1. Identification of the substances/ mixture and of the company/ undertaking

1.1 Product Identifiers
- Product Code: TC346
- Product Name: β-Estradiol
- Cell Culture Tested

1.2 Relevant identified uses of the substance or mixture and uses advised against
- Identified uses: Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet
- Produced by: HiMedia Laboratories Pvt. Ltd.
- Address: 23, Vadhani Indl.Estate, LBS Marg, Mumbai 400 086, India.
- Tel. No.: +91-22-2500 0970, +91-22-2500 1607
- Fax No.: +91-22-2500 2468

1.4 Emergency Tel. No.
- Emergency Tel. No.: Please contact the regional HiMedia representation in your country

2. Hazards Identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]
- Carcinogenicity (Category 2)
- Reproductive toxicity, effects on or via lactation (Additional category)

Classification according to EU Directives 67/548/EEC or 1999/45/EC
- May impair fertility.
- Possible risk of harm to the unborn child.
- Limited evidence of a carcinogenic effect.
- May cause harm to breastfed babies.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008 [CLP]

Pictogram

Signal word: Danger

Hazard Statement(s)
- H351 Suspected of causing cancer
- H362 May cause harm to breast-fed children

Precautionary Statement(s)
- P201 Obtain special instructions before use.
- P263 Avoid contact during pregnancy/while nursing.
- P281 Use personal protective equipment as required.
- P308 + P313 IF exposed or concerned: Get medical advice/attention.


Symbol(s)

R-Phrase(s)
- R60 May impair fertility.
R63 Possible risk of harm to the unborn child.
R40 Limited evidence of a carcinogenic effect.
R64 May cause harm to breastfed babies.

S-Phrase(s)
S53 Avoid exposure - obtain special instructions before use.
S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

2.3 Other hazards - none

3. Composition/Information on Ingredients
3.1 Substances
Synonym: 1,3,5-Estratriene-3,17β-diol, Dihydrofolliculin, 17β-Estradiol

<table>
<thead>
<tr>
<th>Molecular Formula</th>
<th>C\textsubscript{18}H\textsubscript{24}O\textsubscript{2}</th>
</tr>
</thead>
<tbody>
<tr>
<td>Molecular Weight</td>
<td>272.38</td>
</tr>
</tbody>
</table>

- **Component**
- **β-Estradiol, Cell Culture Tested**

<table>
<thead>
<tr>
<th>Component</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS-No.</td>
<td>50-28-2</td>
</tr>
<tr>
<td>EC-No.</td>
<td>200-023-8</td>
</tr>
</tbody>
</table>

4. First Aid Measures
4.1 Description of first aid measures
General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.

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
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed
No data available

4.3 Indication of immediate medical attention and special treatment needed
No data available

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
Carbon oxides

5.3 Precautions for fire-fighters
Wear self-contained breathing apparatus for fire fighting if necessary.

5.4 Further information
No data available
6  Accidental Release Measures
   6.1  Personal precautions, protective equipment and emergency procedures
       Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel
to safe areas.
   6.2  Environmental precautions
       Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
   6.3  Methods and materials for containment and cleaning up
       Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for
disposal.
   6.4  Reference to other sections
       For disposal see Section 13.

7  Handling and Storage
   7.1  Precautions for safe handling
       Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Normal measures for preventive fire
protection.
   7.3  Conditions for safe storage, including any incompatibilities
       Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened
must be carefully resealed and kept upright to prevent leakage.

   Recommended Storage Temperature : Store below 30°C

   7.3  Specific end uses
       No data available

8  Exposure Controls/Personal Protection
   8.1  Control parameters
       Components with workplace control parameters
   8.2  Exposure controls
       Appropriate engineering controls
       Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

       Personal protective equipment
       Hygiene measure
       Immediately change contaminated clothing. Apply preventive skin protection. Wash hands face after working with
the substance

       Eye/face protection
       Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and
approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

       Skin 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.

       The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN
374 derived from it.

       Body protection
       Complete suit protecting against chemicals, The type of protective equipment must be selected according to the
concentration and amount of the dangerous substance at the specific work place.

       Respiratory protection
       Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose
combination (US) or type ABEK(EN 14387) respirator cartridges as a backup to the engineering controls. If the
respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components
tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

       Environment exposure controls
       Do not empty into drains

9  Physical and chemical properties
   9.1  Information on basic physical and chemical properties
Appearance
White to off-white powder

Odour
No data available
Odour Threshold
No data available
Odour Threshold
No data available
pH
No data available
Melting/freezing point
No data available
Initial boiling point and boiling range
No data available
Flash point
No data available
Upper/lower flammability or explosive limits
No data available
Vapour pressure
No data available
Vapour density
No data available
Relative density
No data available
Water Solubility
No data available
Partition coefficient: n-octanol/Water
No data available
Autoignition Temperature
No data available
Decomposition Temperature
No data available
Viscosity
No data available
Explosive properties
No data available
Oxidizing properties
No data available

9.2 Other safety information
No data available

10 Stability and Reactivity
10.1 Reactivity
No data available
10.2 Chemical stability
No data available
10.3 Possibility of hazardous reactions
No data available
10.4 Conditions to avoid
No data available
10.5 Incompatible materials
Strong oxidizing agents
10.6 Hazardous decomposition products
Other decomposition products - No data available

11 Toxicological Information
11.1 Information on toxicological effects
Acute toxicity
No data available
Skin corrosion/irritation
No data available
Serious eye damage/eye irritation
No data available
Respiratory or skin sensitisation
No data available
Germ cell mutagenicity
No data available
Carcinogenicity
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.
Reproductive toxicity
No data available
Specific target organ toxicity- single exposure
No data available
Aspiration hazard
No data available

Potential Health Effects
Inhalation.
Refer Section 2

Skin
Refer Section 2

Eyes
Refer Section 2

Ingestion
Refer Section 2

Additional Information
RTECS: KG2975000

12 Ecological Information
12.1 Toxicity
No data available
12.2 Persistence and degradability
No data available
12.3 Bioaccumulative potential
No data available
12.4 Mobility in soil
No data available
12.5 PBT and vPvB assessment
No data available
12.6 Other adverse effects
No data available

13 Disposal Considerations
13.1 Waste treatments methods
Product
Offer surplus and non-recyclable solutions to a licenced disposal company. Contact a licenced professional waste disposal service to dispose of this material.
13.2 Contaminated packaging
Dispose of as unused product.

14 Transport Information
14.1 UN-No.
ADR/RID: - IMDG: - IATA: -
14.2 UN proper shipping name
ADR/RID: no dangerous goods
IMDG: no dangerous goods
IATA: no dangerous goods
14.3 Transport hazard class(es)
ADR/RID: - IMDG: - IATA: -
14.4 Packaging group
ADR/RID: - IMDG: - IATA: -
14.5 Environmental hazards
ADR/RID: No IMDG: Marine Pollutant:no IATA: No
14.6 Special precautions for use
No data available

15 Regulatory Information
This safety datasheet complies with the requirements of Regulation(EC) No.1907/2006
15.1 Safety health and environment regulations/legislation specific for the substance or mixture
No data available
15.2 Chemical Safety Assessment
16 Other Information
Further information
Copyright 2010 HiMedia Laboratories Pvt. Ltd. License granted to make unlimited paper copies for internal use only. The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Himedia Laboratories, shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.