODIUM VERSENATE * DISODIUM VERSENE * DOTITE 2NA * EDATHAMIL
    DISODIUM * EDETATE DISODIUM * EDETIC ACID DISODIUM SALT * EDTA
    DISODIUM * ENDRATE DISODIUM * N, N'-1, 2-ETHANEDIYLBIS (N-(CARBOXYMETHYL)
    GLYCINE) DISODIUM SALT * ETHYLENEBIS(IMINODIACETIC ACID) DISODIUM
    SALT * ETHYLENEDIAMINETETRAACETATE, DISODIUM SALT *
    ETHYLENEDIAMINETETRAACETIC ACID, DISODIUM SALT * (ETHYLENEDINITRILO)-
    TETRAACETIC ACID DISODIUM SALT * F 1 (COMPLEXON) * GLYCINE, N,N'-1,2-
    ETHANEDIYLBIS(N-(CARBOXYMETHYL)-, DISODIUM SALT (9CI) * KIRESUTO B *
    KOMPLEXON III * METAQUEST B * PERMA KLEER 50 CRYSTALS DISODIUM SALT *
    PERMA KLEER DI CRYSTALS * SELEKTON B 2 * SEQUESTRENE SODIUM 2 *
    SODIUM VERSENATE * TETRACEMATE DISODIUM * TITRIPLEX III * TRILON BD *
    TRIPLEX III * VERESENE DISODIUM SALT * VERSENE SODIUM 2 *
SECTION 3. - - - - - - - HAZARDS IDENTIFICATION - - - -
  LABEL PRECAUTIONARY STATEMENTS
    HARMFUL
    HARMFUL IF SWALLOWED.
    IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN.
    IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF
    WATER AND SEEK MEDICAL ADVICE.
    WEAR SUITABLE PROTECTIVE CLOTHING.
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 - - - - -
  EXTINGUISHING MEDIA
   WATER SPRAY.
    CARBON DIOXIDE, DRY CHEMICAL POWDER OR APPROPRIATE FOAM.
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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- - - - -
    CHEMICAL SAFETY GOGGLES.
    RUBBER GLOVES.
    NIOSH/MSHA-APPROVED RESPIRATOR.
    SAFETY SHOWER AND EYE BATH.
   MECHANICAL EXHAUST REQUIRED.
   DO NOT BREATHE DUST.
   DO NOT GET IN EYES, ON SKIN, ON CLOTHING.
   WASH THOROUGHLY AFTER HANDLING.
    KEEP TIGHTLY CLOSED.
    STORE IN A COOL DRY PLACE.
SECTION 9. - - - - - PHYSICAL AND CHEMICAL PROPERTIES - - -
  APPEARANCE AND ODOR
   WHITE CRYSTALLINE POWDER
  PHYSICAL PROPERTIES
   MELTING POINT: 248 C (DEC)
SECTION 10. - - - - - - - - STABILITY AND REACTIVITY - -
 STABILITY
   STABLE.
  INCOMPATIBILITIES
   STRONG OXIDIZING AGENTS
  HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS
   TOXIC FUMES OF:
   CARBON MONOXIDE, CARBON DIOXIDE
   NITROGEN OXIDES
 HAZARDOUS POLYMERIZATION
   WILL NOT OCCUR.
SECTION 11. - - - -
                   ---- TOXICOLOGICAL INFORMATION ----
 ACUTE EFFECTS
   HARMFUL IF SWALLOWED.
   MAY BE HARMFUL IF INHALED.
   MAY BE HARMFUL IF ABSORBED THROUGH THE SKIN.
   CAUSES EYE AND SKIN IRRITATION.
   MATERIAL IS IRRITATING TO MUCOUS MEMBRANES AND UPPER
   RESPIRATORY TRACT.
   TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND
   TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.
 RTECS #: AH4375000
   ACETIC ACID, (ETHYLENEDINITRILO) TETRA-, DISODIUM SALT
 TOXICITY DATA
   ORL-RAT LD50:2 GM/KG
                                                 FEPRA7 27,465,1968
   ORL-MUS LD50:2050 MG/KG
                                                 NYKZAU 52,126S,1956
   IPR-MUS LD50:260 MG/KG
                                                 NYKZAU 52,126S,1956
   IVN-MUS LD50:56 MG/KG
                                                 CSLNX* NX#03781
   ORL-RBT LD50:2300 MG/KG
                                                 NYKZAU 52,113,1956
   IVN-RBT LD50:47 MG/KG
                                                 NYKZAU 52,113,1956
 TARGET ORGAN DATA
   BEHAVIORAL (CONVULSIONS OR EFFECT ON SEIZURE THRESHOLD)
   EFFECTS ON FERTILITY (POST-IMPLANTATION MORTALITY)
   ONLY SELECTED REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES
    (RTECS) DATA IS PRESENTED HERE. SEE ACTUAL ENTRY IN RTECS FOR
   COMPLETE INFORMATION.
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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
   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 - - - - -
 EUROPEAN INFORMATION
   CAUTION: SUBSTANCE NOT YET FULLY TESTED.
   HARMFUL
   R 22
   HARMFUL IF SWALLOWED.
   R 36/37/38
   IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN.
   IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF
   WATER AND SEEK MEDICAL ADVICE.
   S 36
   WEAR SUITABLE PROTECTIVE CLOTHING.
 REVIEWS, STANDARDS, AND REGULATIONS
   OEL=MAK
   EPA FIFRA 1988 PESTICIDE SUBJECT TO REGISTRATION OR RE-REGISTRATION
    FEREAC 54,7740,1989
   NOHS 1974: HZD 83643; NIS 45; TNF 5010; NOS 47; TNE 43360
   NOES 1983: HZD 83643; NIS 62; TNF 8199; NOS 69; TNE 106998; TFE 62467
   EPA GENETOX PROGRAM 1988, NEGATIVE: HISTIDINE REVERSION-AMES TEST
   EPA TSCA SECTION 8(B) CHEMICAL INVENTORY
SECTION 16. - - - - - - - OTHER INFORMATION- - - -
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