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SAFETY DATA SHEET

SECTION 1. CHEMICAL IDENTIFICATION

CATALOG #: 38037

NAME: Methotrexate hydrate

SYNONYMS: (+)-Amethopterin hydrate

4-Amino-10-methylfolic acid hydrate

24 HOUR EMERGENCY

TELEPHONE:

(800) 535-5053(USA)

352-323-3500 (INTERNATIONAL)

TO REQUEST AN MSDS: (800) 869-9290

CUSTOMER SERVICE:

(630) 766-2112

SECTION 2. HAZARDS IDENTIFICATION

CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

GHS CLASSIFICATION IN ACCORDANCE WITH 29 CFR 1910 (OSHA HCS) ACUTE TOXICITY, ORAL (CATEGORY 3), H301 SKIN IRRITATION (CATEGORY 2), H315 EYE IRRITATION (CATEGORY 2A), H319 REPRODUCTIVE TOXICITY (CATEGORY 1B), H360

FOR THE FULL TEXT OF THE H-STATEMENTS MENTIONED IN THIS SECTION, SEE SECTION 16.

GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS

PICTOGRAM

SIGNAL WORD DANGER

HAZARD STATEMENT(S)

H301 TOXIC IF SWALLOWED. H315 CAUSES SKIN IRRITATION.

H319 CAUSES SERIOUS EYE IRRITATION.

H360 MAY DAMAGE FERTILITY OR THE UNBORN CHILD.

PRECAUTIONARY STATEMENT(S)

P201 OBTAIN SPECIAL INSTRUCTIONS BEFORE USE.

P202 DO NOT HANDLE UNTIL ALL SAFETY PRECAUTIONS HAVE

BEEN READ AND UNDERSTOOD.

P264 WASH SKIN THOROUGHLY AFTER HANDLING.
P270 DO NOT EAT, DRINK OR SMOKE WHEN USING THIS

PRODUCT.

P280 WEAR PROTECTIVE GLOVES/ EYE PROTECTION/ FACE

PROTECTION.

P301 + P310 + P330 IF SWALLOWED: IMMEDIATELY CALL A POISON CENTER OR

DOCTOR/PHYSICIAN, RINSE MOUTH.

P302 + P352 IF ON SKIN: WASH WITH PLENTY OF SOAP AND WATER.

P305 + P351 + P338 IF IN EYES: RINSE CAUTIOUSLY WITH WATER FOR SEVERAL

MINUTES. REMOVE CONTACT LENSES, IF PRESENT AND

EASY TO DO. CONTINUE RINSING.

P308 + P313 IF EXPOSED OR CONCERNED: GET MEDICAL ADVICE/

ATTENTION.

P332 + P313 IF SKIN IRRITATION OCCURS: GET MEDICAL ADVICE/

ATTENTION.

P337 + P313 IF EYE IRRITATION PERSISTS: GET MEDICAL ADVICE/

ATTENTION.

P362 TAKE OFF CONTAMINATED CLOTHING AND WASH BEFORE

REUSE.

P405 STORE LOCKED UP.

P501 DISPOSE OF CONTENTS/ CONTAINER TO AN APPROVED

WASTE DISPOSAL PLANT.

HAZARDS NOT NONE

OTHERWISE

CLASSIFIED (HNOC) OR NOT COVERED

BY GHS

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

MF: $C_{20}H_{22}N_8O_5 \cdot xH_2O$

MW: 454.45

CAS-NO. 133073-73-1

PURITY: \geq 98% (Assay, HPLC)

HAZARDOUS COMPONENTS

COMPONENT	CLASSIFICATION	CONCENTRATION
Methotrexate hydrate		
	ACUTE TOX. 3; SKIN IRRIT. 2;	<= 100 %
	EYE IRRIT. 2A; REPR. 1B; H301,	
	H315, H319, H360	

FOR THE FULL TEXT OF THE H-STATEMENTS MENTIONED IN THIS SECTION, SEE SECTION 16.

SECTION 4. FIRST-AID MEASURES

DESCRIPTION OF FIRST AID MEASURES

GENERAL ADVICE CONSULT A PHYSICIAN. SHOW THIS SAFETY DATA

SHEET TO THE DOCTOR IN ATTENDANCE.MOVE OUT

OF DANGEROUS AREA.

IF INHALED IF BREATHED IN, MOVE PERSON INTO FRESH AIR. IF

NOT BREATHING, GIVE ARTIFICIAL RESPIRATION.

CONSULT A PHYSICIAN.

IN CASE OF SKIN

CONTACT

CONTACT

WASH OFF WITH SOAP AND PLENTY OF WATER. TAKE

VICTIM IMMEDIATELY TO HOSPITAL. CONSULT A

PHYSICIAN.

IN CASE OF EYE

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RINSE THOROUGHLY WITH PLENTY OF WATER FOR AT

LEAST 15 MINUTES AND CONSULT A PHYSICIAN.

IF SWALLOWED NEVER GIVE ANYTHING BY MOUTH TO AN

UNCONSCIOUS PERSON. RINSE MOUTH WITH WATER.

CONSULT A PHYSICIAN.

MOST IMPORTANT

SYMPTOMS AND

EFFECTS, BOTH ACUTE

AND DELAYED

THE MOST IMPORTANT KNOWN SYMPTOMS AND EFFECTS ARE DESCRIBED IN THE LABELLING (SEE

SECTION 2.2) AND/OR IN SECTION 11

INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED NO DATA AVAILABLE

SECTION 5. FIRE AND EXPLOSION DATA

EXTINGUISHING MEDIA

SUITABLE USE WATER SPRAY, ALCOHOL-RESISTANT FOAM, DRY

EXTINGUISHING MEDIA CHEMICAL OR CARBON DIOXIDE.

SPECIAL HAZARDS CARBON OXIDES, NITROGEN OXIDES (NOX)

ARISING FROM THE SUBSTANCE OR MIXTURE

ADVICE FOR WEAR SELF-CONTAINED BREATHING APPARATUS FOR

FIREFIGHTERS FIREFIGHTING IF NECESSARY.

FURTHER INFORMATION NO DATA AVAILABLE

SECTION 6. ACCIDENTAL RELEASE MEASURES

PERSONAL WEAR RESPIRATORY PROTECTION. AVOID DUST PRECAUTIONS, FORMATION. AVOID BREATHING VAPOURS, MIST OR PROTECTIVE GAS. ENSURE ADEQUATE VENTILATION. EVACUATE EQUIPMENT AND PERSONNEL TO SAFE AREAS. AVOID BREATHING DUST. EMERGENCY FOR PERSONAL PROTECTION SEE SECTION 8.

PROCEDURES

ENVIRONMENTAL PREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE **PRECAUTIONS** TO DO SO. DO NOT LET PRODUCT ENTER DRAINS.

METHODS ANDPICK UP AND ARRANGE DISPOSAL WITHOUTMATERIALS FORCREATING DUST. SWEEP UP AND SHOVEL. KEEP INCONTAINMENT ANDSUITABLE, CLOSED CONTAINERS FOR DISPOSAL.

CLEANING UP

REFERENCE TO OTHER FOR DISPOSAL SEE SECTION 13. **SECTIONS**

SECTION 7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING

AVOID CONTACT WITH SKIN AND EYES. AVOID FORMATION OF DUST AND AEROSOLS.FURTHER PROCESSING OF SOLID MATERIALS MAY RESULT IN THE FORMATION OF COMBUSTIBLE DUSTS. THE POTENTIAL FOR COMBUSTIBLE DUST FORMATION SHOULD BE TAKEN INTO CONSIDERATION BEFORE

ADDITIONAL PROCESSING OCCURS.

PROVIDE APPROPRIATE EXHAUST VENTILATION AT

PLACES WHERE DUST IS FORMED. FOR PRECAUTIONS SEE SECTION 2.2.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES KEEP CONTAINER TIGHTLY CLOSED IN A DRY AND

WELL-VENTILATED PLACE.

KEEP IN A DRY PLACE.

Store at 2 - 8 °C

SPECIFIC END USE(S) APART FROM THE USES MENTIONED IN SECTION 1.2

NO OTHER SPECIFIC USES ARE STIPULATED

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

CONTROL PARAMETERS

COMPONENTS WITH WORKPLACE CONTROL PARAMETERS

CONTAINS NO SUBSTANCES WITH OCCUPATIONAL EXPOSURE LIMIT VALUES. HAZARDOUS COMPONENTS WITHOUT WORKPLACE CONTROL PARAMETERS

EXPOSURE CONTROLS

APPROPRIATE AVOID CONTACT WITH SKIN, EYES AND CLOTHING.
ENGINEERING WASH HANDS BEFORE BREAKS AND IMMEDIATELY
CONTROLS AFTER HANDLING THE PRODUCT.

PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE PROTECTION FACE SHIELD AND SAFETY GLASSES USE EQUIPMENT

FOR EYE PROTECTION TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS

NIOSH (US) OR EN 166(EU).

SKIN PROTECTION

HANDLE WITH GLOVES. GLOVES MUST BE INSPECTED PRIOR TO USE. USE PROPER GLOVE REMOVAL TECHNIQUE (WITHOUT TOUCHING GLOVE"S OUTER SURFACE) TO AVOID SKIN CONTACT WITH THIS PRODUCT. DISPOSE OF CONTAMINATED GLOVES AFTER USE IN ACCORDANCE WITH APPLICABLE LAWS AND GOOD LABORATORY PRACTICES. WASH AND DRY HANDS.

FULL CONTACT

MATERIAL: NITRILE RUBBER

MINIMUM LAYER THICKNESS: 0.11 MM

BREAK THROUGH TIME: 480 MIN

MATERIAL TESTED: DERMATRIL (KCL 740, SIZE M)

SPLASH CONTACT

MATERIAL: NITRILE RUBBER

MINIMUM LAYER THICKNESS: 0.11 MM

BREAK THROUGH TIME: 480 MIN

MATERIAL TESTED: DERMATRIL (KCL 740, SIZE M)

IF USED IN SOLUTION, OR MIXED WITH OTHER SUBSTANCES, AND UNDER CONDITIONS WHICH DIFFER FROM EN 374, CONTACT THE SUPPLIER OF THE CE APPROVED GLOVES. THIS RECOMMENDATION IS ADVISORY ONLY AND MUST BE EVALUATED BY AN INDUSTRIAL HYGIENIST AND SAFETY OFFICER FAMILIAR WITH THE SPECIFIC SITUATION OF ANTICIPATED USE BY OUR CUSTOMERS. IT SHOULD NOT BE CONSTRUED AS OFFERING AN APPROVAL FOR ANY SPECIFIC USE SCENARIO.

BODY PROTECTION

COMPLETE SUIT PROTECTING AGAINST CHEMICALS, THE TYPE OF PROTECTIVE EQUIPMENT MUST BE SELECTED ACCORDING TO THE CONCENTRATION AND AMOUNT OF THE DANGEROUS SUBSTANCE AT THE SPECIFIC WORKPLACE.

RESPIRATORY PROTECTION

WHERE RISK ASSESSMENT SHOWS AIR-PURIFYING RESPIRATORS ARE APPROPRIATE USE A FULLFACE PARTICLE RESPIRATOR TYPE N99 (US) OR TYPE P2 (EN 143) RESPIRATOR CARTRIDGES AS A BACKUP TO ENGINEERING CONTROLS. IF THE RESPIRATOR IS THE SOLE MEANS OF PROTECTION, USE A FULL-FACE SUPPLIED AIR RESPIRATOR. USE RESPIRATORS AND COMPONENTS TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR CEN (EU).

CONTROL OF ENVIRONMENTAL EXPOSURE PREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE TO DO SO. DO NOT LET PRODUCT ENTER DRAINS.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE Light yellow to brown powder to crystal

ODOUR NO DATA AVAILABLE
ODOUR THRESHOLD NO DATA AVAILABLE
PH NO DATA AVAILABLE
MELTING 200 - 205 °C (dec.)

POINT/FREEZING POINT INITIAL BOILING POINT AND BOILING RANGE

FLASH POINT

EVAPORATION RATE NO DATA AVAILABLE FLAMMABILITY (SOLID, NO DATA AVAILABLE

GAS)

UPPER/LOWER NO DATA AVAILABLE

FLAMMABILITY OR EXPLOSIVE LIMITS

VAPOUR PRESSURE NO DATA AVAILABLE VAPOUR DENSITY NO DATA AVAILABLE

RELATIVE DENSITY

WATER SOLUBILITY NO DATA AVAILABLE PARTITION COEFFICIENT: NO DATA AVAILABLE

N- OCTANOL/WATER

AUTO-IGNITION NO DATA AVAILABLE

TEMPERATURE

DECOMPOSITION NO DATA AVAILABLE

TEMPERATURE

VISCOSITY NO DATA AVAILABLE EXPLOSIVE PROPERTIES NO DATA AVAILABLE OXIDIZING PROPERTIES NO DATA AVAILABLE

OTHER SAFETY INFORMATION

NO DATA AVAILABLE

SECTION 10. STABILITY AND REACTIVITY

REACTIVITY NO DATA AVAILABLE

CHEMICAL STABILITY STABLE UNDER RECOMMENDED STORAGE

CONDITIONS.

POSSIBILITY OF NO DATA AVAILABLE HAZARDOUS

REACTIONS

CONDITIONS TO AVOID AVOID MOISTURE. LIGHT.

INCOMPATIBLE MATERIALS

STRONG OXIDIZING AGENTS, STRONG ACIDS

HAZARDOUS DECOMPOSITION **PRODUCTS**

HAZARDOUS DECOMPOSITION PRODUCTS FORMED UNDER FIRE CONDITIONS. - CARBON OXIDES,

NITROGEN OXIDES (NOX)

OTHER DECOMPOSITION PRODUCTS - NO DATA

AVAILABLE

IN THE EVENT OF FIRE: SEE SECTION 5

SECTION 11. TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS

ACUTE TOXICITY NO DATA AVAILABLE

INHALATION: NO DATA AVAILABLE

DERMAL: NO DATA AVAILABLE

NO DATA AVAILABLE

SKIN NO DATA AVAILABLE

CORROSION/IRRITATION

SERIOUS EYE NO DATA AVAILABLE

DAMAGE/EYE IRRITATION

RESPIRATORY OR SKIN

SENSITISATION

NO DATA AVAILABLE

GERM CELL NO DATA AVAILABLE

MUTAGENICITY

CARCINOGENICITY

THIS PRODUCT IS OR CONTAINS A COMPONENT THAT IS NOT CLASSIFIABLE AS TO ITS CARCINOGENICITY BASED ON ITS IARC, ACGIH, NTP, OR EPA CLASSIFICATION. IARC:

NO COMPONENT OF THIS PRODUCT PRESENT AT LEVELS GREATER THAN OR EQUAL TO 0.1% IS

IDENTIFIED AS PROBABLE, POSSIBLE OR CONFIRMED

HUMAN CARCINOGEN BY IARC.

NTP: NO COMPONENT OF THIS PRODUCT PRESENT AT

> LEVELS GREATER THAN OR EOUAL TO 0.1% IS IDENTIFIED AS A KNOWN OR ANTICIPATED

CARCINOGEN BY NTP.

OSHA: NO COMPONENT OF THIS PRODUCT PRESENT AT

LEVELS GREATER THAN OR EQUAL TO 0.1% IS ON

OSHA S LIST OF REGULATED CARCINOGENS.

REPRODUCTIVE TOXICITY MAY CAUSE CONGENITAL MALFORMATION IN THE

FETUS.

PRESUMED HUMAN REPRODUCTIVE TOXICANT

SPECIFIC TARGET ORGAN

TOXICITY - SINGLE

EXPOSURE

NO DATA AVAILABLE

SPECIFIC TARGET ORGAN TOXICITY - REPEATED

EXPOSURE

NO DATA AVAILABLE

ASPIRATION HAZARD NO DATA AVAILABLE

ADDITIONAL INFORMATION

RTECS: NOT AVAILABLE

SYMPTOMS AND SIGNS OF POISONING ARE:, NAUSEA, DIZZINESS, HEADACHE, CHANGES IN THE BLOOD COUNT, ANEMIA, DROWSINESS, GASTROINTESTINAL DISTURBANCE, VOMITING, DIARRHOEA, FEVER, HAIR LOSS, MOUTH ULCERS, FATIGUE, CHILLS, ANOREXIA., BLURRED VISION, INCREASED

SUSCEPTIBILITY TO INFECTIONS

BLOOD - IRREGULARITIES - BASED ON HUMAN

EVIDENCE

SECTION 12. ECOLOGICAL INFORMATION

TOXICITY NO DATA AVAILABLE

PERSISTENCE AND DEGRADABILITY

NO DATA AVAILABLE

BIOACCUMULATIVE

POTENTIAL

NO DATA AVAILABLE

MOBILITY IN SOIL NO DATA AVAILABLE

RESULTS OF PBT AND VPVB ASSESSMENT ${\tt PBT/VPVB} \ {\tt ASSESSMENT} \ {\tt NOT} \ {\tt AVAILABLE} \ {\tt AS}$

CHEMICAL SAFETY ASSESSMENT NOT

REQUIRED/NOT CONDUCTED

OTHER ADVERSE EFFECTS NO DATA AVAILABLE

SECTION 13. DISPOSAL CONSIDERATIONS

WASTE TREATMENT METHODS

PRODUCT OFFER SURPLUS AND NON-RECYCLABLE SOLUTIONS

TO A LICENSED DISPOSAL COMPANY. CONTACT A LICENSED PROFESSIONAL WASTE DISPOSAL SERVICE TO DISPOSE OF THIS MATERIAL. DISSOLVE OR MIX THE MATERIAL WITH A COMBUSTIBLE SOLVENT AND BURN IN A CHEMICAL INCINERATOR EQUIPPED WITH AN

AFTERBURNER AND SCRUBBER.

CONTAMINATED PACKAGING

DISPOSE OF AS UNUSED PRODUCT.

SECTION 14. TRANSPORT INFORMATION

DOT (US)

PROPER SHIPPING NAME: ALKALOIDS, SOLID, N.O.S. (METHOTREXATE

HYDRATE)

UN NUMBER: 1544 CLASS: 6.1 PACKING GROUP: III

REPORTABLE QUANTITY

(RQ):

POISON INHALATION NO

HAZARD:

IMDG

PROPER SHIPPING NAME: ALKALOIDS, SOLID, N.O.S. (METHOTREXATE

HYDRATE)

UN NUMBER: 1544
CLASS: 6.1
PACKING GROUP: III
EMS-NO: F-A, S-A

IATA

PROPER SHIPPING NAME: ALKALOIDS, SOLID, N.O.S. (METHOTREXATE

HYDRATE)

UN NUMBER: 1544 CLASS: 6.1 PACKING GROUP: III

SECTION 15. REGULATORY INFORMATION

SARA 302 COMPONENTS NO CHEMICALS IN THIS MATERIAL ARE SUBJECT TO

THE REPORTING REQUIREMENTS OF SARA TITLE III,

SECTION 302.

SARA 313 COMPONENTS THIS MATERIAL DOES NOT CONTAIN ANY CHEMICAL

COMPONENTS WITH KNOWN CAS NUMBERS THAT EXCEED THE THRESHOLD (DE MINIMIS) REPORTING LEVELS ESTABLISHED BY SARA TITLE III, SECTION 313.

SARA 311/312 HAZARDS ACUTE HEALTH HAZARD, CHRONIC HEALTH HAZARD

MASSACHUSETTS RIGHT TO KNOW COMPONENTS

CAS-NO. REVISION DATE

Methotrexate hydrate 133073-73-1 04/24/1993

PENNSYLVANIA RIGHT TO KNOW COMPONENTS

CAS-NO. REVISION DATE

Methotrexate hydrate 133073-73-1 04/24/1993

NEW JERSEY RIGHT TO KNOW COMPONENTS

CAS-NO. REVISION DATE

Methotrexate hydrate 133073-73-1 04/24/1993

CALIFORNIA PROP. 65 COMPONENTS

WARNING: THIS PRODUCT CONTAINS A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

CAS-NO. REVISION DATE

Methotrexate hydrate 133073-73-1 09/28/2007

SECTION 16. OTHER INFORMATION

FULL TEXT OF H-STATEMENTS REFERRED TO UNDER SECTIONS 2 AND 3.

H301 TOXIC IF SWALLOWED. H315 CAUSES SKIN IRRITATION.

H319 CAUSES SERIOUS EYE IRRITATION.

H360 MAY DAMAGE FERTILITY OR THE UNBORN CHILD.

MSDS LEGEND

MW: MOLECULAR WEIGHT MF: MOLECULAR FORMULA

VOC: VOLATILE ORGANIC COMPOUNDS

ACGIH: AMERICAN CONFERENCE OF GOVERNMENENTAL INDUSTRIAL

HYGINISTS

CAS: CHEMICAL ABSTRACTS SERIVE REGISTRY NUMBER
OSHA: OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

PEL: PERMISSIBLE EXPOSURE LIMIT (OSHA) TLV: THRESHOLD LIMIT VALUE (ACGIH)

IMPORTANT:

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REVISION DATE: 01/27/2017