

Technical Data Sheet (TDS)

1. Product Overview

Product Name: Diethylstilbestrol **English Name:** Diethylstilbestrol **CAS Number:** 56-53-1 **Molecular Formula:** C₁₈ H₂₀ O₂ **Molecular Weight:** 268.35 g/mol **Product Characteristics:** Synthetic non-steroidal estrogen with strong estrogenic activity, white to creamy white crystalline powder, odorless, insoluble in water, soluble in ethanol, ether and chloroform. Stable under recommended storage conditions, exhibits high estrogenic potency, able to bind to estrogen receptors and exert estrogen-like effects, with high purity and stable biological activity, serving as a core raw material for estrogen pharmaceutical formulations.

2. Technical Specifications (Complies with Industrial Standards)

Appearance: White to creamy white crystalline powder **Assay (HPLC):** ≥ 98.0% **Melting Point:** 169-172°C **Loss on Drying:** ≤ 0.5% **Residue on Ignition:** ≤ 0.1% **Heavy Metals (Pb):** ≤ 10 ppm **Heavy Metals (As):** ≤ 2 ppm **Related Substances (Total):** ≤ 1.5% **Related Substances (Single):** ≤ 0.5% **Solubility:** Insoluble in water, soluble in ethanol/ether/chloroform **Storage Stability:** Stable for 24 months at 2-8°C (sealed, dark condition) **pH Value:** Not applicable (insoluble in water)

3. Product Advantages

1. High Purity and Low Impurity: Assay ≥98.0%, low single and total related substances, meeting strict pharmaceutical raw material quality standards.
2. Strong Estrogenic Activity: High biological potency with obvious estrogen-like effects, suitable for various estrogen drug development and formulation.
3. Excellent Stability: No easy degradation under recommended storage conditions, long shelf life and stable biological activity without obvious loss.
4. Good Solubility: Soluble in common organic solvents, easy for the development of oral, injectable and external pharmaceutical formulations.
5. Standardized Production: Manufactured in accordance with ISO 9001 quality management system, with complete testing data, strict quality control and consistent batch-to-batch performance.

4. Application Fields

- Pharmaceutical Industry: Raw material for human pharmaceutical formulations (for the treatment of female hypoestrogenism, menopausal syndrome, ovarian insufficiency and other gynecological diseases).
- Research & Development: Laboratory research on estrogen hormone mechanism, reproductive system drug development, endocrine research and steroid hormone activity testing.
- Fine Chemicals: Intermediate for the synthesis of other estrogen derivatives and non-steroidal hormone products.

5. Usage Methods

- Pharmaceutical Formulation: Dissolve in appropriate organic solvent (ethanol/chloroform) according to formulation requirements, prepare oral tablets, capsules, injectable formulations or external ointments; adjust the concentration and dosage based on specific drug specifications and clinical needs.
- Research Use: Prepare standard solutions with ethanol (1-5 mg/mL) for laboratory tests and scientific research, the specific dosage is determined by the research protocol.



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- Note: Strictly follow national pharmaceutical regulations and industrial standards for use, only for industrial production and scientific research purposes, not for unauthorized use and clinical application without approval.

6. Packaging & Storage

Packaging Specifications:

- 100 g/bottle (HDPE bottle with aluminum foil seal)
- 500 g/bottle (HDPE bottle with aluminum foil seal)
- 1 kg/tin can (sealed tin can with inner plastic bag)
- 5 kg/fiber drum (sealed fiber drum with inner plastic bag)
- Custom packaging available upon request.

Storage Conditions:

- Store in a cool, dry, dark place at 2-8°C, keep the container tightly sealed to avoid moisture and light.
- Keep away from heat, open flame, strong oxidizing agents, strong acids and strong bases.
- Store separately from food, beverages, aquatic products and raw materials for edible use.**Shelf Life:** 24 months (unopened, under specified storage conditions).**Transportation:** Non-hazardous for transport under sealed condition; avoid high temperature, sunlight and collision during transportation; use refrigerated transport for long-distance shipping.

7. Safety & Protection

- The product is a synthetic estrogen, avoid direct skin contact and dust inhalation during handling.
- Wear nitrile rubber gloves, safety glasses and dust mask for large-scale handling or prolonged contact.
- In case of skin contact: Rinse the affected area with plenty of soap and water for 5 minutes; remove contaminated clothing and wash before reuse.
- In case of eye contact: Rinse eyes thoroughly with plenty of running water for 10-15 minutes; consult a doctor if irritation persists.
- Do not ingest; if accidentally swallowed, rinse mouth with water and seek medical advice immediately.

8. Quality Assurance

- The product is manufactured in accordance with ISO 9001 quality management system and pharmaceutical raw material production specifications.
- Each batch of product is fully tested and accompanied by a Certificate of Analysis (COA) to ensure compliance with industrial standards and quality requirements.
- Provide professional technical support for product application, including formulation optimization, solubility guidance, quality control and after-sales service.
- Undertake quality responsibility for qualified products under normal storage and use conditions.