



Qinhuangdao Zizhu Pharmaceutical Co., Ltd.

Manufacture Site: No.10, Longhai Road, Economic & Technological Development Zone  
Qinhuangdao, Hebei, China

Telephone: +86-335-8579619 Facsimile: +86-335-8579620

Http:// [www.zizhu-pharm.com](http://www.zizhu-pharm.com) Email: [zizhu@zizhu-pharm.com](mailto:zizhu@zizhu-pharm.com)

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## MATERIAL SAFETY DATA SHEET

### SECTION 1-PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Estradiol Hemihydrate

**Company:** Qinhuangdao Zizhu Pharmaceutical Co., Ltd.

**Address:** No.10, Longhai Road, Economic & Technological Development Zone,  
Qinhuangdao, Hebei Province, P. R. China

**TEL:** +86-335-8579619

### SECTION 2-HAZARD INFORMATION

**Target Organs:** Female and male reproductive system.

**Emergency Overview:** May cause cancer

**Potential Health Effect:**

**Inhalation:** May be harmful if inhaled. May cause respiratory tract irritation.

**Skin:** May be harmful if absorbed through skin. May cause skin irritation.

**Eye:** May cause eye irritation.

**Ingestion:** May be harmful if swallowed.

### SECTION 3-COMPOSITION/INFORMATION ON INGREDIENTS

**Common Name:** Estradiol Hemihydrate

**Formula:**  $C_{18}H_{24}O_2 \cdot 0.5H_2O$

**Chemical Name:** 1,3,5-Estratriene-3,17 $\beta$ -diol

**CAS Number:** 35380-71-3

**Chemical Family:** Steroid

**Therapeutic Category:** Estrogen

**Composition:** Pure material

### SECTION 4-FIRST AID MEASURES



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**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:** Rinse thoroughly with plenty of water. Consult a physician.

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

## SECTION 5-FIREFIGHTING MEASURES

**Suitable Extinguishing Media:** Use water spray, alcohol resistant foam, dry chemical or carbon dioxide.

**Special Protective Equipment for Fire Fighters:** Wear self-contained breathing apparatus for fire fighting if necessary.

## SECTION 6-ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** Use personal protective equipment. Avoid dust formation.

Avoid breathing dust. Ensure adequate ventilation. Evacuate personnel to safe areas.

**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:**

Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

## SECTION 7- HANDLING AND STORAGE

### **Precautions for Safe Handling:**

Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.



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#### **Conditions for Safe Storage:**

Keep container tightly closed in a dry and well-ventilated place.

### **SECTION 8-EXPOSURE CONTROLS/PERSONAL PROTECTION**

Contains no substances with occupational exposure limit values.

#### **PERSONAL PROTECTIVE EQUIPMENT:**

**Respiratory Protection:** Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N100 (US) or type P3 (EN143) respirator cartridges as a backup to 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.

**Hand Protection:** Handle with gloves.

**Eye Protection:** Safety glasses with side-shields.

**Skin and Body Protection:** Choose body protection according to the amount and concentration of the dangerous substance at the work place.

**Hygiene Measures:** Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

### **SECTION 9-PHYSICAL AND CHEMICAL PROPERTIES:**

**Appearance and odor:** White or creamy white crystals or crystalline powder; odourless.

**pH:** Not found.

**Melting Range:** Not found.

**Boiling Point:** Not found.

**Flash Point:** Not found.

**Ignition Temperature:** Not found.

**Evaporation Rate:** Not found.

**Lower Explosion Limit:** Not found.

**Upper Explosion Limit:** Not found.

**Solubility in Water:** Not found.



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**Formula:**  $C_{18}H_{24}O_2 \cdot 0.5H_2O$

**Molecular Weight:** 281.39

## SECTION 10-STABILITY AND REACTIVITY

**Chemical Stability:** Stable under recommended storage conditions.

**Conditions to Avoid:** No data available.

**Materials to Avoid:** No data available.

**Hazardous Decomposition Products:** No data available.

## SECTION 11-TOXICOLOGICAL PROPERTIES

**Acute Toxicity:** No data available.

**Skin Corrosion/Irritation:** No data available.

**Serious Eye Damage/Eye Irritation:** No data available.

**Respiratory or Skin Sensitization:** No data available.

**Germ Cell Mutagenicity:** No data available.

### **Carcinogenicity:**

The National Toxicology Program (Tenth Report on Carcinogens) has determined that steroidal estrogens are known to be human carcinogens based on sufficient evidence of carcinogenicity in humans, which indicates a causal relationship between exposure to steroidal estrogens and human cancer. This is or contains a component that has been reported to be carcinogenic based on its IARC, OSHA, ACGIH, NTP , or EPA classification

Possible human carcinogen

### **IARC (International Agency for Research on Cancer):**

No components 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:**

May cause congenital malformation in the fetus.



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May cause reproductive disorders.

#### **Specific Target Organ Toxicity-Single Exposure (GHS)**

No data available

#### **Specific Target Organ Toxicity-Repeated Exposure (GHS)**

No data available

#### **Aspiration Hazard:**

No data available

#### **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.

#### **Signs and Symptoms of Exposure**

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

### **SECTION 12-ECOLOGICAL INFORMATION**

**Ecological Information:** No data available

### **SECTION 13-DISPOSAL CONSIDERATIONS:**

#### **Product**

Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

#### **Contaminated packaging**

Dispose of as unused product.



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## **SECTION 14-TRANSPORT INFORMATION**

**DOT** (Department of Transportation): Not dangerous goods.

**IMDG** (International Maritime Dangerous Goods): Not dangerous goods.

**IATA** (International Air Transport Association): Not dangerous goods.

## **SECTION 15-OTHER INFORMATION:**

Further information: None.