

## SAFETY DATA SHEET

### Section 1 - Identification of Substance or Mixture and Company

*Product identify:*

*Product name:* Lutein  
*Synonyms:*  $\alpha$ -Carotene-3,3'-diol,  $\beta$ ,  $\epsilon$ -carotene-3,3'-diol,  $\beta$ ,  $\epsilon$ -carotene, Lutein  
*Catalog number:* PI-21815

*Relevant identified uses of the substance or mixture and uses advised against*

*Identified uses:* Laboratory chemicals, Manufacture of substances

*Details of the supplier of the safety data sheet*

*Company identification:* PI Chemicals Ltd.  
633 Eshan Road,  
Pudong New Area, Shanghai China, 200127

*Telephone number:* +86-21-58953700

*Fax number:* +86-21-58953701

*E-mail address:* [info@pipharm.com](mailto:info@pipharm.com)

*Emergency telephone number*

*Emergency number:* +86-21-58953706

### Section 2 - Hazards Identification

*Classification of the substance or mixture:*

Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008

Not a hazardous substance or mixture according to EC-directives 67/548/EEC or 1999/45/EC.

### Section 3: Composition & Information on Ingredients

*Molecular formula:* C<sub>40</sub>H<sub>56</sub>O<sub>2</sub>

*Molecular weight:* 568.88

<i>Component</i>	<i>Concentration</i>
<i>CAS Number:</i> 127-40-2	50%
<i>EC Number:</i> 204-840-0	

### Section 4 - First Aid Measures

*Eye:* Flush eyes with plenty of water for at least 15 minutes. Get medical aid if symptoms appear.

*Skin:* Wash skin with plenty of water at least 15 minutes while removing contaminated clothing and

shoes. Get medical aid if irritation develops and persists.

*Ingestion:* Wash mouth out with water. Get medical aid immediately.

*Inhalation:* Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical aid.

### **Section 5 – Fire-Fighting Measures**

*Extinguishing media:* Use water spray, dry chemical, carbon dioxide, or appropriate foam.

*Special hazards arising from the substance or mixture:* Carbon oxides

*Advice for firefighters:* Wear a self-contained breathing apparatus for fire fighting if necessary

### **Section 6 - Accidental Release Measures**

*Personal precautions, protective equipment and emergency procedures:*

Use proper personal protective equipment as indicated in Section 8.

*Environmental precautions:* Prevent further spillage or leakage when safe and capable

*Methods and materials for containment and cleaning up:*

Vacuum or sweep up material and keep in a suitable closed container for disposal. Do not flush with water.

### **Section 7 - Handling and Storage**

*Precautions for safe handling:*

Provide appropriate exhaust ventilation at places where dust is formed. Avoid contact with skin, eyes and clothes. Avoid inhalation of vapors and spray mist.

*Conditions for safe storage, including any incompatibilities:*

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Store under argon.

Recommended storage temperature: -20 °C

### **Section 8 - Exposure Controls/Personal Protection**

*Control parameters:*

Contains no materials with occupational exposure limits.

*Exposure controls:*

Ensure well ventilation, good industrial hygiene and safety practice.

*Personal protective equipment*

*Eye/Face protection:*

Wear appropriate protective eyeglasses under the standards such as EN166(EU) or type ABEK(EN14387).

*Skin/Body protection:*

Wear appropriate protective gloves which have to satisfy the specifications of EU Directive 89/686/EEC and

the standard EN374 derived from it to prevent skin exposure. Dispose of contaminated gloves in accordance with applicable laws. Wash and dry hands.

Wear appropriate protective clothing to prevent skin exposure.

*Respiratory protection:*

Use an approved respirator and components under appropriate government standards such as NIOSH(US) or CEN(EU) if exposure limits are exceeded or if irritation or other symptoms are experienced.

### **Section 9- Physical and Chemical Properties**

<i>Physical state:</i>	Fine powder
<i>Color:</i>	Orange
<i>Odour:</i>	Characteristic
<i>Melting point/freezing point:</i>	No data available
<i>Initial boiling point and boiling range:</i>	No data available
<i>Flash point:</i>	No data available
<i>Evaporation rate:</i>	No data available
<i>Flammability(solid, gas):</i>	No data available
<i>Upper/lower flammability or explosive limits:</i>	No data available
<i>Vapour pressure:</i>	No data available
<i>Vapour density:</i>	No data available
<i>Relative density:</i>	No data available
<i>Solubility:</i>	No data available
<i>Partition coefficient: n-octanol/water:</i>	No data available
<i>Auto-ignition temperature:</i>	No data available
<i>Decomposition temperature:</i>	No data available
<i>Viscosity:</i>	No data available

### **Section 10-Stability and Reactivity**

<i>Reactivity:</i>	No data available
<i>Chemical stability:</i>	Stable under recommended temperatures and pressures.
<i>Possibility of hazardous reactions:</i>	No data available
<i>Conditions to avoid:</i>	Air sensitive.
<i>Incompatible materials:</i>	Strong oxidizing agents
<i>Hazard Decomposition products:</i>	Carbon oxides

### **Section 11 - Toxicological Information**

<i>Acute toxicity:</i>	
Component: Lutein	
<i>Skin corrosion/irritation:</i>	No data available

---

<i>Serious eye damage/eye irritation:</i>	No data available
<i>Respiratory or skin sensitization:</i>	No data available
<i>Germ cell mutagenicity:</i>	No data available
<i>Carcinogenicity:</i>	
Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.	
<i>Reproductive toxicity:</i>	No data available
<i>Specific target organ toxicity (STOT)-single exposure:</i>	No data available
<i>Specific target organ toxicity (STOT)-repeated exposure:</i>	No data available
<i>Aspiration hazard:</i>	No data available
<i>Additional information:</i>	RTECS#: not available

### **Section 12 – Ecological Information**

<i>Toxicity:</i>	No data available
Component: Lutein	
<i>Persistence and degradability:</i>	No data available
<i>Bioaccumulative potential:</i>	No data available
Component: Lutein	
<i>Mobility in soil:</i>	No data available
<i>Results of PBT and vPvB assessment:</i>	No data available
<i>Other adverse effects:</i>	No data available

### **Section 13 - Disposal Consideration**

#### *Waste treatment methods*

<i>Product:</i>	Dispose of in accordance with federal, state and local environmental regulations
<i>Contaminated packaging:</i>	Dispose of as unused product

### **Section 14 - Transport Information**

#### *IATA*

Not dangerous goods.

#### *IMDG*

Not dangerous goods.

#### *RID/ADR*

Not dangerous goods.

#### *DOT(US)*

Not dangerous goods.

---

## Section 15 - Regulatory Information

*Safety, health and environmental regulations/legislation specific for the substance or mixture*

No data available

*Chemical safety assessment:* No data available

## Section 16 – Other Information

*SDS creation date:* Nov 19, 2012

*Update:* Sept 05, 2014

### *Disclaimer:*

*The above information is believed to be accurate and represents the best knowledge available to us currently. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall PI Chemicals, be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, even if PI Chemicals has been advised of the possibility of such damages.*