

# MATERIAL SAFETY DATA SHEET

NAME OF PRODUCT Dithiobiuret

## SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

FILE NO.: Dithiobiuret

MSDS DATE: 9/11/13

PRODUCT NAME: Dithiobiuret

SYNONYMS:

PRODUCT CODES: DTB

MANUFACTURER: Synectic Corporation

ADDRESS: P.O. Box 611

Nitro, WV 25143 USA

EMERGENCY PHONE: Chemtrec

CHEMTREC PHONE: (800) 424-9300

OTHER CALLS: (304) 727-6796

FAX PHONE: (304) 727-6797

CHEMICAL NAME: 1,3-Dithiobiuret

CHEMICAL FAMILY: Thioureas

CHEMICAL FORMULA:  $\text{H}_2\text{NC}(=\text{S})\text{-NH-C}(=\text{S})\text{NH}_2$

PRODUCT USE: Chemical intermediate

PREPARED BY: Synectic Corporation

### SECTION 1 NOTES:

Symbol(s) T - Toxic

R-phrases(s) R25 - Toxic if swallowed

### Hazard Statements

H301 - Toxic if swallowed

### Precautionary Statements - EU (§28, 1272/2008)

P264 - Wash face, hands and any exposed skin thoroughly after handling

P270 - Do not eat, drink or smoke when using this product

P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician

P280 - Wear protective gloves/ eye protection/ face protection

## SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT: Dithiobiuret 97% minimum

CAS NO. 541-53-7

SARA 313 REPORTABLE CERCLA RQ 100lb TPQ 100/1000

	ppm	mg/m3
OSHA PEL-TWA: None		
OSHA PEL STEL : None		
OSHA PEL CEILING: None		
ACGIH TLV-TWA: None		
ACGIH TLV STEL: None		
ACGIH TLV CEILING: none		

### SECTION 2 NOTES:

## SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Toxic if swallowed

ROUTES OF ENTRY:

### POTENTIAL HEALTH EFFECTS

EYES: May cause eye irritation

SKIN: May cause skin irritation

INGESTION: Toxic by Ingestion

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INHALATION: May cause respiratory irritation, dust may be coughed up and ingested by swallowing..

ACUTE HEALTH HAZARDS: Toxic if swallowed

CHRONIC HEALTH HAZARDS: None noted

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Unknown

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## CARCINOGENICITY

OSHA: no

ACGIH: no

NTP: no

IARC: no

OTHER:

## SECTION 3 NOTES:

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### SECTION 4: FIRST AID MEASURES

**EYES:** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.

**SKIN:** Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur.

**INGESTION:** Do not induce vomiting. Call a physician or Poison Control Center immediately.

**INHALATION:** Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device. Obtain medical attention.

**NOTES TO PHYSICIANS OR FIRST AID PROVIDERS:** Treat symptomatically

## SECTION 4 NOTES:

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### SECTION 5: FIRE-FIGHTING MEASURES

**FLAMMABLE LIMITS IN AIR, UPPER:** Unknown  
(% BY VOLUME) **LOWER:** Unknown

**FLASH POINT:** Unknown

F:

C:

**METHOD USED:**

**AUTOIGNITION TEMPERATURE:** unknown

F:

C:

## NFPA HAZARD CLASSIFICATION

HEALTH: 4

FLAMMABILITY: 0

REACTIVITY: 0

OTHER:

## HMIS HAZARD CLASSIFICATION Not published

HEALTH:

FLAMMABILITY:

REACTIVITY:

PROTECTION:

**EXTINGUISHING MEDIA:** Use media appropriate to primary fire source

**SPECIAL FIRE FIGHTING PROCEDURES:** Thermal decomposition can lead to release of irritating gases and vapors. As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

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UNUSUAL FIRE AND EXPLOSION HAZARDS: None

HAZARDOUS DECOMPOSITION PRODUCTS: Usual products of combustion as well as sulfur and nitrogen compounds.. Not characterized.

SECTION 5 NOTES:

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## SECTION 6: ACCIDENTAL RELEASE MEASURES

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**ACCIDENTAL RELEASE MEASURES:** Use personal protective equipment. Ensure adequate ventilation. Avoid dust formation. Environmental precautions

Should not be released into the environment.

**Methods and material for containment and cleaning up**

Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation.

SECTION 6 NOTES:

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## SECTION 7: HANDLING AND STORAGE

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**HANDLING:** Wear personal protective equipment. Ensure adequate ventilation. Avoid dust formation. Do not breathe vapors/dust. Do not get in

eyes, on skin, or on clothing. Do not ingest.

**STORAGE:** Keep containers tightly closed in a dry, cool and well-ventilated place.

**OTHER PRECAUTIONS:**

SECTION 7 NOTES:

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## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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**Control parameters**

**Exposure limits** This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

**Biological limit values** This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

**Derived No Effect Level (DNEL)** No information available.

**Predicted No Effect Concentration(PNEC)** No information available.

**ENGINEERING CONTROLS:** Ensure adequate ventilation, especially in confined areas Ensure that eyewash stations and safety showers are close to the workstation location

**VENTILATION :** Good mechanical ventilation. Local exhaust.

**RESPIRATORY PROTECTION:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced

**EYE PROTECTION:** Safety glasses with side-shields

**SKIN PROTECTION:** Wear appropriate protective gloves. In dusty conditions use appropriate protective clothing.

**WORK HYGIENIC PRACTICES:** Handle in accordance with good industrial hygiene and safety practice

SECTION 8 NOTES:

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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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**APPEARANCE:** White to yellowish fine crystalline powder

**ODOR:** odorless

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PHYSICAL STATE: solid

pH AS SUPPLIED: solid

pH (Other): 60. (5.8gm/liter @30 deg.C\_

BOILING POINT: decomposes)

MELTING POINT: 185-189 C (decomposes)

VAPOR PRESSURE (mmHg): unknown

VAPOR DENSITY (AIR = 1): unknown

SPECIFIC GRAVITY (H2O = 1): >1.0

EVAPORATION RATE: nil

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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (con't)

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SOLUBILITY IN WATER: 2.7 gm/liter @ 27C

PERCENT SOLIDS BY WEIGHT: 100

MOLECULAR WEIGHT: 135.21

SECTION 9 NOTES:

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## SECTION 10: STABILITY AND REACTIVITY

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STABILITY: Stable under normal conditions

CONDITIONS TO AVOID (STABILITY): Decomposes at 185-189 deg. c

INCOMPATIBILITY (MATERIAL TO AVOID): Strong oxidizers

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Usual products of combustion as well as sulfur and nitrogen compounds.. Not characterized.

HAZARDOUS POLYMERIZATION: will not occur

CONDITIONS TO AVOID (POLYMERIZATION): does not occur

SECTION 10 NOTES:

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## SECTION 11: TOXICOLOGICAL INFORMATION

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TOXICOLOGICAL INFORMATION: RTECS number EC1575000 Oral toxicity, rat: 5mg/kg, Ldlo scu rabbit 100mg/kg Possible skin sensitizer in rabbit test

Inhalation: may be toxic to highly toxic no reliable date. Take precautions

Chronic Toxicity: unknown

Carcinogenicity There are no known carcinogenic chemicals in this product

Mutagenic Effects No information available

Reproductive Effects No information available.

Developmental Effects No information available.

Target Organs None known.

Other Adverse Effects See actual entry in RTECS for complete information The toxicological properties have not been fully investigated.

Endocrine Disruptor Information None known

SECTION 11 NOTES:

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## SECTION 12: ECOLOGICAL INFORMATION

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ECOLOGICAL INFORMATION: Observed to degrade rapidly in moist soil, air, and in water.

Ecotoxicity: no information available

Bioaccumulative potential: no information available

Mobility in soil: no information

SECTION 12 NOTES:

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## SECTION 13: DISPOSAL CONSIDERATIONS

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WASTE DISPOSAL METHOD: Landfill or incinerate in permitted incinerator

RCRA HAZARD CLASS: none

SECTION 13 NOTES:

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## SECTION 14: TRANSPORT INFORMATION

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### U.S. DEPARTMENT OF TRANSPORTATION

PROPER SHIPPING NAME: Toxic Solid, Organic, NOS (Allyl Thiourea)

HAZARD CLASS: 6.1

ID NUMBER: UN2811

PACKING GROUP: III

LABEL STATEMENT:

AIR TRANSPORTATION (Same as above.)

PROPER SHIPPING NAME:

HAZARD CLASS:

ID NUMBER:

PACKING GROUP:

LABEL STATEMENTS:

OTHER AGENCIES:

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## SECTION 15: REGULATORY INFORMATION

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### U.S. FEDERAL REGULATIONS

TSCA (TOXIC SUBSTANCE CONTROL ACT): Luisted

CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT): RQ 100 lb TPQ 100/1000

STATE REGULATIONS:

INTERNATIONAL REGULATIONS: No information known at this time

SECTION 15 NOTES:

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## SECTION 16: OTHER INFORMATION

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OTHER INFORMATION:

PREPARATION INFORMATION:

DISCLAIMER: OTHER INFORMATION:

Full text of R-phrases referred to under sections 2 and 3

R25 - Toxic if swallowed

Revision Date 9/4/13

Revision Summary

Reason for revision Not applicable

Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.