



## MATERIAL SAFETY DATA SHEET

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Issue Date:

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

**Product Name:** : Mesityl oxide reference standard according to Ph. Eur, AnStan<sup>®</sup>.  
**Synonym:** : 4-Methyl-3-penten-2-one.  
**Product code:** : BS14381.  
**CAS Number:** : 141-79-7.  
**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
141-79-7.	4-Methyl-3-penten-2-one.	C <sub>6</sub> H <sub>10</sub> O.

### Section 3- Hazards Identification.

#### Classification

Classification under 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Flammable liquids: Category 3.  
Acute oral toxicity: Category 4.  
Acute dermal toxicity: Category 4.  
Acute Inhalation Toxicity – Vapors: Category 4.

#### Label Elements

##### **Signal Word**

Warning

##### **Hazard Statements**

Flammable liquid and vapour.  
Harmful if swallowed, in contact with skin or if inhaled.



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

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## **Precautionary Statements**

### **Prevention**

- Wash face, hands and any exposed skin thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Wear protective gloves/protective clothing/eye protection/face protection.
- Avoid breathing dust/fume/gas/mist/vapors/spray.
- Use only outdoors or in a well-ventilated area.
- Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- Keep container tightly closed.
- Ground/bond container and receiving equipment.
- Use explosion-proof electrical/ventilating/lighting/equipment.
- Use only non-sparking tools.
- Take precautionary measures against static discharge.

### **Inhalation**

- IF INHALED:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

### **Skin**

- Call a POISON CENTER or doctor/physician if you feel unwell.
- Wash contaminated clothing before reuse.

- IF ON SKIN (or hair):** Take off immediately all contaminated clothing. Rinse skin with water/shower.

### **Ingestion**

- IF SWALLOWED:** Call a POISON CENTER or doctor/physician if you feel unwell.
- Rinse mouth

### **Fire**

- In case of fire:** Use CO<sub>2</sub>, dry chemical, or foam for extinction.

### **Storage**

- Store in a well-ventilated place. Keep cool.

### **Disposal**

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

### **Hazards not otherwise classified (HNOC)**

- None identified

## **Section 4- First Aid Measures.**

- General Advice:** If symptoms persist, call a physician.

- Eye Contact:** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention if symptoms occur.

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

- Inhalation:** Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.





**Ingestion:** Clean mouth with water and drink afterwards plenty of water.

**Most important symptoms and effects:** Difficulty in breathing. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

**Notes to Physician:** Treat symptomatically

## Section 5- Fire Fighting Measures.

**Suitable Extinguishing Media:** Water mist may be used to cool closed containers.

**Unsuitable Extinguishing Media:** No information available.

**Flash Point:** 28°C / 82.4°F.

**Method -** No information available

**Autoignition Temperature:** 340°C / 644°F.

### **Explosion Limits**

Upper 7.2%.

Lower 1.4%.

**Sensitivity to Mechanical Impact:** No information available.

**Sensitivity to Static Discharge:** No information available.

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

Flammable. Containers may explode when heated. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back.

**Hazardous Combustion Products:** Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).

### **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	3	1	N/A

## Section 6- Accidental Release Measures.

**Personal Precautions:** Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust formation.

**Environmental Precautions:** Should not be released into the environment. See Section 12 for additional Ecological Information.

### **Methods for Containment and Clean Up:**

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment

## Section 7- Handling and Storage.

**Handling:** Ensure adequate ventilation. Wear personal protective equipment/face protection. Avoid contact with skin, eyes or clothing. Avoid ingestion and inhalation. Avoid dust formation.





**Storage:** Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks and flame.

## Section 8- Exposure Control/Personal Protection.

### **Exposure Guidelines:**

#### **Component:**

Mesityl oxide

#### **ACGIH TLV:**

TWA: 15 ppm

STEL: 25 ppm

#### **OSHA PEL:**

**(Vacated) TWA:** 15 ppm

**(Vacated) TWA:** 60 mg/m<sup>3</sup>

**(Vacated) STEL:** 25 ppm

**(Vacated) STEL:** 100 mg/m<sup>3</sup>

**TWA:** 25 ppm

**TWA:** 100 mg/m<sup>3</sup>

#### **NIOSH IDLH:**

**IDLH:** 1400 ppm

**TWA:** 10 ppm

**TWA:** 40 mg/m<sup>3</sup>

#### **Mexico OEL (TWA):**

**TWA:** 15 ppm

**STEL:** 25 ppm

**Engineering Measures:** Ensure adequate ventilation, especially in confined areas. Use explosion-proof electrical/ventilating/lighting/equipment.

### **Personal Protective Equipment**

**Eye/face Protection:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin and body protection:** Wear appropriate protective gloves and clothing to prevent skin exposure.

**Respiratory Protection:** No protective equipment is needed under normal use conditions

### **Hygiene Measures:**

Handle in accordance with good industrial hygiene and safety practice







## Section 9- Physical and Chemical Properties.

<b>Appearance:</b>	Colorless to Light yellow clear liquid.
<b>Odor:</b>	Odorless.
<b>Odor Threshold:</b>	No information available.
<b>pH:</b>	No information available.
<b>Melting Point/Range:</b>	-53°C.
<b>Boiling Point/Range:</b>	130°C.
<b>Flash Point:</b>	28°C/82.4°F.
<b>Evaporation Rate:</b>	No information available.
<b>Flammability (solid,gas):</b>	Not applicable.
<b>Flammability or explosive limits:</b>	
Upper	7.2%.
Lower	1.4%.
<b>Vapor Pressure:</b>	No information available.
<b>Density:</b>	1.6613
<b>Solubility:</b>	Soluble in water.
<b>Partition coefficient; n-octanol/water:</b>	No data available.
<b>Autoignition Temperature:</b>	340°C / 644°F.
<b>Decomposition Temperature:</b>	No data available.
<b>Viscosity:</b>	No data available.
<b>Molecular:</b>	C <sub>6</sub> H <sub>10</sub> O.
<b>Molecular Weight:</b>	98.15 g/mol.

## Section 10- Stability and Reactivity.

**Reactive Hazard:** None known, based on information available

**Stability:** Stable under normal conditions.

**Conditions to Avoid:** Keep away from open flames, hot surfaces and sources of ignition.

**Incompatible Materials:** Strong 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.

### **Acute Toxicity**

**Product Information:** No acute toxicity information is available for this product.

### **Component Information**

**Component:** Mesityl oxide

**LD50 Oral:** LD50 = 655 mg/kg (Rat).

LD50 = 1120 mg/kg (Rat).





**LD50 Dermal:**

LD50 = 5151 mg/kg (Rabbit).

LD50 = 5150 mg/kg (Rabbit).

**LC50 Inhalation:**

LC50 = 1130 ppm (Rat) 4h.

LC50 = 9 g/m<sup>3</sup> (Rat) 4h.

**Toxicologically Synergistic Products:** No information available.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Irritation:** No information available.

**Sensitization:** No information available.

**Mutagenic Effects:** No information available

**Reproductive Effects:** No information available.

**Developmental Effects** No information available.

**Teratogenicity** No information available.

STOT - single exposure None known

STOT - repeated exposure None known

**Aspiration hazard:** No information available.

**Symptoms / effects, both acute and delayed:** Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

**Other Adverse Effects:** The toxicological properties have not been fully investigated.

**Section 12- Ecological Information.**

**Ecotoxicity:** No information available

**Persistence and Degradability:** Insoluble in water Persistence is unlikely based on information available.

**Bioaccumulation/ Accumulation:** No information available.

**Mobility:** Is not likely mobile in the environment due its low water solubility. Will likely be mobile in the environment due to its volatility.

**Section 13- Disposal Considerations.**

**Waste Disposal Methods:** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

**Section 14- Transport Information.**

**DOT**

UN-No: UN1229

Proper Shipping Name: MESITYL OXIDE

Hazard Class: 3

Packing Group: III





#### **TDG**

UN-No: UN1229  
Proper Shipping Name: MESITYL OXIDE  
Hazard Class: 3  
Packing Group: III

#### **IATA**

UN-No: UN1229  
Proper Shipping Name: MESITYL OXIDE  
Hazard Class: 3  
Packing Group: III

#### **IMDG/IMO**

UN-No: UN1229  
Proper Shipping Name: MESITYL OXIDE  
Hazard Class: 3  
Packing Group: III

### **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.

