

## MATERIAL SAFETY DATA SHEET

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Issue Date:

### 1- Chemical Product Information and Company Identification.

**Product Name:** : Clothianidin pesticide reference standard, PesStan™.  
**Synonym:** : (E)-1-[(2-Chlorothiazol-5-yl)methyl]-3-methyl-2-nitroguanidine.  
**Product code:** : BS14422.  
**CAS Number:** : 210880-92-5.  
**Company Name:** : Briti Scientific.  
**Company Address:** : Plot No:78/B/13, SY-79,Phase-VI, Jeedimetla,Hyderabad-500 055.  
Telangana, India.

### Section 2- Composition / Information on Ingredients.

CAS No.	Chemical Name	Mol. Formula
210880-92-5.	Clothianidin	C <sub>6</sub> H <sub>8</sub> ClN <sub>5</sub> O <sub>2</sub> S.

### Section 3- Hazards Identification.

#### Classification

#### OSHA Regulatory Status:

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Acute toxicity - Inhalation (Dusts/Mists) Category 4

Skin corrosion/irritation Category 3

#### Label elements

Hazard statements

H332 Harmful if inhaled

H316 Causes mild skin irritation

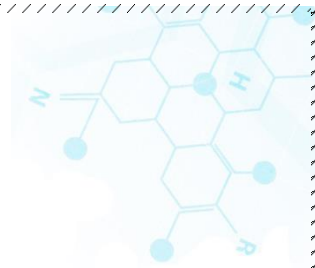
H400 Very toxic to aquatic life

H410 Very toxic to aquatic life with long lasting effect



USA: #1004, Boston, Massachusetts, 02116, United States. India: Jeedimetla, Hyderabad-500 055, Telangana.

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**Precautionary Statements - Prevention:**

- P280 - Wear protective gloves
- P281 - Use personal protective equipment as required
- P201 - Obtain special instructions before use
- P202 - Do not handle until all safety precautions have been read and understood
- P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
- P271 - Use only outdoors or in a well-ventilated area

**Precautionary Statements - Response:**

- P308 + P313 - IF exposed or concerned: Get medical advice/attention
- P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

**Precautionary Statements - Storage:**

- P405 - Store locked up

**Precautionary Statements - Disposal:**

- P501 - Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC):** Not applicable.

## Section 4- First Aid Measures.

**Aspiration pneumonia hazard:** No information available

**Description of first aid measures:**

**Eye contact:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

**Skin Contact:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

**Ingestion:** If swallowed, IMMEDIATELY call a poison control center or doctor for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or a doctor. Never give anything by mouth to an unconscious person.

**Inhalation:** Remove affected person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.

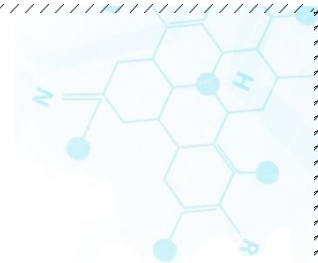
Call a poison control center or doctor for further treatment advice.

**Self-protection of the First Responder:**

Use personal protective equipment as required.

**Note to physicians:** For skin effects, a highly efficient therapeutic agent for Pyrethrin/ Pyrethroid exposure is topical application of tocopherol acetate (Vitamin E).





## Section 5- Fire Fighting Measures.

**Suitable Extinguishing Media:** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable Extinguishing Media:** Caution: Use of water spray when fighting fire may be inefficient  
Hazardous combustion products: Carbon monoxide. Carbon dioxide (CO<sub>2</sub>)

### **Specific Hazards Arising from the Chemical**

In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact. Thermal decomposition can lead to release of irritating and toxic gases and vapors.

### **Explosion data**

Sensitivity to Mechanical Impact: None.

Sensitivity to Static Discharge: None.

### **Hazardous Combustion Products**

Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Hydrogen halides

### **Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

### **NFPA**

Health	Flammability	Instability	Physical hazards
2	1	0	N/A

## Section 6- Accidental Release Measures.

### **Personal precautions, protective equipment and emergency procedures**

**Personal precautions:** Use personal protective equipment as required. Avoid contact with eyes and skin. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

**Environmental precautions:** Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. See Section 12 for additional ecological information.

Methods and material for containment and cleaning up

**Methods for containment:** Prevent further leakage or spillage if safe to do so.

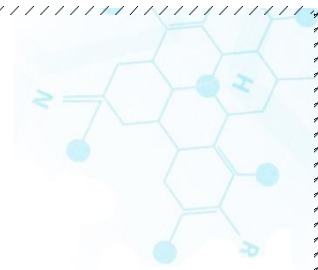
**Methods for cleaning up:** Soak up with inert absorbent material. Pick up and transfer to properly labelled containers. After cleaning, flush away traces with water. Prevent product from entering drains. Dam up.

## Section 7- Handling and Storage.

### **Precautions for safe handling**

**Advice on safe handling:** Use personal protective equipment as required. Ensure adequate ventilation, especially in confined areas. Use with local exhaust ventilation. Do not breathe dust/fume/gas/mist/vapors/spray. For more information, see product label.





### Conditions for safe storage, including any incompatibilities

**Storage Conditions:** Keep out of the reach of children. Keep container tightly closed. Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers. For more information, see product label.

## Section 8- Exposure Control/Personal Protection.

### Control parameters

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

### Appropriate engineering controls

**Engineering Controls:** Safety showers

Eyewash stations

Ventilation systems

### Individual protection measures, such as personal protective equipment

**Eye/face protection:** Tight sealing safety goggles. Face protection shield.

**Skin and body protection:** Wear protective gloves and protective clothing.

### Respiratory protection:

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

### General Hygiene Considerations:

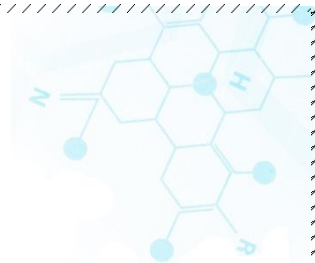
When using do not eat, drink or smoke. Wash contaminated clothing before reuse. Regular cleaning of equipment, work area and clothing is recommended.

## Section 9- Physical and Chemical Properties.

<b>Appearance</b>	White to Light yellow powder to crystal.
<b>Odor</b>	Mild
<b>Odor Threshold</b>	No information available
<b>pH</b>	5.6
<b>Melting Point/Range</b>	176 °C.
<b>Boiling Point/Range</b>	412.5 °C.
<b>Flash Point</b>	> 93.3 °C / > 200.0 °F
<b>Evaporation Rate</b>	No information available
<b>Flammability (solid,gas)</b>	Not applicable
<b>Flammability or explosive limits</b>	
Upper	No data available
Lower	No data available
<b>Vapor Pressure</b>	No information available







Density	1.61 g/cm <sup>3</sup> .
Solubility	Soluble in DMF.
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	No information available
Decomposition Temperature	No information available
Viscosity	No data available
Molecular Formula	C <sub>6</sub> H <sub>8</sub> ClN <sub>5</sub> O <sub>2</sub> S.
Molecular Weight	249.67 g/mol.

### Section 10- Stability and Reactivity.

**Reactive Hazard:** No data available

**Stability:** Stable under recommended storage conditions.

**Conditions to Avoid:** Extremes of temperature and direct sunlight.

**Incompatible Materials:** Incompatible with strong acids and bases. Incompatible with oxidizing agents.

**Hazardous Decomposition Products:** Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>)

**Hazardous Polymerization:** Hazardous polymerization does not occur

**Hazardous Reactions:** None under normal processing.

### Section 11- Toxicological Information.

#### **Numerical measures of toxicity - Product Information**

**Oral LD50** 3,044 mg/kg (rat)

**Dermal LD50** >5,000 mg/kg (rabbit)

**Inhalation LC50** >2.13 mg/L (rat; 4 hours)

**Eye contact:** Non-irritating to eyes.

**Skin Contact:** Slightly irritating.

**Sensitization:** Non-sensitizer.

**Carcinogenicity** This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

**Reproductive toxicity:** No information available.

**Developmental Toxicity** No information available.

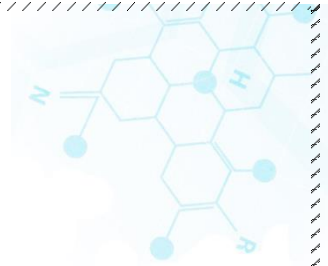
**Teratogenicity:** No information available.

**STOT - single exposure:** No information available.

**STOT - repeated exposure:** No information available.

**Chronic toxicity:** Repeated contact may cause allergic reactions in very susceptible persons. Avoid repeated exposure.





## Section 12- Ecological Information.

### **Ecotoxicity:**

#### **Persistence and degradability**

No information available.

#### **Bioaccumulation**

No information available.

**Other adverse effects:** No information available

#### **Environmental hazards (EPA):**

Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

## Section 13- Disposal Considerations.

### **Waste treatment methods**

**Disposal of wastes:** Disposal should be in accordance with applicable regional, national and local laws and regulations. For more information, see product label.

**Contaminated packaging:** For more information, see product label.

## Section 14- Transport Information.

### **DOT (Department of Transportation)**

**Proper Shipping Name:** Insecticides, Insect or Animal Repellent, Liquid

**Hazard Class:** Non-Hazardous

**Other Shipping Information:** This material is not regulated by the DOT as a hazardous material when shipped in Non-Bulk quantities (i.e., less-than 119 Gallons / 450 Liters).

When shipping in Bulk-quantities (i.e., more than 119 Gallons / 450 Liters), please contact MGK® for the proper shipping description.

### **Air (IATA/ ICAO)**

**Proper Shipping Name:** Insecticides, Insect or Animal Repellent, Liquid

**Hazard Class:** Non-Hazardous

**Vessel (IMO/ IMDG)** Not available

## Section 15- Regulatory Information.

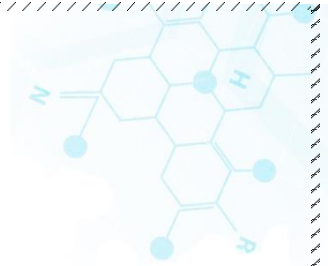
### **Legend:**

TSCA - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

'-' - Not Listed





**TSCA 12(b)** - Notices of Export Not applicable

**U.S. Federal Regulations**

SARA 313 Not applicable

SARA 311/312 Hazard Categories See section 2 for more information

CWA (Clean Water Act) Not applicable

**Clean Air Act** Not applicable

**OSHA** - Occupational Safety and

Health Administration

Not applicable

**CERCLA** Not applicable

**California Proposition 65** This product does not contain any Proposition 65 chemicals

**Section 16- Other Information.**

Briti Scientific provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.

