



Material Safety Data Sheet  
HIND III, Restriction Enzyme

MSDS# 92159

Section 1 - Chemical Product and Company Identification

MSDS Name: HIND III, Restriction Enzyme  
Catalog Numbers: BP3372-1, BP3372-5, BP3372-5S, BP3372-7, BP3372-7S  
Synonyms: Nuclease, Restriction Endodeoxyribo-, HIND III  
Company Identification: Fisher Scientific  
One Reagent Lane  
Fair Lawn, NJ 07410  
For information in the US, call: 201-796-7100  
Emergency Number US: 201-796-7100  
CHEMTREC Phone Number, US: 800-424-9300

Section 2 - Composition, Information on Ingredients

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Risk Phrases:

CAS#: 56-81-5  
Chemical Name: Glycerol  
%: 50.0  
EINECS#: 200-289-5  
Hazard Symbols:

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Risk Phrases:

CAS#: 81295-22-9  
Chemical Name: Nuclease, restriction endodeoxyribo-, hindiii  
%: 50.0  
EINECS#: 279-728-8  
Hazard Symbols:

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Text for R-phrases: see Section 16

Hazard Symbols: None listed  
Risk Phrases: None listed

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Caution! Hygroscopic (absorbs moisture from the air). This is expected to be a low hazard for usual industrial handling. Good laboratory procedures are recommended when handling this compound. May cause eye, skin, and respiratory tract irritation. Target Organs: No data found.

Potential Health Effects

Eye: May cause eye irritation.  
Skin: May cause skin irritation.  
Ingestion: May cause irritation of the digestive tract. Low hazard for usual industrial handling.  
Inhalation: May cause respiratory tract irritation. Low hazard for usual industrial handling.  
Chronic: May cause kidney injury.

Section 4 - First Aid Measures

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If

irritation develops, get medical aid.

Skin: Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Wash clothing before reuse.

Ingestion: Never give anything by mouth to an unconscious person. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water. Wash mouth out with water. Get medical aid if irritation or symptoms occur.

Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.

Notes to Physician:

### Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Extinguishing Media: Use agent most appropriate to extinguish fire. Cool containers with flooding quantities of water until well after fire is out. Use water spray, dry chemical, carbon dioxide, or appropriate foam.

Autoignition Temperature: Not available

Flash Point: Not available

Explosion Limits: Lower: Not available

Explosion Limits: Upper: Not available

NFPA Rating: health: 1; flammability: 0; instability: 0;

### Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Clean up spills immediately, observing precautions in the Protective Equipment section. Provide ventilation.

### Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Wash thoroughly after handling. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. Use with adequate ventilation.

Storage: Store in a cool, dry, well-ventilated area away from incompatible substances. Store protected from moisture. Store at -20°C.

### Section 8 - Exposure Controls, Personal Protection

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Glycerol	10 mg/m3 (mist)	none listed	15 mg/m3 TWA (total); 5 mg/m3 TWA (respirable fraction)
Nuclease, restriction endodeoxyribo-, hindiii	none listed	none listed	none listed

OSHA Vacated PELs: Glycerol: 10 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction) Nuclease, restriction endodeoxyribo-, hindiii: None listed

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

Personal Protective Equipment

- Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by 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 the 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.

#### Section 9 - Physical and Chemical Properties

Physical State: Liquid

Color: Not available

Odor: Not available

pH: Not available

Vapor Pressure: Not available

Vapor Density: Not available

Evaporation Rate: Not available

Viscosity: Not available

Boiling Point: Not available

Freezing/Melting Point: Not available

Decomposition Temperature: Not available

Solubility in water: Not available

Specific Gravity/Density:

Molecular Formula:

Molecular Weight:

#### Section 10 - Stability and Reactivity

- Chemical Stability: Material is heat sensitive and may decompose at elevated temperatures.
- Conditions to Avoid: Incompatible materials, excess heat, exposure to moist air or water.
- Incompatibilities with Other Materials: Oxidizing agents, lead oxide, nitric acid, sulfuric acid, hydrogen peroxide, potassium permanganate, calcium hypochlorite, perchloric acid, moisture.
- Hazardous Decomposition Products: Carbon monoxide, carbon dioxide.
- Hazardous Polymerization: Will not occur.

#### Section 11 - Toxicological Information

- RTECS#: CAS# 56-81-5: MA8050000  
CAS# 81295-22-9: RF0757812
- RTECS:  
**CAS# 56-81-5:** Draize test, rabbit, eye: 126 mg Mild;  
Draize test, rabbit, eye: 500 mg/24H Mild;  
Draize test, rabbit, skin: 500 mg/24H Mild;  
Inhalation, rat: LC50 = >570 mg/m<sup>3</sup>/1H;
- LD50/LC50: Oral, mouse: LD50 = 4090 mg/kg;  
Oral, rabbit: LD50 = 27 gm/kg;  
Oral, rat: LD50 = 12600 mg/kg;  
Skin, rabbit: LD50 = >10 gm/kg;
- RTECS:  
**CAS# 81295-22-9:**  
Glycerol - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
- Carcinogenicity: Nuclease, restriction endodeoxyribo-, hindiii - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
- Other: See actual entry in RTECS for complete information.

#### Section 12 - Ecological Information

Not available

### Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

### Section 14 - Transport Information

US DOT

Shipping Name: CARBON DIOXIDE, SOLID

Hazard Class: 9

UN Number: UN1845

Packing Group: III

Canada TDG

Shipping Name: Not available

Hazard Class:

UN Number:

Packing Group:

### Section 15 - Regulatory Information

#### European/International Regulations

##### European Labeling in Accordance with EC Directives

Hazard Symbols: Not available

Risk Phrases:

Safety Phrases:

S 28A After contact with skin, wash immediately with plenty of water.

S 37 Wear suitable gloves.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

##### WGK (Water Danger/Protection)

CAS# 56-81-5: 0

CAS# 81295-22-9: Not available

##### Canada

CAS# 56-81-5 is listed on Canada's DSL List

Canadian WHMIS Classifications: Not available

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

CAS# 56-81-5 is not listed on Canada's Ingredient Disclosure List.

CAS# 81295-22-9 is not listed on Canada's Ingredient Disclosure List.

#### US Federal

##### TSCA

CAS# 56-81-5 is listed on the TSCA Inventory.

CAS# 81295-22-9 is not listed on the TSCA Inventory. It is for research and development use only.

### Section 16 - Other Information

MSDS Creation Date: 11/27/2001

Revision #6 Date 7/20/2009

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the

company has been advised of the possibility of such damages.

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