

Designer Molecules, Inc.

Material Safety Data Sheet

Product: ECAT-259
MSDS ID: R1207

Revised Date: 08/25/15
Replaces Date: 12/01/11

1. General Information

Trade Name: ECAT-259
Product Code: R1207
Product Type: Epoxy catalyst
Company: Designer Molecules, Inc.
10080 Willow Creek Rd.
San Diego, CA 92131
Telephone: 858-348-1122

Emergency phone number (spill, leak, fire, exposure or accident):
US Domestic 800-424-9300 (CHEMTREC)
International +1 703-527-3887

2. Hazards Identification

EMERGENCY OVERVIEW:

OSHA Hazards:

Irritant

GHS Classification:

Skin irritation (Category 2)

Eye irritation (Category 2A)

Specific target organ toxicity – single exposure (Category 3)

GHS Label Elements, including precautionary statements:



Signal Word: **Warning**

H315: Causes skin irritation.

H319: Causes serious eye irritation.

H335: May cause respiratory irritation.

P261: Avoid breathing dust/fume/gas/mist/vapors/spray.

P280: Wear protective gloves.

P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

HMIS Classification:

Health Hazard: 2

Flammability: 1

Physical Hazards: 0

POTENTIAL HEALTH EFFECTS:

INHALATION: May be harmful if inhaled. Causes respiratory tract irritation.

EYE CONTACT: Causes eye irritation

SKIN CONTACT: Harmful if absorbed through skin. Causes skin irritation.

SWALLOWING: Harmful if swallowed.

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3. Composition Information

COMPONENT	CAS#	CONCENTRATION
1,3-Benzenediol, 4-[1-[[3-(1 <i>H</i> -imidazol-1-yl)propyl]imino]ethyl]-	1313999-39-1	> 90%

4. First Aid Measures

- SWALLOWING:** Do not induce vomiting. Wash out mouth with water provided the person is fully conscious. Get immediate medical attention.
- SKIN CONTACT:** Wash area with soap and water. Remove contaminated clothing and shoes. Wash or clean before reuse.
- INHALATION:** Remove person to fresh air. If breathing has stopped, perform artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
- EYE CONTACT:** Flush with water for 15 minutes. Get immediate medical attention.

NOTES TO PHYSICIAN:

There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.

5. Fire and Explosion Hazard Data

- FLASH POINT (method):** >392°F / >200°C, (closed cup)
- AUTOIGNITION:** Not determined
- EXTINGUISHER METHOD:** Water spray, CO₂, foam, dry chemical
- SPECIAL FIRE-FIGHTING PROCEDURES:**

Fire fighters should wear NIOSH/MSHA approved pressure demand self-contained breathing apparatus. Decontaminate or discard any clothing that may contain chemical residues.

- UNUSUAL FIRE AND EXPLOSION HAZARDS:**
None.

6. Accidental Release Measures

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Promptly absorb spill. Remove sources of ignition. Cover drains to prevent entry into waterways. Wear personal protective equipment (clothing and gloves) when handling spilled materials.

PERSONAL PRECAUTIONS:

Wear suitable NIOSH-approved protective equipment.

ENVIRONMENTAL PRECAUTIONS:

May be toxic to aquatic life. Avoid runoff to waterways and sewers.

7. Handling and Storage

STEPS TO BE TAKEN IF MATERIAL IS SPILLED OR RELEASED:

For small amounts, wipe off with damp sponge. For large amounts, absorb on sand or vermiculite. Wipe off and dispose of into proper waste disposal containers.

WASTE DISPOSAL METHODS:

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Dissolve or mix material with proper solvent and incinerate.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

Material is generally stable. Keep away from open flames. Store at room temperature in a cool dry place

OTHER PRECAUTIONS AND/OR SPECIAL HAZARDS:

None.

8. Exposure Controls and Personal Protection Measures

PERSONAL PROTECTION:

Respiratory: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Hands: Protective gloves are recommended (4H, butyl, neoprene, nitrile, or PVC-coated).
Eyes: Safety glasses, goggles, or face shields are required.
Skin: Chemical-resistant clothing.

OTHER PROTECTIVE EQUIPMENT:

Eye wash.
Safety shower.

ENGINEERING CONTROLS:

Ventilation: This product should be stored in a closed environment to prevent any vapors from escaping storage containers, and to prevent moisture contamination. General mechanical room ventilation is satisfactory. Local ventilation is required at points where vapors are likely to be released into workplace air.

EXPOSURE LIMITS:

Component	Type	Value	Remarks
Modified imidazole	TWA (skin) OSHA	- ppm	None established
	STEL (skin) ACGIH	- ppm	None established
	TWA (skin) ACGIH	- ppm	None established

9. Physical / Chemical Characteristics

APPEARANCE:

Physical State: Solid (powder)
Color: Tan to Light Yellow
Odor: Slight odor

OTHER PROPERTIES:

Boiling Point: Not determined
Melting Point: ~ 240°C
pH: Not determined
Specific Gravity (H₂O=1): Not determined
Vapor Pressure: 3.4 x10⁻¹⁰ mm Hg @ 25°C (estimated)
Vapor Density (Air-1): Heavier than air
Solubility in water: 41 mg/L @ 25°C (estimated)
Log K_{OW}: 3.85 @ 25°C (estimated)
Evaporation rate (BuAc=1): <1
Avg. Molecular Weight: 259.31
Percent volatile (weight): Not determined

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Percent volatile (volume): Not determined
Volatile organic content: Not determined

10. Reactivity Hazard Data

STABILITY: Stable
CONDITIONS TO AVOID: Open flames, high temperatures
INCOMPATIBLE MATERIALS: Strong acids or bases; strong oxidizing agents.
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon dioxide (CO₂), carbon monoxide (CO), oxides of nitrogen
HAZARDOUS POLYMERIZATION: Will not occur
CONDITIONS TO AVOID: Open flames; strong oxidizing agents

11. Toxicological Information

ROUTE OF EXPOSURE:
Inhalation: Material is likely to be irritating to mucous membranes and upper respiratory tract.
Multiple Routes: Causes eye and skin irritation. May be harmful by inhalation, ingestion, or skin absorption.

SIGNS AND SYMPTOMS OF EXPOSURE:
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. Ecological Information

ELIMINATION (persistence and degradability):
Biodegradability: Not determined. ECAT-259 is estimated to be persistent in the environment

AQUATIC TOXICITY:
Acute toxicity to fish: Not determined. ECAT-259 is estimated to be chronically toxic to fish.
Acute toxicity to plants: Not determined
Microorganisms: Not determined.

13. Disposal Considerations

WASTE DISPOSAL METHOD: Incineration and should be in accordance with local, state of national legislation.
EMPTY CONTAINER WARNINGS: Empty containers may contain product residue and should be treated as hazardous waste with proper disposal (incineration).

14. Transport Information

Not a hazardous material for transportation.

US DOT REGULATIONS:
NON-BULK Proper Shipping Name: Not regulated
BULK Proper Shipping Name: Not regulated

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an

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authorized safety officer. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. Regulatory Information

CA PROPOSITION 65: This material does not contain any chemicals known to the State of California to cause cancer or reproductive defects.

TSCA INVENTORY STATUS: All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Acts (TSCA) inventory.

EPA will issue a Significant New Use Rule (SNUR) for this substance under TSCA section 5(a)(2). Applicable to this material will be the restrictions stated in 40 CFR 721.85 (a)(1), (b)(1) and (c)(1) and 40 CFR 721.90 (a)(1), (b)(1) and (c)(1).

The SNUR will require submission of a Significant New Use Notification (SNUN) to EPA 90 days before any predictable or purposeful release containing the product into surface water or any disposal of the manufacturing, process or use stream of the product other than by incineration (including cleaning releases and transport containers). Corresponding recordkeeping at 40 CFR 721.125(a), (b), (c), (j) and (k) will also be required. Contact Designer Molecules, Inc. representatives for further information.

TSCA 12(b) EXPORT NOTIFICATION: This material does not contain 12(b) regulated chemicals.

SARA 311/312 HAZARD CLASS: There are no known hazards associated with this material.

EINECS IDENTIFICATION: This material is not listed on EINECS.

HMIS RATINGS:

Health:	<u>2</u>
Flammability:	<u>1</u>
Reactivity:	<u>0</u>
Personal Protection:	<u>B</u>

16. Other Information

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgments of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user. While that data contained herein is factual, it should not be taken as warranty or representation for which the company assumes legal responsibility. It is offered solely for your consideration, investigation and verification. Any use of this data and information must be determined by the user to be in accordance with applicable federal, state and local laws and regulations.