Sigma Chemical Co. P.O. Box 14508

St. Louis, MO 63178 USA

Phone: 314-771-5765

MATERIAL SAFETY DATA SHEET

SECTION 1. - - - - - - CHEMICAL IDENTIFICATION- - - - - - -CATALOG #: H7904 4-HYDROXYTAMOXIFEN NAME: SECTION 2. - - - - COMPOSITION/INFORMATION ON INGREDIENTS - - - - -CAS #: 68047-06-3 MF: C26H29NO2 HAZARDOUS INGREDIENTS CONTAINS ETHYL ETHER, CHEMICAL ABSTRACTS REGISTRY NUMBER 60-29-7. SYNONYMS TRANS-4-(1-(4-(2-(DIMETHYLAMINO)ETHOXY)PHENYL)-2-PHENYL-1-BUTENYL)PHENOL * HYDROXYTAMOXIFEN * 4-HYDROXYTAMOXIFEN * ICI 79,280 * SECTION 3. - - - - - - - HAZARDS IDENTIFICATION - - -LABEL PRECAUTIONARY STATEMENTS TOXIC MAY IMPAIR FERTILITY. HARMFUL BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED. IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN. TARGET ORGAN(S): MALE REPRODUCTIVE SYSTEM FEMALE REPRODUCTIVE SYSTEM 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. 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. DISCARD CONTAMINATED CLOTHING AND SHOES. SECTION 5. - - - - - - FIRE FIGHTING MEASURES - - - - - -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- - - - -EVACUATE AREA. WEAR SELF-CONTAINED BREATHING APPARATUS, RUBBER BOOTS AND HEAVY RUBBER GLOVES. WEAR DISPOSABLE COVERALLS AND DISCARD THEM AFTER USE. 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.

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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.
   USE ONLY IN A CHEMICAL FUME HOOD.
   DO NOT BREATHE DUST.
   DO NOT GET IN EYES, ON SKIN, ON CLOTHING.
   AVOID PROLONGED OR REPEATED EXPOSURE.
   WASH THOROUGHLY AFTER HANDLING.
   KEEP TIGHTLY CLOSED.
   STORE IN A COOL DRY PLACE.
SECTION 9. - - - - - PHYSICAL AND CHEMICAL PROPERTIES - - - -
 APPEARANCE AND ODOR
   SOLID.
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
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.
 CHRONIC EFFECTS
   MAY CAUSE REPRODUCTIVE DISORDERS.
   TARGET ORGAN(S):
   MALE REPRODUCTIVE SYSTEM
   FEMALE REPRODUCTIVE SYSTEM
   CENTRAL NERVOUS SYSTEM
   KIDNEYS
   LIVER
   G.I. SYSTEM
    SKELETAL MUSCLE
   TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND
   TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.
 RTECS #: SL1210000
    PHENOL, 4-(1-(4-(2-(DIMETHYLAMINO)ETHOXY)PHENYL)-2-PHENYL-1-BUTENYL)-,
    (E)-
 TARGET ORGAN DATA
   EFFECTS ON FERTILITY (PRE-IMPLANTATION MORTALITY)
    ONLY SELECTED REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES
    (RTECS) DATA IS PRESENTED HERE. SEE ACTUAL ENTRY IN RTECS FOR
   COMPLETE INFORMATION.
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.
   TOXIC
   R 60
   MAY IMPAIR FERTILITY.
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R 20/21/22

HARMFUL BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED. R 36/37/38

IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN.

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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.

S 36/37/39

WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES AND EYE/FACE PROTECTION.

TLV AND SOURCE

FOR ETHYL ETHER:

ACGIH TLV-TWA: 400 PPM (1200 MG/M3); STEL: 500 PPM (1500 MG/M3). OSHA PEL: 8H TWA 400 PPM (1200 MG/M3); STEL: 500 PPM (1500 MG/M3).

SECTION 16. - - - - - - - - - OTHER INFORMATION - - - - - - - - - - - - THE ABOVE INFORMATION IS BELIEVED TO BE CORRECT BUT DOES NOT PURPORT TO BE ALL INCLUSIVE AND SHALL BE USED ONLY AS A GUIDE. SIGMA, ALDRICH, FLUKA SHALL NOT BE HELD LIABLE FOR ANY DAMAGE RESULTING FROM HANDLING OR FROM CONTACT WITH THE ABOVE PRODUCT. SEE REVERSE SIDE OF INVOICE OR PACKING SLIP FOR ADDITIONAL TERMS AND CONDITIONS OF SALE. COPYRIGHT 2001 SIGMA-ALDRICH CO.

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