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Material Safety Data Sheet

Transportation Emergency: 1-800-451-8346

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SECTION 1. ----- CHEMICAL IDENTIFICATION-----

CATALOG #: 7167-1-03

NAME: BUTYL-2-THIOUREA

SYNONYM: BUTYLTHIOUREA; N-(N-BUTYL)THIOUREA

SECTION 2. ----- COMPOSITION/INFORMATION ON INGREDIENTS -----

CAS NUMBER: 1516-32-1

MDL NUMBER: MFCD00022173

MOLECULAR FORMULA: $C_5H_{12}N_2S$

MOLECULAR WEIGHT: 132.23

SECTION 3. ----- HAZARDS IDENTIFICATION -----

LABEL PRECAUTIONARY STATEMENTS

HARMFUL.

HARMFUL IF SWALLOWED.

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

NOT ESTABLISHED.

EXTINGUISHING MEDIA

SUITABLE: FOR SMALL (INCIPIENT) FIRES, USE MEDIA SUCH AS "ALCOHOL" FOAM, DRY CHEMICAL, OR CARBON DIOXIDE. FOR LARGE FIRES, APPLY WATER FROM AS FAR AS POSSIBLE. USE VERY LARGE QUANTITIES (FLOODING) OF WATER APPLIED AS A MIST OR SPRAY; SOLID STREAMS OF WATER MAY BE INEFFECTIVE. COOL ALL AFFECTED CONTAINERS WITH FLOODING QUANTITIES OF WATER.

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-----

PERSONAL PROTECTION

AVOID BREATHING DUST. ENSURE ADEQUATE VENTILATION.

WEAR PROTECTIVE EQUIPMENT INCLUDING RUBBER GLOVES, AND EYE PROTECTION.

KEEP UNPROTECTED PERSONS AWAY.

ENVIRONMENTAL PROTECTION

PREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE TO DO SO. TAKE PRECAUTIONS TO ENSURE PRODUCT DOES NOT CONTAMINATE THE GROUND OR ENTER THE DRAINAGE SYSTEM.

COLLECTION

CONTAIN SPILLAGE, AND THEN COLLECT WITH AN ELECTRICALLY PROTECTED VACUUM CLEANER OR BY WET-BRUSHING AND PLACE IN CONTAINER FOR DISPOSAL ACCORDING TO LOCAL REGULATIONS.

SECTION 7. ----- HANDLING AND STORAGE-----

HANDLING

USER EXPOSURE: AVOID INHALATION. AVOID CONTACT WITH EYES, SKIN, AND CLOTHING. AVOID PROLONGED OR REPEATED EXPOSURE.

STORAGE

SUITABLE: TIGHTLY CLOSED CONTAINERS IN A DRY AND WELL-VENTILATED PLACE.

CONTAINERS WHICH ARE OPENED MUST BE CAREFULLY RESEALED AND KEPT UPRIGHT TO PREVENT LEAKAGE. STORE IN COOL, DRY PLACE. AVOID DIRECT SUNLIGHT.

SECTION 8. ----- EXPOSURE CONTROLS/PERSONAL PROTECTION-----

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 FULL-FACE RESPIRATOR WITH MULTI-PURPOSE COMBINATION (US) OR TYPE ABEK (EN 14387) RESPIRATOR CARTRIDGES AS A BACKUP TO ENGINEERING CONTROLS. IF THE RESPIRATOR IS THE SOLE MEANS OF PROTECTION, USE A FULL-FACE SUPPLIED AIR RESPIRATOR.

HAND: COMPATIBLE CHEMICAL-RESISTANT GLOVES.

EYE: CHEMICAL SAFETY GOGGLES.

GENERAL HYGIENE MEASURES

WASH THOROUGHLY AFTER HANDLING. WASH CONTAMINATED CLOTHING BEFORE REUSE.

SECTION 9. ----- PHYSICAL AND CHEMICAL PROPERTIES -----

APPEARANCE AND ODOR

SOLID

PHYSICAL PROPERTIES

MELTING POINT: 76 - 79 °C

SECTION 10. -----STABILITY AND REACTIVITY-----

STABILITY

STABLE: STABLE UNDER RECOMMENDED STORAGE CONDITIONS.

MATERIALS TO AVOID: STRONG OXIDIZING AGENTS.

CONDITIONS TO AVOID: HEAT, FLAMES AND SPARKS, EXTREMES OF TEMPERATURE, MOISTURE AND DIRECT SUNLIGHT.

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS DECOMPOSITION PRODUCTS: CARBON OXIDES, NITROGEN OXIDES, SULFUR OXIDES.

HAZARDOUS POLYMERIZATION

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR.

SECTION 11. ----- TOXICOLOGICAL INFORMATION -----

ACUTE TOXICITY

LD50 INTRAPERITONEAL - MOUS E - 300 mg/kg

ADDITIONAL INFORMATION

RTECS: YS4375000

SECTION 12. ----- ECOLOGICAL INFORMATION -----

TOXICITY

LC50 - DAPHNIA MAGNA (WATER FLEA) - 18.7 mg/L - 48 H

SECTION 13. ----- DISPOSAL CONSIDERATIONS -----

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION
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 -----

UNRESTRICTED

SECTION 15. ----- REGULATORY INFORMATION -----

EU ADDITIONAL CLASSIFICATION
SYMBOL OF DANGER: Xn
INDICATION OF DANGER: HARMFUL.
RISK STATEMENTS: 22
SAFETY STATEMENTS: 22-24/25-26-36/37/39-45
UNITED STATES REGULATORY INFORMATION
TSCA: LISTED ON TSCA INVENTORY; FOR R&D USE ONLY

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. SYNQUEST LABS, INC. SHALL
NOT BE HELD LIABLE FOR ANY DAMAGE RESULTING FROM HANDLING
OR FROM CONTACT WITH THE ABOVE PRODUCT.