

BIO BASIC INC.

160 TORBAY ROAD, MARKHAM ONTARIO L3R 1G6 CANADA
TEL: (905) 474 4493, (800) 313 7224 FAX: (905) 474 5794

MATERIAL SAFETY DATA SHEET

REQUIRED UNDER SAFETY AND HEALTH REGULATION FOR SHIP REPAIRING

MANUFACTURER'S NAME: BIO BASIC INC.
TEL: (905) 474 4493
FAX: (905) 474 5794
FOR CHEMICAL EMERGENCY: (416) 995 9730
ADDRESS: 160 TORBAY ROAD, MARKHAM ONTARIO L3R 1G6 CANADA

DATE PREPARED: AUGUST 1, 2007

SECTION 1 - PRODUCT AND COMPANY INFORMATION

PRODUCT NAME DIMETHYLAMINE HYDROCHLORIDE, 99%
PRODUCT NUMBER DB0410

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENT

SUBSTANCE NAME	CAS #	SARA 313
DIMETHYLAMINE HYDROCHLORIDE	506-59-2	NO

FORMULA C2H7N.HCL
SYNONYMS DIMETHYLAMMONIUM CHLORIDE * HYDROCHLORIC ACID
DIMETHYLAMINE * METHANAMINE, N-METHYL-,
HYDROCHLORIDE (9CI) * N-METHYLMETHANAMINE
HYDROCHLORIDE
RTECS NUMBER: IQ0220000

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

HARMFUL.

HARMFUL IF SWALLOWED. IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN.

HMIS RATING

HEALTH: 1

FLAMMABILITY: 0

REACTIVITY: 1

NFPA RATING

HEALTH: 1

FLAMMABILITY: 0

REACTIVITY: 1

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 SKIN CONTACT, FLUSH WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. REMOVE CONTAMINATED CLOTHING AND SHOES.

CALL A PHYSICIAN.

EYE EXPOSURE

IN CASE OF CONTACT WITH EYES, FLUSH WITH COPIOUS AMOUNTS OF

WATER FOR AT LEAST 15 MINUTES. ASSURE ADEQUATE FLUSHING BY SEPARATING THE EYELIDS WITH FINGERS. CALL A PHYSICIAN.

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.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL

EVACUATE AREA.

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

WEAR RESPIRATOR, CHEMICAL SAFETY GOGGLES, 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. AVOID CONTACT WITH EYES, SKIN, AND CLOTHING. AVOID PROLONGED OR REPEATED EXPOSURE.

STORAGE

SUITABLE: KEEP TIGHTLY CLOSED.

SPECIAL REQUIREMENTS

HYGROSCOPIC.

SECTION 8 - EXPOSURE CONTROLS / PPE

ENGINEERING CONTROLS

SAFETY SHOWER AND EYE BATH. MECHANICAL EXHAUST REQUIRED.

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: COMPATIBLE CHEMICAL-RESISTANT GLOVES.

EYE: CHEMICAL SAFETY GOGGLES.

GENERAL HYGIENE MEASURES

WASH THOROUGHLY AFTER HANDLING.

SECTION 9 - PHYSICAL/CHEMICAL PROPERTIES

APPEARANCE PHYSICAL STATE: SOLID

COLOR: COLORLESS

FORM: CRYSTALS

PROPERTY VALUE AT TEMPERATURE OR PRESSURE

MOLECULAR WEIGHT 81.55 AMU

PH N/A
BP/BP RANGE N/A
MP/MP RANGE 168 °C
FREEZING POINT N/A
VAPOR PRESSURE N/A
VAPOR DENSITY N/A
SATURATED VAPOR CONC. N/A
SG/DENSITY N/A
BULK DENSITY N/A
ODOR THRESHOLD N/A
VOLATILE% N/A
VOC CONTENT N/A
WATER CONTENT < 2 %
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

STABLE: STABLE.

CONDITIONS TO AVOID: HYGROSCOPIC.

MATERIALS TO AVOID: OXIDIZING AGENTS.

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS DECOMPOSITION PRODUCTS: CARBON MONOXIDE, CARBON DIOXIDE,
NITROGEN OXIDES, HYDROGEN CHLORIDE GAS.

HAZARDOUS POLYMERIZATION

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

SECTION 11 - TOXICOLOGICAL INFORMATION

ROUTE OF EXPOSURE

SKIN CONTACT: CAUSES SKIN IRRITATION.

SKIN ABSORPTION: MAY BE HARMFUL IF ABSORBED THROUGH THE SKIN.

EYE CONTACT: CAUSES EYE IRRITATION.

INHALATION: MATERIAL IS IRRITATING TO MUCOUS MEMBRANES AND UPPER
RESPIRATORY TRACT. MAY BE HARMFUL IF INHALED.

INGESTION: HARMFUL IF SWALLOWED.

SIGNS AND SYMPTOMS OF EXPOSURE

TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND
TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

TOXICITY DATA

ORAL

RAT

1070 MG/KG

LD50

ORAL

MOUSE

8100 MG/KG
LD50
INTRAPERITONEAL
MOUSE
1570 MG/KG
LD50
REMARKS: LUNGS, THORAX, OR RESPIRATION:RESPIRATORY STIMULATION.
SUBCUTANEOUS
MOUSE
2 GM/KG
LD50
INTRAVENOUS
MOUSE
1210 MG/KG
LD50
ORAL
RABBIT
1600 MG/KG
LD50
ORAL
GUINEA PIG
1600 MG/KG
LD50
CHRONIC EXPOSURE - CARCINOGEN
SPECIES: MOUSE
ROUTE OF APPLICATION: ORAL
DOSE: 12 GM/KG
EXPOSURE TIME: Y
FREQUENCY: C
RESULT: LIVER:TUMORS. LUNGS, THORAX, OR
RESPIRATION:BRONCHIOGENIC CARCINOMA. TUMORIGENIC:NEOPLASTIC BY
RTECS CRITERIA.
CHRONIC EXPOSURE - REPRODUCTIVE HAZARD
SPECIES: MOUSE
DOSE: 3825 MG/KG
ROUTE OF APPLICATION: INTRAPERITONEAL
EXPOSURE TIME: (1-17D PREG)
RESULT: EFFECTS ON FERTILITY: POST-IMPLANTATION MORTALITY (E.G.,
DEAD AND/OR RESORBED IMPLANTS PER TOTAL NUMBER OF IMPLANTS).

SECTION 12 - ECOLOGICAL INFORMATION
NO DATA AVAILABLE.

SECTION 13 - DISPOSAL CONSIDERATIONS
APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION
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. 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: XN

INDICATION OF DANGER: HARMFUL.

R: 22-36/37/38

RISK STATEMENTS: HARMFUL IF SWALLOWED. IRRITATING TO EYES,
RESPIRATORY SYSTEM AND SKIN.

S: 26-36/37

SAFETY STATEMENTS: IN CASE OF CONTACT WITH EYES, RINSE
IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE. WEAR
SUITABLE PROTECTIVE CLOTHING AND GLOVES.

US CLASSIFICATION AND LABEL TEXT

INDICATION OF DANGER: HARMFUL.

RISK STATEMENTS: HARMFUL IF SWALLOWED. IRRITATING TO EYES,
RESPIRATORY SYSTEM AND SKIN.

SAFETY STATEMENTS: IN CASE OF CONTACT WITH EYES, RINSE
IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE. WEAR
SUITABLE PROTECTIVE CLOTHING AND GLOVES.

UNITED STATES REGULATORY INFORMATION

SARA LISTED: NO

TSCA INVENTORY ITEM: YES

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: YES

NDSL: NO

SECTION 16 - OTHER INFORMATION

DISCLAIMER

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

WARRANTY

THE ABOVE INFORMATION IS BELIEVED TO BE CORRECT BUT DOES NOT
PURPORT TO BE ALL INCLUSIVE AND SHALL BE USED ONLY AS A GUIDE. THE
INFORMATION IN THIS DOCUMENT IS BASED ON THE PRESENT STATE OF OUR
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