


Section 1: Identification

Common Name/Trade Name	ESTRADIOL USP (HEMIHYDRATE)	
Supplier Information	Letco Medical, LLC 1316 Commerce Drive NW Decatur, AL 35601 1 (800) 239-5288 +1 (734) 843-4693	IN CASE OF EMERGENCY: Chemtrec 1 (800) 424-9300 (24 hours)
Distributor Name	Bella Corp Trading Pty Ltd 6/34 Dominions Road, Ashmore QLD 4214, Australia Telephone: 07 5597 4169 Email: bellacorp@bellacorp.com.au	
Product Synonym(s)	Estra-1,3,5(10)-triene-3,17-diol, (17beta)-. Estradiol-17-beta.	
Relevant Use(s) of Product	Manufacture or Compounding of Substances	

Section 2: Hazards Identification

Classification of Substance or Mixture	Carcinogenicity (Category 1), Reproductive toxicity (Category 1)	
Signal Word	Danger	
Hazard Statement(s)	H350 H360	May cause cancer May damage fertility or the unborn child
Pictogram(s)		
Precautionary Statement(s)	P201 P202 P280 P281 P308+P313 P405 P501	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection. Use personal protective equipment as required. IF exposed or concerned Get medical advice/attention. Store locked up. Dispose of contents/container to an approved waste disposal plant.
Hazards Not Otherwise Classified	Exposure may produce an allergic reaction.	
Ingredient(s) with Unknown Toxicity	No data available	

Section 3: Composition/Information on Ingredients

Chemical Name	Estra-1,3,5(10)-triene-3,17-diol, (17beta)-
Common Name	Estradiol Hemihydrate
CAS Number	35380-71-3
Impurities and/or Stabilizing Additives	No data available

Section 4: First Aid Measures

General Advice	Remove from exposure. Remove contaminated clothing. For treatment advice, seek guidance from an occupational health physician or other licensed health-care provider familiar with workplace chemical exposures. If person is not breathing, give artificial respiration. If breathing is difficult, give oxygen if available. Persons developing serious hypersensitivity (anaphylactic) reactions must receive immediate medical attention.
If Inhaled	Move to fresh air. Call a physician if symptoms develop or persist.
In Case of Skin Contact	Remove and isolate contaminated clothing and shoes. Rinse skin with water/shower. Get medical attention if irritation develops and persists. For minor skin contact, avoid spreading material on unaffected skin.
In Case of Eye Contact	Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.
If Swallowed	Do not induce vomiting without advice from poison control center. If ingestion of a large amount does occur, call a poison control center immediately.
Most Important Symptoms and Effects	Endocrine system effects.

Section 5: Fire Fighting Measures

Suitable Extinguishing Media	Suitable extinguishing media: Foam. Dry chemical or CO ₂ . Use fire-extinguishing media appropriate for surrounding materials. Unsuitable extinguishing media: None known. Use water spray to cool unopened containers. As with all fires, evacuate personnel to a safe area. Firefighters should use self-contained breathing equipment and protective clothing. Use standard firefighting procedures and consider the hazards of other involved materials.
Special Hazards Arising From the Substance/Mixture	No unusual fire or explosion hazards noted.
Special PPE and/or Precautions for Firefighters	Wear suitable protective equipment.

Section 6: Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures	Keep unnecessary personnel away. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Avoid inhalation of dust from the spilled material. Wear appropriate personal protective equipment.
Methods and Materials Used for Containment	Avoid discharge into drains, water courses or onto the ground.
Cleanup Procedures	Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid the generation of dusts during clean-up. For waste disposal, see section 13. Clean surface thoroughly to remove residual contamination.

Section 7: Handling and Storage

Precautions for Safe Handling	As a general rule, when handling, avoid all contact and inhalation of dust, mists, and/or vapors associated with the material. Clean equipment and work surfaces with suitable detergent or solvent after use. After removing gloves, wash hands and other exposed skin thoroughly. Use of a designated area is recommended for handling of potent materials.
Conditions for Safe Storage	Preserve in tight, light-resistant container. Store at controlled room temperature.

Section 8: Exposure Controls/Personal Protection

Components with Workplace Control Parameters	Exposure limit values: Type TWA, Value 0.1 micrograms/m ³ . No biological exposure limits noted for the ingredient(s).
Appropriate Engineering Controls	Airborne exposure should be controlled primarily by engineering controls such as general dilution ventilation, local exhaust ventilation, or process enclosure. Local exhaust ventilation is generally preferred to general exhaust because it can control the containment at its source, preventing dispersion into the work area. An industrial hygiene survey involving air monitoring may be used to determine the effectiveness of engineering controls. Effectiveness of engineering controls intended for use with highly potent materials should be assessed by use of nontoxic surrogate materials. Handle in accordance with good industrial hygiene and safety practice.
PPE - Eye/Face Protection	Safety glasses with side shields are recommended. Face shields or goggles may be required if splash potential exists or if corrosive materials are present. Approved eye protection is preferred. Maintain eyewash facilities in the work area.
PPE - Skin Protection	Chemically compatible gloves. For handling solutions, ensure that the glove material is protective against the solvent being used. Use handling practices that minimize direct hand contact. Employees who are sensitive to natural rubber (latex) should use nitrile or other synthetic nonlatex gloves. Use of powdered latex gloves should be avoided due to the risk of latex allergy. To reduce the risk of contamination of skin and surfaces, wear two pairs of gloves. Remove the outer gloves only after removing other personal protective equipment. For handling of laboratory scale quantities, a disposable lab coat or isolation gown over street clothes is recommended. Where significant quantities are handled, work clothing and booties may be necessary to prevent take-home contamination.
PPE - Body Protection	Chemically compatible gloves. For handling solutions, ensure that the glove material is protective against the solvent being used. Use handling practices that minimize direct hand contact. Employees who are sensitive to natural rubber (latex) should use nitrile or other synthetic nonlatex gloves. Use of powdered latex gloves should be avoided due to the risk of latex allergy. To reduce the risk of contamination of skin and surfaces, wear two pairs of gloves. Remove the outer gloves only after removing other personal protective equipment. For handling of laboratory scale quantities, a disposable lab coat or isolation gown over street clothes is recommended. Where significant quantities are handled, work clothing and booties may be necessary to prevent take-home contamination. Wear appropriate thermal protective clothing, when necessary.
PPE - Respiratory Protection	Where respirators are deemed necessary to reduce or control occupational exposures, use respiratory protection and have an effective respirator program in place.

Section 9: Physical and Chemical Properties

Appearance	White or almost white crystalline powder.
Upper/Lower Flammability or Explosive Limits	Not available
Odor	Odorless
Vapor Pressure	Not available
Odor Threshold	Not available
Vapor Density	Not available
pH	Not available
Relative Density	Not available
Melting Point/Freezing Point	173 - 180 °C
Solubility	Soluble in ethanol, in acetone, in dioxane, in chloroform, and in solutions of fixed alkali hydroxides; sparingly soluble in vegetable oils.
Initial Boiling Point and Boiling Range	Not available
Flash Point	Not available
Evaporation Rate	Not available
Flammability (Solid, Gas)	Not available
Partition Coefficient	3.3
Auto-Ignition Temperature	Not available
Decomposition Temperature	Not available
Viscosity	Not available

Section 10: Stability and Reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical Stability	Stable at normal conditions.
Possibility of Hazardous Reactions	No dangerous reaction known under conditions of normal use.
Conditions to Avoid	Contact with incompatible materials.
Incompatible Materials	Strong oxidizing agents.
Hazardous Decomposition Products	Irritating and/or toxic fumes or gases. Emits toxic fumes under fire conditions.

Section 11: Toxicological Information

Acute Toxicity - LD50 Oral	Mouse >4000 mg/kg Rat >4000 mg/kg Based on information from therapeutic use, this material may cause endocrine effects.
Acute Toxicity - Inhalation	Due to lack of data the classification is not possible.
Acute Toxicity - Dermal	Based on information from therapeutic use, this material may cause endocrine effects.
Acute Toxicity - Eye	Due to lack of data the classification is not possible.
Skin Corrosion/Irritation	Based on available data, the classification criteria are not met.
Serious Eye Damage/Irritation	Knowledge about health hazard is incomplete.
Respiratory or Skin Sensitization	No data available.
Germ Cell Mutagenicity	No data available
Carcinogenicity IARC	May cause cancer. Long term use of estrogens in humans has shown an increased risk of endometrial, breast and ovarian cancer. In certain animal species, long term continuous administration of estrogens increased the frequency of cancer of the breast, cervix, vagina, pancreas, testis, uterus and liver.
Carcinogenicity ACGIH	May cause cancer.
Carcinogenicity NTP	May cause cancer.
Carcinogenicity OSHA	May cause cancer.
Reproductive Toxicity	May damage fertility or the unborn child. Studies suggest an association between congenital malformations in the fetus and maternal use of some estrogens during pregnancy.
Specific Target Organ Toxicity - Single Exposure	Knowledge about health hazard is incomplete.
Specific Target Organ Toxicity - Repeated Exposure	Knowledge about health hazard is incomplete.
Aspiration Hazard	No data available.

Section 12: Ecological Information

Toxicity	Aquatic: Fish LC50 Fish 0.002 ug/l, 96 hours.
Persistence and Degradability	No data is available on the degradability of this product.
Bio-accumulative Potential	Not available.
Mobility in Soil	Not available.
Other Adverse Effects	Not available.

Section 13: Disposal Considerations

Waste Treatment Methods Product	Dispose of contents/container in compliance with local/regional/national/international regulations. Dispose of in accordance with local regulations.
Waste Treatment Methods Packaging	Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (See: Disposal instructions). Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.
Special Precautions Landfill or Incinerations	No data available
Other Information	No data available

Section 14: Transport Information

UN Number	Not dangerous goods.
UN Proper Shipping Name	N/A
Transport Hazard Class(es)	N/A
Packaging Group	N/A
Environmental Hazards	N/A

Section 15: Regulatory Information

OSHA Specifically Regulated Substances: Not regulated. SARA: Hazard categories: Immediate Hazard-No. Delayed Hazard-Yes, Fire Hazard-No, Pressure Hazard-No, Reactivity Hazard-No. SARA 302 Extremely hazardous substance: Not listed. SARA 311/312 Hazardous chemical: Yes. Other federal regulations: Safe Drinking Water Act (SDWA): Not regulated. US state regulations: WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

Section 16: Other Information

Additional Information	N/A
Prepared By	Scarlotte Smith
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Disclaimer

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