



# NEWAY SINOPHC TECH. LIMITED

ADD:RM. 204, BUILDING 3, NO. 188, AONA RD., CHINA (SHANGHAI) PILOT FREE TRADE ZONE.  
Email:marketing01@newayphc.com; Phone:+86-021-50350029 <https://www.newayphc.com>

## Safety Data Sheet (MSDS)

(According to GB/T 16483 and GB/T 17519; Adapts to GHS, IMDG, IATA Standards)

**Product Name:** Diethylstilbestrol **Product Number:** DES-20260222 **Brand:** SIGALD **CAS Number:** 56-53-1 **Revision Date:** 22 FEB 2026

### SECTION 1: Identification of the Substance/Mixture and of the Company/Undertaking

#### 1.1 Product Identifiers

- Product Name: Diethylstilbestrol
- Synonyms: DES; 4,4'-Dihydroxy- $\alpha,\alpha'$ -diethylstilbene
- CAS-No.: 56-53-1
- Molecular Formula:  $C_{18}H_{20}O_2$
- Molecular Weight: 268.35 g/mol

#### 1.2 Details of the supplier of the safety data sheet

- Company: NEWAY SINOPHC TECH. LIMITED
- Address: RM. 204, BUILDING 3, NO. 188, AONA RD., CHINA (SHANGHAI) PILOT FREE TRADE ZONE.
- Telephone: +86-021-50350029
- Fax: +86-021-50350029

#### 1.3 Emergency telephone

- Emergency Phone #: +86-021-50350029 (CHEMTREC)

#### 1.4 Relevant Identified Uses and Uses Advised Against

- Identified Uses: Pharmaceutical research raw material, scientific research reagent, fine chemical intermediate, veterinary pharmaceutical raw material.
- Uses Advised Against: Not for unauthorized human use; not for cosmetic use; not for direct release to the natural environment; do not use for human pregnancy-related treatment.

### SECTION 2: Hazards Identification

#### 2.1 GHS Classification

- Acute toxicity (oral, rat): Category 4 ( $LD_{50} = 3000$  mg/kg)
- Carcinogenicity: Category 1A (known to cause cancer in humans)
- Reproductive toxicity: Category 1B
- Target organ toxicity (repeated exposure): Category 2 (endocrine system, reproductive system)
- Hazard to the aquatic environment (long-term): Category 3

#### 2.2 GHS Label Elements

- Hazard Pictograms: GHS07 (Exclamation mark), GHS08 (Health hazard), GHS09 (Environment)
- Signal Word: Danger
- Hazard Statements:
  - H302: Harmful if swallowed
  - H350: May cause cancer
  - H360: May damage fertility or the unborn child



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- H373: May cause damage to organs (endocrine system, reproductive system) through prolonged or repeated exposure
- H412: Harmful to aquatic life with long lasting effects
- Precautionary Statements:
- P201: Obtain special instructions before use
- P202: Do not handle until all safety precautions have been read and understood
- P260: Do not breathe dust/fume/gas/mist/vapors/spray
- P264: Wash skin thoroughly after handling
- P270: Do not eat, drink or smoke when using this product
- P273: Avoid release to the environment
- P280: Wear protective gloves/eye protection/face protection
- P301+P312: If swallowed: Call a POISON CENTER/doctor if you feel unwell
- P308+P313: If exposed or concerned: Get medical advice/attention
- P391: Collect spillage
- P405: Store locked up
- P501: Dispose of contents/container to an approved waste disposal plant

**2.3 Physical and Chemical Hazards:** No physical or chemical hazards under normal use; combustible at high temperature (>300°C).**2.4 Health Hazards:** Harmful if swallowed; known human carcinogen; reproductive toxicant; prolonged exposure may cause endocrine and reproductive system damage; no skin/eye irritation in normal handling.**2.5 Environmental Hazards:** Harmful to aquatic life with long-lasting effects; low biodegradability, high bioaccumulation in aquatic organisms.**2.6 Other Hazards:** No additional hazards identified.

## SECTION 3: Composition/Information on Ingredients

- Substance / Mixture: Pure Substance
- Active Ingredient: Diethylstilbestrol (100%, CAS:56-53-1)
- No hazardous impurities present above industrial standard limit values.

## SECTION 4: First Aid Measures

### 4.1 Description of First-Aid Measures

- If Inhaled: Move victim to fresh air at once. If breathing is difficult, give oxygen and call a POISON CENTER/doctor immediately.
- In Case of Skin Contact: Wash skin 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 running water for 10-15 minutes. Consult a doctor if irritation or redness persists.
- If Swallowed: Do not induce vomiting. Rinse mouth with water. Call a POISON CENTER/doctor at once and provide product information.

**4.2 Most Important Symptoms and Effects:** Nausea, vomiting (acute ingestion); cancer, reproductive dysfunction, endocrine disorder (prolonged exposure); fetal damage (in

pregnant women).4.3 **Immediate Medical Attention:** Required for ingestion, prolonged exposure, or pregnancy exposure; provide MSDS to attending physician.

## SECTION 5: Firefighting Measures

5.1 **Extinguishing Media:** Water spray, dry powder, foam, CO<sub>2</sub>. No limitations on extinguishing agents.5.2 **Special Hazards:** Combustible at high temperature; burning produces toxic fumes (CO, CO<sub>2</sub>, phenolic compounds). No explosion risk.5.3 **Firefighter Advice:** Wear SCBA and full fire gear. Fight fire from safe distance; prevent fire runoff from entering water sources.

## SECTION 6: Accidental Release Measures

6.1 **Personal Precautions:** Wear nitrile gloves, goggles, N95 dust mask. Avoid dust inhalation; ensure good ventilation. Evacuate non-essential personnel.6.2 **Environmental Precautions:** Prevent spillage from entering soil, sewers or water bodies. Do not discharge to environment.6.3 **Clean Up Methods:** Small spill - sweep up and collect in sealed hazardous waste container. Large spill - contain with sand, transfer by vacuum (HEPA) to sealed container.6.4 **Reference:** See Section 13 for waste disposal.

## SECTION 7: Handling and Storage

7.1 **Safe Handling:** Handle in well-ventilated area with dust extraction. Wear full PPE (Section 8). Do not eat/drink/smoke during handling. Wash hands thoroughly after use. Avoid dust formation.7.2 **Safe Storage:** Store at 2-8°C in cool, dry, dark place; keep container tightly sealed. Store locked up in dedicated chemical storage area. Incompatibilities: Strong oxidizers, acids, bases. Shelf Life: 24 months (unopened, specified conditions). Separate from food, aquatic products and non-hazardous materials.

## SECTION 8: Exposure Controls/Personal Protection

8.1 **Control Parameters:** No official OEL; internal limit 0.05 mg/m<sup>3</sup> (airborne dust) due to carcinogenicity.8.2 **Exposure Controls:**

- Engineering Controls: Local exhaust ventilation for dust-generating operations; regular air monitoring.
- PPE: Chemical splash goggles + face shield; nitrile gloves (≥0.3 mm); impermeable protective clothing; N95 dust mask (routine) / PAPR (large spills); lab coat. Replace gloves if damaged.

## SECTION 9: Physical and Chemical Properties

- Physical State: Crystalline powder
- Color: White to off-white
- Odor: Slight phenolic odor
- Melting Point: 169-172°C
- Boiling Point: N/A (decomposes before boiling)
- Flammability: Combustible (>300°C)
- Flash Point: >200°C (Closed Cup)
- Autoignition Temperature: >350°C
- Solubility: Soluble in ethanol/ether/chloroform; slightly soluble in water



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- Density (20°C): 1.14 g/cm<sup>3</sup> (powder)
- pH (1% in ethanol): 5.0-7.0
- Vapor Pressure (25°C): <0.001 hPa
- Particle Size: 90% passing 100 mesh
- Hygroscopy: Slightly hygroscopic

## SECTION 10: Stability and Reactivity

10.1 **Chemical Stability:** Stable at 2-8°C (sealed, dark); decomposes at >172°C and strong light.

10.2 **Hazardous Reactions:** None under normal use/handling.

10.3 **Conditions to Avoid:** High temperature, direct sunlight, moisture, strong oxidizers/acids/bases.

10.4 **Incompatible Materials:** Hydrogen peroxide, KMnO<sub>4</sub>, concentrated H<sub>2</sub>SO<sub>4</sub>, NaOH, halogenated compounds.

10.5 **Decomposition Products:** CO, CO<sub>2</sub>, phenolic compounds (burning); no toxic decomposition under normal storage.

## SECTION 11: Toxicological Information

### 11.1 Toxicological Effects

- Acute Toxicity: Oral (rat) LD<sub>50</sub> = 3000 mg/kg (harmful); Dermal (rabbit) LD<sub>50</sub> > 5000 mg/kg; Inhalation LC<sub>50</sub> > 10 mg/m<sup>3</sup> (4h).
- Skin/Eye Irritation: No irritation in standard tests.
- Carcinogenicity: Category 1A (IARC Group 1) - known human carcinogen (breast, ovarian, cervical cancer).
- Reproductive Toxicity: Category 1B - causes birth defects, reduced fertility, fetal damage.
- Target Organ Toxicity: Endocrine/reproductive system damage (prolonged exposure).
- Mutagenicity: No mutagenic effects in standard tests; carcinogenic via hormonal mechanism.

## SECTION 12: Ecological Information

12.1 **Toxicity:** Harmful to aquatic life; Zebrafish LC<sub>50</sub> = 4.2 mg/L (96h); Daphnia EC<sub>50</sub> = 3.5 mg/L (48h).

12.2 **Persistence:** Low biodegradability (BOD<sub>5</sub> /COD<0.2); persists in environment >6 months.

12.3 **Bioaccumulation:** High BCF>2000; accumulates in aquatic animal fatty tissues.

12.4 **Mobility:** Low in soil; binds strongly to organic matter.

12.5 **PBT/vPvB:** Classified as vPvB (very persistent, very bioaccumulative).

12.6 **Other Effects:** Endocrine disruptor for aquatic organisms; causes reproductive dysfunction in fish/amphibians.

## SECTION 13: Disposal Considerations

13.1 **Waste Treatment:** Dispose of product/packaging/spillage to licensed hazardous waste facility per local/national/international regulations. Do not discharge to environment. Rinse empty packaging with organic solvent; collect rinse as hazardous waste.

13.2 **Disposal Notes:** Incinerate in hazardous waste incinerator with gas treatment; do not landfill untreated waste.

## SECTION 14: Transport Information

14.1 **UN Number:** UN 3077

14.2 **UN Proper Shipping Name:** Environmentally hazardous substance, solid, n.o.s. (Diethylstilbestrol)

14.3 **Hazard Class:** 9 (Miscellaneous dangerous goods)

14.4 **Packaging Group:** III

14.5 **Environmental Hazards:** Marine Pollutant (Yes); ADR/RID/IMDG/IATA



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Class 9.14.6 **Special Precautions:** Transport in sealed packaging at 2-8°C (refrigerated). Avoid sunlight, high temp, collision. Do not transport with food/aquatic products. Accompany with transport docs (UN no., hazard class, emergency contact).14.7 **IATA Restrictions:** Cargo only air transport; limited quantity ≤5 kg per package; no passenger aircraft transport.

### SECTION 15: Regulatory Information

15.1 **National (China):** Class 9 hazardous chemical (Hazardous Chemical Safety Management Regulation); prohibited from human medical use (Pharmaceutical Administration Law); environmental discharge prohibited (Environmental Protection Law).15.2 **International:** GHS Rev.9 (Acute toxicity 4, Carcinogenicity 1A, Reproductive toxicity 1B, Aquatic chronic 3); REACH EU (Annex XVII restricted); TSCA US (listed, hazardous waste regulated); IMDG Code Class 9 UN3077; IATA DGR Class 9.

### SECTION 16: Other Information

- This MSDS complies with GB/T 16483, GB/T 17519, GHS Rev.9. Based on current scientific/regulatory data.
- Supplier is not liable for damage from improper use/storage/transport/disposal.
- Professional use only; not for general consumers. First revision: 22 FEB 2026. Updated with new data as needed.

纳维盈医化科技  
NEWAY SINOPHC TECH