# 1. Identification of the Substance/ Mixture and the Company/ Undertaking

<table>
<thead>
<tr>
<th>Product Name:</th>
<th>DTT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Code:</td>
<td>IB21040 &amp; IB21045</td>
</tr>
<tr>
<td>Recommend Use:</td>
<td>For further manufacturing use only</td>
</tr>
<tr>
<td>Uses Advised Against:</td>
<td>Not for human or animal drug use</td>
</tr>
<tr>
<td>Company:</td>
<td>IBI SCIENTIFIC</td>
</tr>
<tr>
<td></td>
<td>7445 Chavenelle Road</td>
</tr>
<tr>
<td></td>
<td>Dubuque, IA  52002</td>
</tr>
<tr>
<td>Emergency Tele. Number:</td>
<td>3E Company (Acct# 9027) 1-800-451-8346 / (001) 760-602-8703</td>
</tr>
<tr>
<td>Company Tele. Number:</td>
<td>1-800-253-4942 / (001) 563-690-0484</td>
</tr>
<tr>
<td>E-Mail Address:</td>
<td><a href="mailto:info@ibisci.com">info@ibisci.com</a></td>
</tr>
</tbody>
</table>

# 2. Hazardous Identification

<table>
<thead>
<tr>
<th>GHS – Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSHA Regulatory Status:</td>
</tr>
<tr>
<td>Acute Toxicity - Oral:</td>
</tr>
<tr>
<td>Skin Corrosion/Irritation:</td>
</tr>
<tr>
<td>Serious Eye Damage/Eye Irritation:</td>
</tr>
<tr>
<td>Specific Target Organ Toxicity (Single Exposure):</td>
</tr>
<tr>
<td>Signal Word:</td>
</tr>
<tr>
<td>Appearance:</td>
</tr>
<tr>
<td>Physical State:</td>
</tr>
<tr>
<td>Odor:</td>
</tr>
<tr>
<td>Hazard Statements:</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
**Precautionary Statements:**

- **P261:** Avoid breathing dust/fume/gas/mist/vapors/spray
- **P264:** Wash face, hands, and any exposed skin thoroughly after handling
- **P270:** Do not eat, drink, or smoke when using this product
- **P271:** Use only outdoors or in a well-ventilated area
- **P280:** Wear protective gloves/protective clothing/eye protection/face protection
- **P301+P312:** IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
- **P301+P330+P331:** IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
- **P304+P340:** IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
- **P305+P351+P338:** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- **P312:** Call a POISON CENTER or doctor if you feel unwell
- **P321:** Specific treatment (see supplemental first aid instructions on this label)
- **P337+P313:** If eye irritation persists: Get medical advice/attention
- **P362:** Take off contaminated clothing and wash before reuse

**Hazards not otherwise classified:** Not applicable

**Other Information:**

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

- **Chemical Name:** DL-Dithiothreitol
- **EC No.:** EEC No. 222-468-7
- **REACH Reg. No.:** Not Available
- **CAS No.:** 3483-12-3
- **Weight %:** 95 – 100
- **Classification:** -

### 4. FIRST AID MEASURES

**Eye Contact:** Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

**Skin Contact:** Wash off immediately with soap and plenty of water, removing all contaminated clothes and shoes.

**Inhalation:** Move to fresh air. If not breathing, give artificial respiration.

**Ingestion:** Never give anything by mouth to an unconscious person. Rinse mouth.

**Notes to Physician:** Treat symptomatically.

### 5. FIRE FIGHTING MEASURES

- **Flammable Properties:** Not flammable
- **Flash Point:** Not determined
- **Suitable Extinguishing Media:** Dry chemical, CO₂, appropriate foam
- **Hazardous Combustion Products:** Carbon oxides, Sulfur oxides, Hydrogen sulfide gas
- **Explosion Data**
  - Sensitivity to Mechanical Impact: Not sensitive
  - Sensitivity to Static Discharge: Not sensitive
Protective Equip. & Precautions for Firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equiv.) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Ensure adequate ventilation, especially in confined areas.
Environmental Precautions: See Section 12 for additional ecological information.
Methods for Containment: Prevent further leakage or spillage, if safe to do so.
Methods for Cleaning Up: Avoid dust formation. Pick up and transfer to properly labeled containers. Ventilate area and wash spill site after material pickup is complete.

7. HANDLING AND STORAGE

Handling: Handle in accordance with good industrial hygiene and safety practice. Hygroscopic.
Storage: Keep container tightly closed in a dry, cool, and well-ventilated place. Hygroscopic.
Incompatible Products: Bases, Oxidizing agents, Reducing agents, Alkali metals.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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

Chemical Name: DL-Dithiothreitol - #3483-12-3
ACGIH TLV: -
OSHA PEL: -
NIOSH IDLH: -

Engineering Measures: Showers, Eyewash Stations, Ventilation Systems

Personal Protective Equipment

Eye/Face Protection: Avoid contact with eyes. Safety glasses with side-shields.
Skin & Body Protection: Wear protective gloves/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.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: White
Odor: Thiol odor – Unpleasant Characteristic, Skunk-like
Odor Threshold: No information available
Decomposition Temp. °C: No information available
Freezing Point: No information available
Initial Boiling Point: No information available
Physical State: Powder
pH: 4.3
Flash Point: 109°C / 228°F
Autoignition Temp. °C: No data available
Boiling Point/Range: No data available
Melting Point/Range: 42 – 43°C
Flammability Limits (Air): Upper-No data available * Lower-No data available
Explosion Limits: No information available
Explosive Properties: No information available
**10. Stability and Reactivity**

<table>
<thead>
<tr>
<th>Property</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reactivity</td>
<td>No data available</td>
</tr>
<tr>
<td>Chemical Stability</td>
<td>Stable under recommended storage conditions</td>
</tr>
<tr>
<td>Possibility of Hazardous Reactions</td>
<td>None under normal processing</td>
</tr>
<tr>
<td>Incompatible Products</td>
<td>Bases, Oxidizing agents, Reducing agents, Alkali metals</td>
</tr>
<tr>
<td>Conditions to Avoid</td>
<td>Protect from moisture.</td>
</tr>
<tr>
<td>Hazardous Decomposition Products</td>
<td>Carbon oxides, Sulfur oxides, Hydrogen sulfide gas</td>
</tr>
<tr>
<td>Hazardous Polymerization</td>
<td>Hazardous polymerization does not occur.</td>
</tr>
</tbody>
</table>

**11. Toxicological Information**

**Information on likely routes of exposure**

<table>
<thead>
<tr>
<th>Route</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>May cause irritation of respiratory tract</td>
</tr>
<tr>
<td>Eye Contact</td>
<td>Irritating to eyes</td>
</tr>
<tr>
<td>Skin Contact</td>
<td>Irritating to skin</td>
</tr>
<tr>
<td>Ingestion</td>
<td>There is no data available for this product</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 Oral</td>
<td>-</td>
</tr>
<tr>
<td>LD50 Dermal</td>
<td>-</td>
</tr>
<tr>
<td>LC50 Inhalation</td>
<td>-</td>
</tr>
</tbody>
</table>

**Chemical Name:** DL-Dithiothreitol - #3483-12-3

**Information on toxicological effects**

- **Symptoms:** No information available.
- **Delayed and immediate effects as well as chronic effects from short and long term exposure**
  - Sensitization: No information available
  - Mutagenic Effects: No information available
  - Carcinogenicity: No information available
  - Chemical Name: DL-Dithiothreitol - #3483-12-3
  - ACGIH: -
  - IARC: -
  - NTP: -
  - OSHA: -
- **Reproductive Toxicity:** No information available
  - STOT – single exposure: No information available
  - STOT – repeated exposure: No information available
  - Chronic Toxicity: No information available
  - Target Organ Effects: Central nervous system (CNS)
  - Aspiration Effects: No information available

**Numerical measures of toxicity – Product Information**

The following values are calculated based on chapter 3.1 of the GHS document.
12. Ecological Information

**Ecotoxicity:** 100% of mixture consists of component(s) of unknown hazards to aquatic environment
- Chemical Name: DL-Dithiothreitol - #3483-12-3
- Toxicity to Algee: -
- Toxicity to Fish: -
- Daphnia Magna (Water Flea): -

**Persistence and Degradability:** No information available

**Bioaccumulation/Accumulation:** No information available
- Chemical Name: DL-Dithiothreitol - #3483-12-3
- Low Pow: -

**Other Adverse Effects:** No information available

13. Disposal Considerations

**Water Disposal Method:** Dispose of material in accordance with all federal, state, and local regulations.

**Contaminated Packaging:** Do not re-use empty containers.
- Chemical Name: DL-Dithiothreitol - #3483-12-3
- RCRA – Halogenated Organic Compounds: -
- RCRA – P Series Wastes: -
- RCRA – F Series Wastes: -
- RCRA – K Series Wastes: -
- Chemical Name: DL-Dithiothreitol - #3483-12-3
- California Hazardous Waste Status: -

14. Transport Information

**IATA**
Not regulated

**US DOT**
Not regulated

15. Toxicological Information

**International Inventories**
- TSCA: Complies
- DSL/NDSL: Complies
- EINECS/ELINCS: Complies
- ENCS: Does not comply
- IECSC: Complies
- KECL: Does not comply
- PICCS: Complies
- AICS: Complies

**Legend:**
- TSCA: United States Toxic Substances Control Act Section 8(b) Inventory
- DSL/NDSL: Canadian Domestic Substances List/Non-Domestic Substances List
- EINECS/ELINCS: European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
- ENCS: Japan Existing and New Chemical Substances
- IECSC: China Inventory of Existing Chemical Substances
- KECL: Korean Existing and Evaluated Chemical Substances
- PICCS: Philippines Inventory of Chemicals and Chemical Substances
- AICS: Australian Inventory of Chemical Substances
SAFETY DATA SHEET
IB21040 & IB21045 – DTT

U.S. Federal Regulations
SARA 313 Section 313 of Title III of the superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain a chemical or chemicals which are subject to the reporting requirements of the Act & Title 40 of the Code of Federal Regulations, part 372.

SARA 311/312 Hazard Categories
Acute Health Hazard Yes
Chronic Health Hazard No
Fire Hazard No
Sudden Release of Pressure Hazard No
Reactive Hazard No

Clean Water Act This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical Name: DL-Dithiothreitol - #3483-12-3
CWA – Reportable Quantities: -
CWA – Toxic Pollutants: -
CWA – Priority Pollutants: -
CWA – Hazardous Substances: -

CERCLA This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

Chemical Name: DL-Dithiothreitol - #3483-12-3
Hazardous Substances RQs: -
Extremely Hazardous Substances RQs: -
RQ: -

U.S. State Regulations
California Proposition 65 This product does not contain any Proposition 65 chemicals.

Chemical Name: DL-Dithiothreitol - #3483-12-3
California Prop. 65: -

U.S. Right-to-Know Regulations
Chemical Name: DL-Dithiothreitol - #3483-12-3
New Jersey: -
Massachusetts: -
Pennsylvania: -

U.S. EPA Label Information
EPA Pesticide Registration #: Not applicable.

Canada No information available

WHMIS Hazard Class
D2B – Toxic materials
### 16. Other Information

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Issuing Date:</strong></td>
<td>10-Feb-1998</td>
</tr>
<tr>
<td><strong>Revision Date:</strong></td>
<td>6-July-2018</td>
</tr>
<tr>
<td><strong>Revision Note:</strong></td>
<td>Updated address and logo</td>
</tr>
<tr>
<td><strong>Recommended Restrictions:</strong></td>
<td>No information available</td>
</tr>
<tr>
<td><strong>Disclaimer:</strong></td>
<td>The information provided on this SDS 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 test.</td>
</tr>
</tbody>
</table>

---

**End of Safety Data Sheet**