

BIO BASIC INC.

160 TORBAY ROAD, MARKHAM ONTARIO L3R 1G6 CANADA
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MATERIAL SAFETY DATA SHEET

REQUIRED UNDER SAFETY AND HEALTH REGULATION FOR SHIP REPAIRING

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SECTION 1 - PRODUCT AND COMPANY INFORMATION

PRODUCT NAME MANGANESE(II) ACETATE TETRAHYDRATE
PRODUCT NUMBER MB0600

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENT

SUBSTANCE NAME CAS # SARA 313
MANGANESE(II) ACETATE TETRAHYDRATE 6156-78-1 YES
FORMULA (C₂H₃O₂)₂MN.4H₂O
SYNONYMS MANGANESE ACETATE TETRAHYDRATE * MANGANESE(II)
ACETATE TETRAHYDRATE * MANGANESE DIACETATE,
TETRAHYDRATE * MANGANOUS ACETATE TETRAHYDRATE
RTECS NUMBER: AI5775000

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

HARMFUL.

HARMFUL BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED.
LIMITED EVIDENCE OF A CARCINOGENIC EFFECT. IRRITATING TO EYES,
RESPIRATORY SYSTEM AND SKIN.

TARGET ORGAN(S): CENTRAL NERVOUS SYSTEM. POSSIBLE MUTAGEN.

FOR ADDITIONAL INFORMATION ON TOXICITY, PLEASE REFER TO SECTION 11.

SECTION 4 - FIRST AID MEASURES

ORAL EXPOSURE

IF SWALLOWED, WASH OUT MOUTH WITH WATER PROVIDED PERSON IS
CONSCIOUS. CALL A PHYSICIAN.

INHALATION EXPOSURE

IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING GIVE
ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN.

DERMAL EXPOSURE

IN CASE OF CONTACT, IMMEDIATELY WASH SKIN WITH SOAP AND COPIOUS
AMOUNTS OF WATER.

EYE EXPOSURE

IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES WITH COPIOUS AMOUNTS
OF WATER FOR AT LEAST 15 MINUTES.

SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT

N/A

AUTOIGNITION TEMP

N/A

FLAMMABILITY

N/A

EXTINGUISHING MEDIA

SUITABLE: WATER SPRAY. CARBON DIOXIDE, DRY CHEMICAL POWDER, OR APPROPRIATE FOAM.

FIREFIGHTING

PROTECTIVE EQUIPMENT: WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO PREVENT CONTACT WITH SKIN AND EYES.

SPECIFIC HAZARD(S): EMITS TOXIC FUMES UNDER FIRE CONDITIONS.

EXPOSURE HAZARD(S)

MATERIAL: IRRITANT.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

WEAR SELF-CONTAINED BREATHING APPARATUS, RUBBER BOOTS, AND HEAVY RUBBER GLOVES.

METHODS FOR CLEANING UP

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

HANDLING

USER EXPOSURE: DO NOT BREATHE DUST. DO NOT GET IN EYES, ON SKIN, ON CLOTHING.

STORAGE

SUITABLE: KEEP TIGHTLY CLOSED. STORE IN A COOL DRY PLACE.

SECTION 8 - EXPOSURE CONTROLS / PPE

ENGINEERING CONTROLS

SAFETY SHOWER AND EYE BATH. USE ONLY IN A CHEMICAL FUME HOOD.

PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY: USE RESPIRATORS AND COMPONENTS TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR CEN (EU). WHERE RISK ASSESSMENT SHOWS AIR-PURIFYING RESPIRATORS ARE APPROPRIATE USE A DUST MASK TYPE N95 (US) OR TYPE P1 (EN 143) RESPIRATOR.

HAND: RUBBER GLOVES.

EYE: CHEMICAL SAFETY GOGGLES.

GENERAL HYGIENE MEASURES

WASH THOROUGHLY AFTER HANDLING. WASH CONTAMINATED CLOTHING BEFORE REUSE.

EXPOSURE LIMITS, RTECS

COUNTRY SOURCE TYPE VALUE

USA ACGIH TWA 0.2 MG(MN)/M3

USA MSHA STANDARD-AIR CEILING 0.5 MG(MN)/M3

USA OSHA. PEL CL 5 MG(MN)/M3

NEW ZEALAND OEL

REMARKS: CHECK ACGIH TLV

SECTION 9 - PHYSICAL/CHEMICAL PROPERTIES

APPEARANCE COLOR: FAINTLY RED

FORM: CRYSTALS

PROPERTY VALUE AT TEMPERATURE OR PRESSURE

MOLECULAR WEIGHT 245.09 AMU

PH N/A

BP/BP RANGE N/A

MP/MP RANGE 300 °C

FREEZING POINT N/A

VAPOR PRESSURE N/A
VAPOR DENSITY N/A
SATURATED VAPOR CONC. N/A
SG/DENSITY 1.589 G/CM3
BULK DENSITY N/A
ODOR THRESHOLD N/A
VOLATILE% N/A
VOC CONTENT N/A
WATER CONTENT N/A
SOLVENT CONTENT N/A
EVAPORATION RATE N/A
VISCOSITY N/A
SURFACE TENSION N/A
PARTITION COEFFICIENT N/A
DECOMPOSITION TEMP. N/A
FLASH POINT N/A
EXPLOSION LIMITS N/A
FLAMMABILITY N/A
AUTOIGNITION TEMP N/A
REFRACTIVE INDEX N/A
OPTICAL ROTATION N/A
MISCELLANEOUS DATA N/A
SOLUBILITY N/A
N/A = NOT AVAILABLE

SECTION 10 - STABILITY AND REACTIVITY

STABILITY

MATERIALS TO AVOID: STRONG OXIDIZING AGENTS, STRONG ACIDS, STRONG BASES.

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS DECOMPOSITION PRODUCTS: CARBON MONOXIDE, CARBON DIOXIDE.

SECTION 11 - TOXICOLOGICAL INFORMATION

ROUTE OF EXPOSURE

INHALATION: MATERIAL IS IRRITATING TO MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT.

MULTIPLE ROUTES: CAUSES EYE AND SKIN IRRITATION. HARMFUL IF SWALLOWED, INHALED, OR ABSORBED THROUGH SKIN.

TARGET ORGAN(S) OR SYSTEM(S)
LUNGS. NERVES.

SIGNS AND SYMPTOMS OF EXPOSURE

MEN EXPOSED TO MANGANESE DUSTS SHOWED A DECREASE IN FERTILITY. CHRONIC MANGANESE POISONING PRIMARILY INVOLVES THE CENTRAL NERVOUS SYSTEM. EARLY SYMPTOMS INCLUDE LANGUOR, SLEEPINESS AND WEAKNESS IN THE LEGS. A STOLID MASK-LIKE APPEARANCE OF THE FACE, EMOTIONAL DISTURBANCES SUCH AS UNCONTROLLABLE LAUGHTER AND A SPASTIC GAIT WITH TENDENCY TO FALL IN WALKING ARE FINDINGS IN MORE ADVANCED CASES. HIGH INCIDENCE OF PNEUMONIA HAS BEEN FOUND IN WORKERS EXPOSED TO THE DUST OR FUME OF SOME MANGANESE COMPOUNDS. TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

TOXICITY DATA

ORAL

RAT

3730 MG/KG

LD50

SECTION 12 - ECOLOGICAL INFORMATION
NO DATA AVAILABLE.

SECTION 13 - DISPOSAL CONSIDERATIONS
APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION
THE MATERIAL SHOULD BE DISSOLVED IN: 1) WATER, 2) ACID SOLUTION,
OR 3) OXIDIZED TO A WATER-SOLUBLE STATE. PRECIPITATE THE MATERIAL
AS THE SULFIDE, ADJUSTING THE PH OF THE SOLUTION TO 7 TO COMPLETE
PRECIPITATION. FILTER THE INSOLUBLES AND DISPOSE OF THEM IN A
HAZARDOUS WASTE SITE. DESTROY ANY EXCESS SULFIDE WITH SODIUM
HYPOCHLORITE. NEUTRALIZE THE SOLUTION BEFORE FLUSHING DOWN THE
DRAIN. OBSERVE ALL FEDERAL, STATE, AND LOCAL ENVIRONMENTAL
REGULATIONS.

SECTION 14 - TRANSPORT INFORMATION
DOT
PROPER SHIPPING NAME: NONE
NON-HAZARDOUS FOR TRANSPORT: THIS SUBSTANCE IS
CONSIDERED TO BE NON-HAZARDOUS FOR TRANSPORT.
IATA
NON-HAZARDOUS FOR AIR TRANSPORT: NON-HAZARDOUS FOR AIR
TRANSPORT.

SECTION 15 - REGULATORY INFORMATION
EU ADDITIONAL CLASSIFICATION
SYMBOL OF DANGER: XI
INDICATION OF DANGER: IRRITANT.
R: 36/37/38
RISK STATEMENTS: IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN.
S: 26-36
SAFETY STATEMENTS: IN CASE OF CONTACT WITH EYES, RINSE
IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE. WEAR
SUITABLE PROTECTIVE CLOTHING.
S CLASSIFICATION AND LABEL TEXT
INDICATION OF DANGER: HARMFUL.
RISK STATEMENTS: HARMFUL BY INHALATION, IN CONTACT WITH SKIN AND
IF SWALLOWED. LIMITED EVIDENCE OF A CARCINOGENIC EFFECT.
IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN.
SAFETY STATEMENTS: WEAR SUITABLE PROTECTIVE CLOTHING. DO NOT
BREATHE DUST. IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY
WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE.
US STATEMENTS: TARGET ORGAN(S): CENTRAL NERVOUS SYSTEM. POSSIBLE
MUTAGEN.
UNITED STATES REGULATORY INFORMATION
SARA LISTED: YES
DEMINIMIS: 1 %
NOTES: THIS PRODUCT IS SUBJECT TO SARA SECTION 313 REPORTING
REQUIREMENTS. THIS PRODUCT IS SUBJECT TO SARA SECTION 313
REPORTING REQUIREMENTS.
CANADA REGULATORY INFORMATION
WHMIS CLASSIFICATION: THIS PRODUCT HAS BEEN CLASSIFIED IN
ACCORDANCE WITH THE HAZARD CRITERIA OF THE CPR, AND THE MSDS
CONTAINS ALL THE INFORMATION REQUIRED BY THE CPR.
DSL: NO
NDSL: NO

SECTION 16 - OTHER INFORMATION
DISCLAIMER

FOR R&D USE ONLY. NOT FOR DRUG, HOUSEHOLD OR OTHER USES.

WARRANTY

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