

SAFETY DATA SHEET

Revision Date 01-Apr-2024

Revision Number 3

1. Identification

Product Name	DNA Molecular Weight Marker, 100bp Ladder, (100-1517 bp)
Cat No. :	J67383
Synonyms	No information available
Recommended Use	Laboratory chemicals.
Uses advised against	Food, drug, pesticide or biocidal product use.

Details of the supplier of the safety data sheet

Company

Thermo Fisher Scientific Chemicals, Inc.
30 Bond Street
Ward Hill, MA 01835-8099
Tel: 800-343-0660
Fax: 800-322-4757

Emergency Telephone Number

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99
CHEMTRIC Tel. No. **US**:001-800-424-9300 / **Europe**:001-703-527-3887

2. Hazard(s) identification

Classification

Classification under 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Label Elements

None required

Hazards not otherwise classified (HNOC)

None identified

3. Composition/Information on Ingredients

Component	CAS No	Weight %
Water	7732-18-5	92.09
Deoxyribonucleic acids	9007-49-2	5
.alpha.-D-Glucopyranoside, .beta.-D-fructofuranosyl, polymer with (chloromethyl)oxirane	26873-85-8	2.5
Ethylenediamine tetraacetic acid (EDTA)	60-00-4	0.32
1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride	1185-53-1	0.05
Sodium lauryl sulfate	151-21-3	0.017
Phenol, 4,4'-(3H-2,1-benzoxathiol-3-ylidene)bis[2,6-dibromo , S,S-dioxide, monosodium salt	34725-61-6	0.015

4. First-aid measures

Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur.
Inhalation	Remove to fresh air. Get medical attention immediately if symptoms occur.
Ingestion	Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.
Most important symptoms and effects	None reasonably foreseeable.
Notes to Physician	Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media	Carbon dioxide (CO ₂). Powder. Water spray. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.
Unsuitable Extinguishing Media	No information available
Flash Point	No information available
Method -	No information available
Autoignition Temperature	No information available
Explosion Limits	
Upper	No data available
Lower	No data available
Sensitivity to Mechanical Impact	No information available
Sensitivity to Static Discharge	No information available

Specific Hazards Arising from the Chemical

Keep product and empty container away from heat and sources of ignition.

Hazardous Combustion Products

Nitrogen oxides (NO_x). Sulfur oxides. Hydrogen chloride. Hydrogen bromide. Oxides of phosphorus. Sodium oxides.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA

Health
0

Flammability
0

Instability
0

Physical hazards
-

6. Accidental release measures

Personal Precautions

Environmental Precautions

Ensure adequate ventilation. Use personal protective equipment as required.

Should not be released into the environment. See Section 12 for additional Ecological Information.

Methods for Containment and Clean Up Sweep up and shovel into suitable containers for disposal.

7. Handling and storage

Handling

Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid contact with skin, eyes or clothing. Avoid ingestion and inhalation.

Storage.

Keep refrigerated. Incompatible Materials. Oxidizing agent.

8. Exposure controls / personal protection

Exposure Guidelines

This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Engineering Measures

None under normal use conditions.

Personal Protective Equipment

Eye/face Protection

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 and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection

No protective equipment is needed under normal use conditions.

Recommended Filter type:

Particle filter.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Physical State

Liquid

Appearance

No information available

Odor

No information available

Odor Threshold

No information available

pH

No information available

Melting Point/Range

No data available

Boiling Point/Range

No information available

Flash Point

No information available

Evaporation Rate

No information available

Flammability (solid,gas)

Not applicable

Flammability or explosive limits

Upper

No data available

Lower

No data available

Vapor Pressure

23 hPa @ 20 °C

Vapor Density

No information available

Specific Gravity	No information available
Solubility	No information available
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	No information available
Decomposition Temperature	No information available
Viscosity	No information available

10. Stability and reactivity

Reactive Hazard	None known, based on information available
Stability	Stable under normal conditions.
Conditions to Avoid	Incompatible products.
Incompatible Materials	Oxidizing agent
Hazardous Decomposition Products	Nitrogen oxides (NOx), Sulfur oxides, Hydrogen chloride, Hydrogen bromide, Oxides of phosphorus, Sodium oxides
Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions	None under normal processing.

11. Toxicological information

Acute Toxicity

Product Information

Oral LD50	Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg.
Dermal LD50	Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg.
Vapor LC50	Based on ATE data, the classification criteria are not met. ATE > 20 mg/l.

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Water	-	-	-
Ethylenediamine tetraacetic acid (EDTA)	4500 mg/kg (Rat) >2000 mg/kg (Rat)	Not listed	1 mg/l (rat)
1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride	OECD 425 (Rat) LD50 > 5000 mg/kg bw	OECD 402 (Rat) LD50 > 5000 mg/kg bw	Not listed
Sodium lauryl sulfate	LD50 = 1288 mg/kg (Rat)	LD50 = 200 mg/kg (Rabbit)	LC50 > 3900 mg/m ³ (Rat) 1 h

Toxicologically Synergistic Products	No information available
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Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation	No information available
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Sensitization	No information available
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Carcinogenicity	The table below indicates whether each agency has listed any ingredient as a carcinogen.
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Component	CAS No	IARC	NTP	ACGIH	OSHA	Mexico
Water	7732-18-5	Not listed				
Deoxyribonucleic acids	9007-49-2	Not listed				
.alpha.-D-Glucopyranoside, .beta.-D-fructofuranosyl, l, polymer with (chloromethyl)oxirane	26873-85-8	Not listed				
Ethylenediamine	60-00-4	Not listed				

tetraacetic acid (EDTA)						
1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride	1185-53-1	Not listed				
Sodium lauryl sulfate	151-21-3	Not listed				
Phenol, 4,4'-(3H-2,1-benzoxathiol-3-ylidene)bis[2,6-dibromo-, S,S-dioxide, monosodium salt	34725-61-6	Not listed				

Mutagenic Effects No information available

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

STOT - single exposure None known
STOT - repeated exposure None known

Aspiration hazard No information available

Symptoms / effects, both acute and delayed No information available

Endocrine Disruptor Information No information available

Other Adverse Effects The toxicological properties have not been fully investigated.

12. Ecological information

Ecotoxicity

Do not empty into drains.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Ethylenediamine tetraacetic acid (EDTA)	EC50: = 1.01 mg/L, 72h (Desmodesmus subspicatus)	LC50: 34 - 62 mg/L, 96h static (Lepomis macrochirus) LC50: 44.2 - 76.5 mg/L, 96h static (Pimephales promelas)	Not listed	EC50: = 113 mg/L, 48h Static (Daphnia magna)
1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride	Not listed	Not listed	OECD 209 EC50 > 1000 mg/L (3h)	Daphnia Magna EC50 >100 mg/L (48h)
Sodium lauryl sulfate	EC50: 3.59 - 15.6 mg/L, 96h static (Pseudokirchneriella subcapitata) EC50: = 117 mg/L, 96h (Pseudokirchneriella subcapitata) EC50: 30 - 100 mg/L, 96h (Desmodesmus subspicatus) EC50: = 53 mg/L, 72h (Desmodesmus subspicatus)	1.31 mg/L LC50 96 h 9.9-20.1 mg/L LC50 96 h 4.5 mg/L LC50 96 h 4.62 mg/L LC50 96 h 7.97 mg/L LC50 96 h 10.2-22.5 mg/L LC50 96 h 10.8-16.6 mg/L LC50 96 h 13.5-18.3 mg/L LC50 96 h 15-18.9 mg/L LC50 96 h 22.1-22.8 mg/L LC50 96 h 4.06-5.75 mg/L LC50 96 h 4.2-4.8 mg/L LC50 96 h 4.3-8.5 mg/L LC50 96 h 5.8-7.5 mg/L LC50 96 h 6.2-9.6 mg/L LC50 96 h 8-12.5 mg/L LC50 96 h 4.2 mg/L LC50 96 h	= 0.46 mg/L EC50 Photobacterium phosphoreum 30 min = 0.72 mg/L EC50 Photobacterium phosphoreum 15 min = 1.19 mg/L EC50 Photobacterium phosphoreum 5 min	EC50: = 1.8 mg/L, 48h (Daphnia magna)

Persistence and Degradability Miscible with water Persistence is unlikely based on information available.

Bioaccumulation/ Accumulation No information available.

Mobility Will likely be mobile in the environment due to its water solubility.

Component	log Pow
1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride	-3.6
Sodium lauryl sulfate	1.6

13. Disposal considerations

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. Transport information

<u>DOT</u>	Not regulated
<u>TDG</u>	Not regulated
<u>IATA</u>	Not regulated
<u>IMDG/IMO</u>	Not regulated

15. Regulatory information

United States of America Inventory

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	TSCA - EPA Regulatory Flags
Water	7732-18-5	X	ACTIVE	-
Deoxyribonucleic acids	9007-49-2	-	-	-
.alpha.-D-Glucopyranoside, .beta.-D-fructofuranosyl, polymer with (chloromethyl)oxirane	26873-85-8	X	ACTIVE	XU
Ethylenediamine tetraacetic acid (EDTA)	60-00-4	X	ACTIVE	-
1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride	1185-53-1	X	ACTIVE	-
Sodium lauryl sulfate	151-21-3	X	ACTIVE	-
Phenol, 4,4'-(3H-2,1-benzoxathiol-3-ylidene)bis[2,6-dibromo-, S,S-dioxide, monosodium salt	34725-61-6	X	ACTIVE	-

Legend:

TSCA US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

'-' - Not Listed

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B))

TSCA - Per 40 CFR 751, Regulation of Certain Chemical Substances & Mixtures, Under TSCA Section 6(h) (PBT) Not applicable

TSCA 12(b) - Notices of Export Not applicable

International Inventories

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

Component	CAS No	DSL	NDSL	EINECS	PICCS	ENCS	ISHL	AICS	IECSC	KECL
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Water	7732-18-5	X	-	231-791-2	X	X		X	X	KE-35400
Deoxyribonucleic acids	9007-49-2	X	-	-	-	-		X	X	-
.alpha.-D-Glucopyranoside, .beta.-D-fructofuranosyl, polymer with (chloromethyl)oxirane	26873-85-8	-	X	-	-	-		-	X	KE-17698
Ethylenediamine tetraacetic acid (EDTA)	60-00-4	X	-	200-449-4	X	X	X	X	X	KE-13648
1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride	1185-53-1	X	-	214-684-5	X	X		X	X	KE-34819
Sodium lauryl sulfate	151-21-3	X	-	205-788-1	X	X	X	X	X	KE-21884
Phenol, 4,4'-(3H-2,1-benzoxathiol-3-yliden e)bis[2,6-dibromo-, S,S-dioxide, monosodium salt	34725-61-6	-	X	252-170-2	-	-		-	-	-

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

Component	CWA - Hazardous Substances	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants
Ethylenediamine tetraacetic acid (EDTA)	X	5000 lb	-	-

Clean Air Act Not applicable

OSHA - Occupational Safety and Health Administration Not applicable

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355).

Component	Hazardous Substances RQs	CERCLA Extremely Hazardous Substances RQs	SARA Reportable Quantity (RQ)
Ethylenediamine tetraacetic acid (EDTA)	5000 lb	-	5000 lb 2270 kg

California Proposition 65 This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Water	-	-	X	-	-
Ethylenediamine tetraacetic acid (EDTA)	X	X	X	-	-

U.S. Department of Transportation

Reportable Quantity (RQ): Y
DOT Marine Pollutant N
DOT Severe Marine Pollutant N

U.S. Department of Homeland Security This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade No information available

Authorisation/Restrictions according to EU REACH

Component	CAS No	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Water	7732-18-5	-	-	-
Deoxyribonucleic acids	9007-49-2	-	-	-
.alpha.-D-Glucopyranoside, .beta.-D-fructofuranosyl, polymer with (chloromethyl)oxirane	26873-85-8	-	-	-
Ethylenediamine tetraacetic acid (EDTA)	60-00-4	-	Use restricted. See item 75. (see link for restriction details)	-
1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride	1185-53-1	-	-	-
Sodium lauryl sulfate	151-21-3	-	-	-
Phenol, 4,4'-(3H-2,1-benzoxathiol-3-ylidene)bis[2,6-dibromo-, S,S-dioxide, monosodium salt	34725-61-6	-	-	-

REACH links

<https://echa.europa.eu/substances-restricted-under-reach>

Safety, health and environmental regulations/legislation specific for the substance or mixture

Component	CAS No	OECD HPV	Persistent Organic Pollutant	Ozone Depletion Potential	Restriction of Hazardous Substances (RoHS)
Water	7732-18-5	Listed	Not applicable	Not applicable	Not applicable
Deoxyribonucleic acids	9007-49-2	Not applicable	Not applicable	Not applicable	Not applicable
.alpha.-D-Glucopyranoside, .beta.-D-fructofuranosyl, polymer with (chloromethyl)oxirane	26873-85-8	Not applicable	Not applicable	Not applicable	Not applicable
Ethylenediamine tetraacetic acid (EDTA)	60-00-4	Listed	Not applicable	Not applicable	Not applicable
1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride	1185-53-1	Not applicable	Not applicable	Not applicable	Not applicable
Sodium lauryl sulfate	151-21-3	Listed	Not applicable	Not applicable	Not applicable
Phenol, 4,4'-(3H-2,1-benzoxathiol-3-ylidene)bis[2,6-dibromo-, S,S-dioxide, monosodium salt	34725-61-6	Not applicable	Not applicable	Not applicable	Not applicable

S,S-dioxide, monosodium salt					
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Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?
Not applicable

Other International Regulations

Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements	Rotterdam Convention (PIC)	Basel Convention (Hazardous Waste)
Water	7732-18-5	Not applicable	Not applicable	Not applicable	Not applicable
Deoxyribonucleic acids	9007-49-2	Not applicable	Not applicable	Not applicable	Not applicable
.alpha.-D-Glucopyranoside, .beta.-D-fructofuranosyl, polymer with (chloromethyl)oxirane	26873-85-8	Not applicable	Not applicable	Not applicable	Not applicable
Ethylenediamine tetraacetic acid (EDTA)	60-00-4	Not applicable	Not applicable	Not applicable	Not applicable
1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride	1185-53-1	Not applicable	Not applicable	Not applicable	Not applicable
Sodium lauryl sulfate	151-21-3	Not applicable	Not applicable	Not applicable	Not applicable
Phenol, 4,4'-(3H-2,1-benzoxathiol-3-ylidene)bis[2,6-dibromo-, S,S-dioxide, monosodium salt	34725-61-6	Not applicable	Not applicable	Not applicable	Not applicable

16. Other information

Prepared By Health, Safety and Environmental Department
Email: chem.techinfo@thermofisher.com
www.thermofisher.com

Revision Date 01-Apr-2024
Print Date 01-Apr-2024
Revision Summary New emergency telephone response service provider.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of SDS