

# Safety Data Sheet

## 1. IDENTIFICATION OF THE SUBSTANCES/MIXTURE AND OF THE COMPANY/UNDERTAKING

- 1.1. **Product Identifiers**  
**Product Code(s)** HB2493  
**Product Name** 17- $\alpha$  estradiol
- 1.2. **Relevant identified uses of the substance or mixture and uses advised against**  
**Recommended use** For research use only – Not for human use  
**Uses advised against** No information available
- 1.3. **Details of the supplier of the safety data sheet**  
**Supplier**

HelloBio Ltd  
Unit 3 IO Centre  
Cabot Park  
Moorend Farm Avenue  
Avonmouth  
Bristol  
BS 11 0QL  
UK  
Tel: +44 (0)117 318 0505  
Fax: +44 (0)1179 811 601

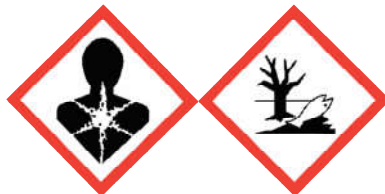
For further information, please contact: [technicalsupport@hellowbio.com](mailto:technicalsupport@hellowbio.com)

- 1.4. **Emergency Telephone number**  
**Emergency telephone** - Tel: +44 (0)117 318 0505

## 2. HAZARDS IDENTIFICATION

- 2.1 **Classification of the substance or mixture**  
**GHS/CLP – REGULATION (EC) No 1272/2008**  
Germ cell mutagenicity (Category 2), H341  
Carcinogenicity (Category 2), H351  
Reproductive toxicity (Category 1A), H360F  
Effects on or via lactation, H362  
Long-term (chronic) aquatic hazard (Category 1), H410  
For the full text of the H-Statements mentioned in this Section, see Section 16.

- 2.2. **Label Elements**



**Signal Word**  
Danger

### Hazard Statements

- H341 Suspected of causing genetic defects.  
H351 Suspected of causing cancer.  
H360F May damage fertility.  
H362 May cause harm to breast-fed children.  
H410 Very toxic to aquatic life with long lasting effects.

### Precautionary Statements

- P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P260 Do not breathe dusts or mists.  
P263 Avoid contact during pregnancy and while nursing.  
P273 Avoid release to the environment.  
P308 + P313 IF exposed or concerned: Get medical advice/ attention.

#### 2.3. Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1. Substances

|               |   |                          |
|---------------|---|--------------------------|
| Product Name: | 17-apha estradiol                               |                          |
| Synonyms:     | (17 $\alpha$ )-Estra-1,3,5(10)-triene-3,17-diol |                          |
| Formula:      | C18H24O2  | Molecular Weight: 272.38 |
| CAS Number    | 57-91-0   |                          |

## 4. FIRST AID MEASURES

#### 4.1. Description of first aid measures

|                       |   |
|-----------------------|---|
| <b>General advice</b> | If symptoms persist, call a physician.  |
| <b>Eye contact</b>    | Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. If symptoms persist, call a physician. |
| <b>Skin Contact</b>   | Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, call a physician.                                    |
| <b>Ingestion</b>      | Rinse mouth. If symptoms persist, call a physician  |
| <b>Inhalation</b>     | Move to fresh air. If symptoms persist, call a physician.   |

#### 4.2. Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.

#### 4.3. Indication of immediate medical attention and special treatment needed

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

## 5. FIRE-FIGHTING MEASURES

#### 5.1. Extinguishing media

##### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide

#### 5.2. Special hazards arising from the substance or mixture

In combustion, may emit toxic fumes.

- 5.3. **Precautions for fire-fighters**  
Wear suitable protective clothing to prevent contact with skin and eyes and self-contained breathing apparatus.

## 6. ACCIDENTAL RELEASE MEASURES

- 6.1. **Personal precautions, protective equipment and emergency procedures**  
Do not take action without suitable protective clothing – see section 8 of SDS. Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid breathing vapours, mist, dust or gas.
- 6.2. **Environmental precautions**  
Do not let product enter drains.
- 6.3. **Methods and materials for containment and cleaning up**  
Cover spillage with suitable absorbent material. Using non-spark tools, sweep up material and place in an appropriate container. Decontaminate spill site with 10% caustic solution and ventilate area until disposal is complete. Hold all material for appropriate disposal as described under section 13 of SDS.
- 6.4. **Reference to other sections**  
For required PPE see section 8. For disposal see section 13.

## 7. HANDLING AND STORAGE

- 7.1. **Precautions for safe handling**  
Use in a chemical fume hood, with air supplied by an independent system. Avoid inhalation, contact with eyes, skin and clothing. Avoid the formation of dust and aerosols. Use in a well-ventilated area. Keep away from sources of ignition. Avoid prolonged or repeated exposure.
- 7.2. **Conditions for safe storage, including any incompatibilities.**  
Store in cool, well-ventilated area. Keep away from direct sunlight. Keep container tightly sealed until ready for use. Recommended storage temperature: Store at RT
- 7.3. **Specific end uses**  
Use in a laboratory fume hood where possible. Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- 8.1. **Control parameters**
- Components with workplace control parameters**  
Contains no substances with occupational exposure limit values.
- 8.2. **Exposure controls**
- Appropriate engineering controls**  
Use in a fume hood where applicable. Ensure all engineering measures described under section 7 of SDS are in place. Ensure laboratory is equipped with a safety shower and eye wash station.
- Personal protective equipment**
- Eye/face protection**  
Use appropriate safety glasses.
- Skin protection**  
Use appropriate chemical resistant gloves (minimum requirement use standard BS EN 374:2003). Gloves should be inspected before use. Wash and dry hands thoroughly after handling.
- Body protection**  
Wear appropriate protective clothing.
- Respiratory protection**  
If risk assessment indicates necessary, use a suitable respirator.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

|  |                   |                           |                   |
|--|-------------------|---------------------------|-------------------|
| Appearance                                   | White powder      | Vapour pressure           | No data available |
| Odour  | No data available | Vapour density            | No data available |
| Odour threshold                              | No data available | Relative density          | No data available |
| pH   | No data available | Solubility(ies)           | DMSO              |
| Melting/freezing point                       | No data available | Partition coefficient     | No data available |
| Boiling point/range                          | No data available | Auto-ignition temperature | No data available |
| Flash Point                                  | No data available | Decomposition temperature | No data available |
| Evaporation rate                             | No data available | Viscosity                 | No data available |
| Flammability (solid, gas)                    | No data available | Explosive properties      | No data available |
| Upper/lower flammability or explosive limits | No data available | Oxidising properties      | No data available |

### 9.2. Other safety information

No data available

## 10. STABILITY AND REACTIVITY

### 10.1. Reactivity

Stable under recommended transport or storage conditions.

### 10.2. Chemical Stability

Stable under recommended storage conditions.

### 10.3. Possibility of hazardous reactions

Hazardous reactions will not occur under normal transport or storage conditions.

### 10.4. Conditions to avoid

Heat, moisture

### 10.5. Incompatible materials

Strong acids/alkalis, strong oxidising/reducing agents.

### 10.6. Hazardous decomposition products

Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), Nitrogen oxides (NO<sub>x</sub>), Phosphorous oxides.

## 11. TOXICOLOGICAL INFORMATION

### 11.1. Information on toxicological effects

#### Acute Toxicity

**Inhalation** No Information available

**Eye contact** No Information available

**Skin contact** No Information available

**Ingestion** No Information available

#### Chronic toxicity

**Corrosivity** No Information available

**Sensitization** No Information available

**Neurological effects** No Information available

**Reproductive toxicity** No Information available

**Mutagenic effects** No Information available

**Target Organ Effects** No Information available

**Reproductive toxicity** Studies indicating a hazard to babies during the lactation period May damage fertility. Positive evidence from human epidemiological studies.

## 12. ECOLOGICAL INFORMATION

### 12.1. Toxicity

#### Ecotoxicity effects

As supplied, the preparation is not expected to present significant adverse environmental effects

### 12.2. Persistence and degradability

No Information available

### 12.3. Bioaccumulative potential

No Information available

### 12.4. Mobility in soil

No Information available

### 12.5. Results of PBT and vPvB assessment

No Information available

### 12.6. Other adverse effects

No Information available

## 13. DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

#### Waste from residues/unused products

Dispose of in accordance with local regulations

#### Contaminated packaging

Empty containers should be taken to an approved waste handling site for recycling or disposal.

#### Other information

According to the European Waste Catalogue. Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used.

## 14. TRANSPORT INFORMATION

|      |                             |   |
|------|-----------------------------|---|
| ADR  | <b>Proper shipping name</b> | Environmentally hazardous substance, solid, n.o.s. ( $\alpha$ -estradiol) |
|      | <b>Hazard Class</b>         | 9   |
|      | <b>UN/ID No</b>             | 3077  |
|      | <b>Packing Group</b>        | III   |
| IATA | <b>Proper shipping name</b> | Environmentally hazardous substance, solid, n.o.s. ( $\alpha$ -estradiol) |
|      | <b>Hazard Class</b>         | 9   |
|      | <b>UN/ID No</b>             | 3077  |
|      | <b>Packing Group</b>        | III   |
| DOT  | <b>Proper shipping name</b> | Environmentally hazardous substance, solid, n.o.s. ( $\alpha$ -estradiol) |
|      | <b>Hazard Class</b>         | 9   |
|      | <b>UN/ID No</b>             | 3077  |
|      | <b>Packing Group</b>        | III   |

## 15. REGULATORY INFORMATION

**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**  
No information available

**15.2. Chemical Safety Assessment**  
No information available

## 16. OTHER INFORMATION

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

### **Disclaimer**

The information provided in this Safety Data Sheet 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless stated in the text.