



Material Safety Data Sheet  
Full Scale DNA Ladder, 1kb

MSDS# 93325

Section 1 - Chemical Product and Company Identification

MSDS Name: Full Scale DNA Ladder, 1kb  
Catalog Numbers: BP2582-200, BP2582-5  
Synonyms: Hi-Lo DNA Marker.  
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#: Not available  
Chemical Name: Hi-Lo DNA Marker, premixed with loading dye, plasmid DNA  
%: <1.0  
EINECS#: unlisted  
Hazard Symbols:

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Risk Phrases:

CAS#: Not available  
Chemical Name: Bromophenyl blue  
%: 0.02  
EINECS#: unlisted  
Hazard Symbols:

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Risk Phrases:

CAS#: Not available  
Chemical Name: Xylene cyanol FE  
%: 0.02  
EINECS#: unlisted  
Hazard Symbols:

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Risk Phrases:

CAS#: 56-81-5  
Chemical Name: Glycerol  
%: 6.0  
EINECS#: 200-289-5  
Hazard Symbols:

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Risk Phrases:

CAS#: 60-00-4  
Chemical Name: Ethylenediamine tetraacetic acid (edta)  
%: <1.0  
EINECS#: 200-449-4  
Hazard Symbols:

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Risk Phrases:

CAS#: 77-86-1  
Chemical Name: Tris (hydroxymethyl) aminomethane  
%: <1.0  
EINECS#: 201-064-4  
Hazard Symbols:

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Risk Phrases:

CAS#: 7732-18-5  
Chemical Name: Water  
%: 90.9+  
EINECS#: 231-791-2  
Hazard Symbols:

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Risk Phrases:

CAS#: 26628-22-8  
Chemical Name: Sodium azide  
%: 0.02  
EINECS#: 247-852-1  
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! The toxicological properties of this material have not been fully investigated. 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. The toxicological properties of this substance have not been fully investigated.

Inhalation: May cause respiratory tract irritation. The toxicological properties of this substance have not been fully investigated.

Chronic: No information found.

#### Section 4 - First Aid Measures

**Eyes:** In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid.

**Skin:** In case of contact, flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash clothing before reuse.

**Ingestion:** If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid. If material is ingested or injected, medical attention should be sought immediately. A copy of the MSDS should be given to the physician or health care professional.

**Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

**Notes to Physician:** Treat symptomatically and supportively.

### 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:** Substance is nonflammable; use agent most appropriate to extinguish surrounding fire.

**Autoignition Temperature:** Not available

**Flash Point:** Not available

**Explosion Limits:** Not available

**Lower:** Not available

**Explosion Limits:** Not available

**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. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Provide ventilation.

### Section 7 - Handling and Storage

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

**Storage:** Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

### Section 8 - Exposure Controls, Personal Protection

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Hi-Lo DNA Marker, p remixed with loadin g dye, plasmid DNA	none listed	none listed	none listed
Bromophenyl blue	none listed	none listed	none listed
Xylene cyanol FE	none listed	none listed	none listed
Glycerol	10 mg/m3 (mist)	none listed	15 mg/m3 TWA (total); 5 mg/m3 TWA (respirable fraction)
Ethylenediamine tet raacetic acid (edta )	none listed	none listed	none listed
Tris (hydroxymethyl ) aminomethane	none listed	none listed	none listed

Water	none listed	none listed	none listed
Sodium azide	0.29 mg/m3 Ceiling (as NaN3); 0.11 ppm Ceiling (vapor, as hydrazoic acid)	none listed	none listed

OSHA Vacated PELs: Hi-Lo DNA Marker, premixed with loading dye, plasmid DNA: None listed Bromophenyl blue: None listed Xylene cyanol FE: None listed Glycerol: 10 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction) Ethylenediamine tetraacetic acid (edta): None listed Tris (hydroxymethyl) aminomethane: None listed Water: None listed Sodium azide: None listed

#### Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

#### Exposure Limits

#### Personal Protective Equipment

- Eyes: Wear chemical splash goggles.
- Skin: Wear appropriate protective gloves to prevent skin exposure.
- Clothing: Wear appropriate protective clothing to minimize contact with skin.
- Respirators: Respirator protection is not normally required.

#### Section 9 - Physical and Chemical Properties

Physical State: Liquid

Color: blue

Odor: Not available

pH: Not available

Vapor Pressure: Not available

Vapor Density: Not available

Evaporation Rate: (water = 1): 1

Viscosity: Not available

Boiling Point: 100 deg C ( 212.00°F)

Freezing/Melting Point: 0 deg C ( 32.00°F)

Decomposition Temperature: Not available

Solubility in water: Not available

Specific Gravity/Density: 1.0

Molecular Formula: Solution

Molecular Weight: 0

#### Section 10 - Stability and Reactivity

- Chemical Stability: Stable under normal temperatures and pressures.
- Conditions to Avoid: Any set of conditions that should be avoided for water..
- Incompatibilities with Other Materials: Not compatible with substances which are incompatible with water..
- Hazardous Decomposition Products: None.
- Hazardous Polymerization: Will not occur.

#### Section 11 - Toxicological Information

CAS# 56-81-5: MA8050000

CAS# 60-00-4: AH4025000

RTECS#: CAS# 77-86-1: TY2900000

CAS# 7732-18-5: ZC0110000

CAS# 26628-22-8: VY8050000

RTECS: Not available. RTECS: Not available. RTECS: Not available. 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;  
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# 60-00-4:** Oral, mouse: LD50 = 30 mg/kg;

LD50/LC50: RTECS:

**CAS# 77-86-1:** Oral, rat: LD50 = 5900 mg/kg;

RTECS:

**CAS# 7732-18-5:** Oral, rat: LD50 = >90 mL/kg;

RTECS:

**CAS# 26628-22-8:** Inhalation, mouse: LC50 = 32400 ug/m<sup>3</sup>;

Inhalation, rat: LC50 = 37 mg/m<sup>3</sup>;

Oral, mouse: LD50 = 27 mg/kg;

Oral, rat: LD50 = 27 mg/kg;

Skin, rabbit: LD50 = 20 mg/kg;

Skin, rat: LD50 = 50 mg/kg;

Hi-Lo DNA Marker, premixed with loading dye, plasmid DNA - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Bromophenyl blue - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Xylene cyanol FE - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Glycerol - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Carcinogenicity: Ethylenediamine tetraacetic acid (edta) - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Tris (hydroxymethyl) aminomethane - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Water - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Sodium azide - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Other: The toxicological properties have not been fully investigated.

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: Not regulated.

Hazard Class:

UN Number:

Packing Group:

Canada TDG

Shipping Name: Not available

Hazard Class:

UN Number:

Packing Group:

USA RQ: CAS# 60-00-4: 5000 lb final RQ; 2270 kg final RQ

USA RQ: CAS# 26628-22-8: 1000 lb final RQ; 454 kg final RQ

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: Not available

Risk Phrases:

Safety Phrases:

S 24/25 Avoid contact with skin and eyes.

WGK (Water Danger/Protection)

CAS# 56-81-5: 0

CAS# 60-00-4: 2

CAS# 77-86-1: 1

CAS# 7732-18-5: Not available

CAS# 26628-22-8: 2

Canada

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

CAS# 60-00-4 is listed on Canada's DSL List

CAS# 77-86-1 is listed on Canada's DSL List

CAS# 7732-18-5 is listed on Canada's DSL List

CAS# 26628-22-8 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# 0-01-1 is not listed on Canada's Ingredient Disclosure List.

CAS# 0-02-2 is not listed on Canada's Ingredient Disclosure List.

CAS# 0-03-3 is not listed on Canada's Ingredient Disclosure List.

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

CAS# 60-00-4 is not listed on Canada's Ingredient Disclosure List.

CAS# 77-86-1 is not listed on Canada's Ingredient Disclosure List.

CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.

CAS# 26628-22-8 is listed on Canada's Ingredient Disclosure List

US Federal

TSCA

CAS# 0-01-1 is not listed on the TSCA Inventory. It is for research and development use only.

CAS# 0-02-2 is not listed on the TSCA Inventory. It is for research and development use only.

CAS# 0-03-3 is not listed on the TSCA Inventory. It is for research and development use only.

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

CAS# 60-00-4 is listed on the TSCA Inventory.

CAS# 77-86-1 is listed on the TSCA Inventory.

CAS# 7732-18-5 is listed on the TSCA Inventory.

CAS# 26628-22-8 is listed on the TSCA Inventory.

Section 16 - Other Information

MSDS Creation Date: 10/20/2004

Revision #5 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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