# SAFETY DATA SHEET

**Date:** October 12, 2019

## 1. PRODUCT AND COMPANY IDENTIFICATION

<table>
<thead>
<tr>
<th>Product Name:</th>
<th>MTT (3-(4,5-dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catalog Number:</td>
<td>10059</td>
</tr>
<tr>
<td>Unit Size:</td>
<td>100 mg</td>
</tr>
<tr>
<td>Manufacturer/Supplier:</td>
<td>Biotium, Inc. 46117 Landing Parkway, Fremont, CA 94538, USA</td>
</tr>
<tr>
<td>Phone:</td>
<td>1-510-265-1027; Fax: 1-510-265-1352</td>
</tr>
<tr>
<td>Web:</td>
<td><a href="http://www.biotium.com">http://www.biotium.com</a></td>
</tr>
</tbody>
</table>

Use as laboratory reagent. For research use only. Not for food, drug, household, or cosmetic use.

## 2. HAZARDS IDENTIFICATION

### GHS Classification

<table>
<thead>
<tr>
<th>Signal word</th>
<th>Warning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health hazards</td>
<td>Skin corrosion/irritation Category 2</td>
</tr>
<tr>
<td></td>
<td>Serious eye damage/eye irritation Category 2</td>
</tr>
<tr>
<td></td>
<td>Specific target organ systemic toxicity (single exposure) Category 3</td>
</tr>
<tr>
<td></td>
<td>Mutagenic Category 2</td>
</tr>
</tbody>
</table>

### Physical hazards

None

### Hazard statements

H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation

### Precautionary statements

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P281 Use personal protective equipment as required.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

### WHMIS classification

None

### GHS hazard pictogram

- **Signal word:** Warning
- **Hazard statements:**
  - H315 Causes skin irritation.
  - H319 Causes serious eye irritation.
  - H335 May cause respiratory irritation

### Classification according to Regulation (EC) No 1272/2008[CLP]

- **Precautionary statements**
  - P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
  - P281 Use personal protective equipment as required.
  - P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Health hazards

- Skin corrosion/irritation Category 2
- Serious eye damage/eye irritation Category 2
- Specific target organ systemic toxicity (single exposure) Category 3
- Mutagenic Category 2

Physical hazards
None

Classification according to Directive 1999/45/EC
Labeling according to Regulation (EC) No 1272/2008[CLP]

Hazard pictogram

Signal word Warning

Hazard statements
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation

Precautionary statements
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P281 Use personal protective equipment as required.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

HMIS Classification
Health hazard: 2
Flammability: 0
Physical hazards: 0

NFPA Rating
Health hazard: 2
Fire: 0
Reactivity Hazard: 0

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS No.</th>
<th>EC No.</th>
<th>Index No.</th>
<th>Weight %</th>
<th>Classification according to 67/548/EEC</th>
<th>Classification according to regulation (EC)No1278/2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTT</td>
<td>298-93-1</td>
<td>206-069-5</td>
<td>-</td>
<td>≥95%</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

4. FIRST-AID MEASURES

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Flush eyes with water as a precaution.

If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
5. **FIREFIGHTING MEASURES**

   **Suitable extinguishing media**
   Carbon dioxide, dry chemical extinguishers, foam extinguishers or water.

   **Special protective equipment for firefighters**
   Wear self contained breathing apparatus for firefighting if necessary.

6. **ACCIDENTAL RELEASE MEASURES**

   **Personal precautions**
   Avoid breathing vapors, mist or gas. Remove all sources of ignition.

   **Environmental precautions**
   Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

   **Methods and materials for containment and cleaning up**
   Contain spillage. Soak up spilled substance with inert absorbent material. Keep in suitable, closed containers for disposal.

7. **HANDLING AND STORAGE**

   **Precautions for safe handling**
   Avoid inhalation of vapor or mist.
   Avoid direct contact with substance.

   **Conditions for safe storage**
   Keep container tightly closed in a dry and well-ventilated place.
   Store at 4°C.

8. **EXPOSURE CONTROLS/PERSONAL PROTECTION**

   **Components with workplace control parameters**
   None

   **Personal protective equipment**

   **Hand protection**
   Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

   **Respiratory protection**
   Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

   **Eye protection**
   Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

   **Hygiene measures**
   Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. **PHYSICAL AND CHEMICAL PROPERTIES**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>MTT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Yellow Solid</td>
</tr>
<tr>
<td>Odor</td>
<td>No information available</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No information available</td>
</tr>
<tr>
<td>pH</td>
<td>No information available</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>No information available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No information available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No information available</td>
</tr>
<tr>
<td>Evaporate rate</td>
<td>No information available</td>
</tr>
<tr>
<td>Flammability</td>
<td>No information available</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>No information available</td>
</tr>
</tbody>
</table>
10. STABILITY AND REACTIVITY

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
No data available

Conditions to avoid
Heat, flames and sparks.

Materials to avoid
No data available

Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides
Other decomposition products - No data available

11. TOXICOLOGICAL INFORMATION

Acute toxicity
Oral LD50  No data available
Inhalation LC50  No data available
Dermal LD50  No data available

Other information on acute toxicity  No data available

Skin corrosion/irritation  Skin irritation

Serious eye damage/eye irritation  Serious eye damage/eye irritation

Respiratory or skin sensitization  No data available

Germ cell mutagenicity  Conclusive but not sufficient for classification

Carcinogenicity  Conclusive but not sufficient for classification
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity  Conclusive but not sufficient for classification

Specific target organ toxicity - single exposure (Globally Harmonized System)
May cause respiratory irritation

Specific target organ toxicity - repeated exposure (Globally Harmonized System)
Conclusive but not sufficient for classification

Aspiration hazard  Conclusive but not sufficient for classification

Potential health effects
Inhalation May be harmful if inhaled. May cause respiratory tract irritation.
Ingestion May be harmful if swallowed.
Skin May be harmful if absorbed through skin. May cause skin irritation.
Eyes May cause eye irritation.

Additional Information
RTECS: XF8060000
12. ECOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Category</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toxicity</td>
<td>No information available</td>
</tr>
<tr>
<td>Persistence and degradability</td>
<td>No information available</td>
</tr>
<tr>
<td>Biodegradation</td>
<td>No information available</td>
</tr>
<tr>
<td>Mobility in soil</td>
<td>No information available</td>
</tr>
<tr>
<td>Results of PBT and vPvB assessment</td>
<td>No information available</td>
</tr>
<tr>
<td>Other adverse effects</td>
<td>No information available</td>
</tr>
<tr>
<td>Additional information</td>
<td>No information available</td>
</tr>
</tbody>
</table>

13. DISPOSAL CONSIDERATIONS

Do not dispose product directly into sewage. Consult local state or national regulation for proper disposal.

14. TRANSPORT INFORMATION

<table>
<thead>
<tr>
<th>Category</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>IATA, IMDG, DOT (US), TDG</td>
<td>Not dangerous goods during transportation</td>
</tr>
<tr>
<td>UN number</td>
<td>None</td>
</tr>
<tr>
<td>UN proper shipping name</td>
<td>None</td>
</tr>
<tr>
<td>Transport hazard class</td>
<td>None</td>
</tr>
<tr>
<td>Packing group</td>
<td>None</td>
</tr>
<tr>
<td>Environmental hazards</td>
<td>None</td>
</tr>
<tr>
<td>Transport in bulk according to Annex II of MARPOL 73/78 and IBC Code</td>
<td>None</td>
</tr>
<tr>
<td>Special precaution for user</td>
<td>None</td>
</tr>
</tbody>
</table>

15. REGULATION INFORMATION

US Federal Regulations
US Toxic Substances Control Act (TSCA): Listed
SARA 302: No chemicals were found.
SARA 313: No chemicals were found.
SARA 311/312 Hazards: Acute Health Hazard, Chronic Health Hazard

WHMIS Hazard Class
None

16. OTHER INFORMATION

Classification according to Regulation (EC) Nr. 1272/2008
Refer to section 2 and section 3

Prepared by: Regulatory Department
Biotium Inc.

Version no. 3
Revision date (Initials) October 12, 2019 (LR)
Reason for revision Application of WHMIS labeling requirements

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