



Humco Holding Group, Inc.
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Texarkana TX 75501 USA
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www.humco.com

24-Hour Emergency Number (CHEMTREC)
USA- 800-424-9300

All non-emergency calls should be directed to
Customer Service at 800-662-3435

NAME: ESTRIOL, USP

SDS NO. 8066

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Estriol, USP

Synonyms: 3,16 α ,17 β -Trihydroxy-1,3,5(10)-estratriene

16 α -Hydroxyestradiol

1,3,5(10)-Estratriene-3,16 α ,17 β -triol

Recommended Use: Active Pharmaceutical Ingredient

Manufacturer by: Humco Holding Group, Inc.

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2. HAZARD IDENTIFICATION

Pictogram:	
Classification:	Carcinogenicity (Category 2) Reproductive toxicity (Category 1B)
Signal Word:	Danger
Hazard Statements:	Suspected of causing cancer. May damage fertility or the unborn child.
Precautionary Statements	Avoid breathing dust/ fume/gas/mist/vapors/spray. Wash hands thoroughly after handling.

	<p>Wear protective gloves/clothing and eye/face protection as specified by the manufacturer/supplier or the competent authority.</p> <p>Take off contaminated clothing and wash it before reuse.</p> <p>Obtain special instructions before use.</p> <p>Do not handle until all safety precautions have been read and understood.</p> <p>Use personal protective equipment as required.</p> <p>Avoid release to the environment - if this is not the intended use.</p> <p>Avoid contact during pregnancy/while nursing.</p> <p>Do not breathe dust/fume/gas/mist/vapors/spray.</p>
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3. COMPOSITION / INGREDIENTS

CHEMICAL NAME	CAS#
ESTRIOL, USP	50-27-1

4. FIRST-AID MEASURES

IN CASE OF EYE CONTACT: Flush with copious amounts of water for 15 minutes, separating eyelids with fingers. If irritation persists seek medical aid.

IN CASE OF SKIN CONTACT: Wash with soap & water for 15minutes. If irritation persists seek medical aid.

IF SWALLOWED: Call a physician. Wash out mouth with water. Do not induce vomiting without medical advice.

IF INHALED: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician

SYMPTOMS AND EFFECTS: Not expected to present a significant hazard under anticipated conditions of normal use.

5. FIRE-FIGHTING MEASURES

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL: Not applicable

FLAMMABLE PROPERTIES: May be combustible at high temperature

HAZARDOUS COMBUSTION PRODUCTS: Under fire conditions, hazardous fumes will be present.

EXTINGUISHING MEDIA: Small fire: dry chemical, CO2 or water spray. Large fire: dry chemical, CO2, alcohol resistant foam or water spray. Do not get water inside containers.

PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIREFIGHTERS: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

METHODS & MATERIAL FOR CONTAINMENT: On land, sweep or shovel into suitable containers. Minimize generation of dust.

CLEANUP PROCEDURE: Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Wear respirator, chemical safety goggles, rubber boots and heavy rubber gloves. Stop leak if you can do it without risk. Prevent entry into waterways, sewers, basements or confined areas. Shut off all sources of ignition.

Evacuate the area. If necessary, employ water fog to disperse the vapors. Absorb the matter with compatible vermiculite or other absorbing material. Place in a suitable container and retain for disposal. Ventilate and clean the affected area. Do not flush into sewerage system or to drains.

7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING: Do not inhale. Avoid contact with eyes, skin and clothing. Avoid prolonged or repeated exposure. Wash thoroughly after handling.

STORAGE CONDITIONS: Store in original container, tightly sealed container, protected from direct sunlight, in a dry, cool and well ventilated area, away from incompatible materials. Store in accordance with local regulations. Eliminate all ignition sources. Separate from oxidizing materials. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Preserve in tight, light-resistant containers.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

National occupational exposure limits

United States

Components	IARC	OSHA	ACGIH	AIHA WHEEL
Estriol 50-27-1	N/L	N/L	N/L	N/L

EXPOSURE GUIDELINES: Consult local authorities for provincial or state exposure limits

PERSONAL PROTECTIVE EQUIPMENT: Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by WHMIS or OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. Skin: Wear appropriate gloves to prevent skin exposure. Clothing: Wear appropriate protective clothing to minimize contact with skin. Respirators: Follow WHMIS or OSHA

respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

SPECIFIC ENGINEERING CONTROLS: Adequate mechanical ventilation. Fume hood, eye wash station, and safety shower.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	White powder	Upper/Lower Flammability:	Not determined
Odor:	Not determined	Vapor Pressure	Not determined
Odor Threshold:	Not determined	Vapor Density:	Not determined
pH:	Not determined	Relative Density:	Not determined
Melting point /Freezing Point:	280 - 282 °C (536 - 540 °F)	Solubilities:	Not determined
Boiling point/range:	Not determined	Partition coefficient: n-octanol/water:	Not determined
Flash point	Not determined	Auto-ignition temperature	Not determined
Evaporation rate	Not determined	Decomposition Temperature:	Not determined
Flammability:	Not determined	Viscosity	Not determined

10. STABILITY AND REACTIVITY

REACTIVITY: Not established

STABILITY: Stable under recommended storage conditions

MATERIALS TO AVOID: Not determined

HAZARDOUS DECOMPOSITION PRODUCTS: Toxic fumes of carbon monoxide, carbon dioxide, nitrogen oxides and other gases may occur

HAZARDOUS POLYMERIZATION: Will not occur

POSSIBILITY OF HAZARDOUS REACTION: Not established

CONDITIONS TO AVOID: Moisture, sunlight and extreme temperatures

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - > 2,000 mg/kg

Inhalation: No data available

Dermal: No data available

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

There is limited evidence for the carcinogenicity of estriol in experimental animals. Studies in humans strongly suggest that the administration of estrogens is causally related to an increased incidence of endometrial carcinoma; there is no evidence that estriol is different from other estrogens in this respect. Limited evidence of carcinogenicity in animal studies

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.

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.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: Known to be human carcinogen (Oestriol)

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

Presumed human reproductive toxicant

May cause reproductive disorders.

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Additional Information

Stomach - Irregularities - Based on Human Evidence

12. ECOLOGICAL INFORMATION

Acute or chronic aquatic toxicity:	No specific information available, but material is not intended to be released to the environment.
Chemical degradation:	Not determined.
Biodegradation:	Not determined.
Bioaccumulation potential	Not determined.
Adsorption studies or leaching studies:	Not determined.
Other adverse effects	Not determined.

13. DISPOSAL CONSIDERATIONS

Dispose in accordance with federal, state and local laws and regulations. Avoid release into environment.

14. TRANSPORT INFORMATION

DOT Hazard Classification:	NOT HAZARDOUS MATERIAL
UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group number:	Not applicable
Environmental hazards:	Not applicable
Special precautions:	Do not freeze, avoid extreme heat

IATA TRANSPORT INFORMATION

Not Regulated
Not Dangerous
Not Hazardous
Not Restricted For Transport by IATA

15. REGULATORY INFORMATION

Not determined

16. OTHER INFORMATION

The information in this SDS is considered current and reliable. However, the data is provided without any warranty, expressed or implied, regarding its correctness or accuracy. Since the conditions for use, handling, storage and disposal are beyond Humco's control, it is the responsibility of the user to determine safe conditions for use and to assume liability for loss, damage, or expenses arising from improper use. No warranty expressed or implied regarding the product described herein will be created by or inferred from any statement or omission. Various agencies may have specific regulations concerning the transportation, handling, storage, use or disposal of this product which may not be reflected in the SDS. The user should review these regulations to ensure full compliance.