

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 8.9

Revision Date 03.07.2024

Print Date 26.03.2025

GENERIC EU MSDS - NO COUNTRY SPECIFIC DATA - NO OEL DATA

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name : mPAGE® Lux Bis-Tris Stacking Solution

Product Number : LUXRGTSTK

Catalogue No. : 596607

Brand : Millipore

REACH No. : This product is a mixture. REACH Registration Number see section 3.

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet

Company :

1.4 Emergency telephone

Emergency Phone # : +(44)-870-8200418 (CHEMTREC (GB))
 +(353)-19014670 (CHEMTREC Ireland)
 001-803-017-9114 (CHEMTREC India)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Serious eye damage, (Category 1)	H318: Causes serious eye damage.
Skin sensitization, (Category 1)	H317: May cause an allergic skin reaction.
Germ cell mutagenicity, (Category 1B)	H340: May cause genetic defects.
Carcinogenicity, (Category 1B)	H350: May cause cancer.
Reproductive toxicity, (Category 2)	H361f: Suspected of damaging fertility.



Specific target organ toxicity - repeated exposure, (Category 2), Peripheral nervous system

H373: May cause damage to organs through prolonged or repeated exposure if swallowed.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal Word

Danger

Hazard Statements

H317

May cause an allergic skin reaction.

H318

Causes serious eye damage.

H340

May cause genetic defects.

H350

May cause cancer.

H361f

Suspected of damaging fertility.

H373

May cause damage to organs (Peripheral nervous system) through prolonged or repeated exposure if swallowed.

Precautionary Statements

P202

Do not handle until all safety precautions have been read and understood.

P260

Do not breathe mist or vapors.

P280

Wear protective gloves/ protective clothing/ eye protection/ face protection.

P302 + P352

IF ON SKIN: Wash with plenty of water.

P305 + P351 + P338

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

P308 + P313

IF exposed or concerned: Get medical advice/ attention.

Supplemental Hazard Statements

none

Restricted to professional users.

Reduced Labeling (<= 125 ml)

Pictogram



Signal Word

Danger

Hazard Statements

H317

May cause an allergic skin reaction.

H340

May cause genetic defects.

H350

May cause cancer.

H318

Causes serious eye damage.

H361f

Suspected of damaging fertility.

Precautionary Statements

P202

Do not handle until all safety precautions have been read and understood.



P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P302 + P352	IF ON SKIN: Wash with plenty of water.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
Supplemental Hazard Statements	none

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Component	Classification	Concentration
2-[Bis(2-hydroxyethyl)amino]-2-(hydroxymethyl)propane-1,3-diol		
CAS-No. EC-No. Registration number	6976-37-0 230-237-7 01-2120768016-54-XXXX	Eye Irrit. 2; H319 >= 3 - < 10 %
acrylamide Included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH)		
CAS-No. EC-No. Index-No. Registration number	79-06-1 201-173-7 616-003-00-0 01-2119463260-48-XXXX	Acute Tox. 3; Acute Tox. 4; Skin Irrit. 2; Eye Irrit. 2; Skin Sens. 1; Muta. 1B; Carc. 1B; Repr. 2; STOT RE 1; H301, H332, H312, H315, H319, H317, H340, H350, H361f, H372 >= 3 - < 10 %
N,N'-methylenediacrylamide		
CAS-No. EC-No.	110-26-9 203-750-9	Acute Tox. 3; Acute Tox. 4; Muta. 1B; Carc. 1B; Repr. 2; STOT RE 1; H301, >= 0.1 - < 1 %



*	H312, H340, H350, H361fd, H372	
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*A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, or the annual tonnage does not require a registration.

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

Show this material safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air. Call in physician.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.

In case of eye contact

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

If swallowed

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Foam Carbon dioxide (CO₂) Dry powder

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Carbon oxides

Nitrogen oxides (NO_x)

Mixture with combustible ingredients.

Development of hazardous combustion gases or vapours possible in the event of fire.



5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Further information

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Tightly closed. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons.

Recommended storage temperature see product label.

Storage class

Storage class (TRGS 510): 6.1C: Combustible, acute toxic Cat.3 / toxic compounds or compounds which causing chronic effects

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated



SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with workplace control parameters

8.2 Exposure controls

Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles

Skin protection

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested:KCL 741 Dermatril® L

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested:KCL 741 Dermatril® L

required

Body Protection

protective clothing

Respiratory protection

required when vapours/aerosols are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended Filter type: Filter type ABEK

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Control of environmental exposure

Do not let product enter drains.



SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- | | |
|---|--|
| a) Physical state | liquid |
| b) Color | No data available |
| c) Odor | No data available |
| d) Melting point/freezing point | No data available |
| e) Initial boiling point and boiling range | No data available |
| f) Flammability (solid, gas) | No data available |
| g) Upper/lower flammability or explosive limits | No data available |
| h) Flash point | No data available |
| i) Autoignition temperature | No data available |
| j) Decomposition temperature | No data available |
| k) pH | No data available |
| l) Viscosity | Viscosity, kinematic: No data available
Viscosity, dynamic: No data available |
| m) Water solubility | No data available |
| n) Partition coefficient: n-octanol/water | No data available |
| o) Vapor pressure | No data available |
| p) Density | No data available |
| Relative density | No data available |
| q) Relative vapor density | No data available |
| r) Particle characteristics | No data available |
| s) Explosive properties | Not classified as explosive. |
| t) Oxidizing properties | none |

9.2 Other safety information

No data available

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SECTION 10: Stability and reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

Sensitivity to light

The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions

alkalines

Oxidizing agents

Reducing agents

Bases

Metals

Peroxides

acids

Violent reactions possible with:

The generally known reaction partners of water.

10.4 Conditions to avoid

no information available

10.5 Incompatible materials

no information available

10.6 Hazardous decomposition products

In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Mixture

Acute toxicity

Acute toxicity estimate Oral - > 2,000 mg/kg

(Calculation method)

Acute toxicity estimate Inhalation - 4 h - > 5 mg/l - dust/mist(Calculation method)

Symptoms: Possible symptoms:, mucosal irritations

Acute toxicity estimate Dermal - > 2,000 mg/kg

(Calculation method)

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

Remarks: Mixture causes serious eye damage.

Respiratory or skin sensitization

Mixture may cause an allergic skin reaction.

Germ cell mutagenicity



Possible mutagen

Carcinogenicity

Possible carcinogen.

Reproductive toxicity

Evidence to impair fertility.

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

Mixture may cause damage to organs through prolonged or repeated exposure.

- Peripheral nervous system

Aspiration hazard

No data available

11.2 Additional Information

Endocrine disrupting properties

Product:

Assessment

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

No data available

Components

2-[Bis(2-hydroxyethyl)amino]-2-(hydroxymethyl)propane-1,3-diol

Acute toxicity

LD50 Oral - Rat - female - > 2,000 mg/kg

(OECD Test Guideline 423)

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

Skin - reconstructed human epidermis (RhE)

Result: No irritation - 15 min

(OECD Test Guideline 439)

Serious eye damage/eye irritation

Eyes - Human

Result: Eye irritation

(OECD Test Guideline 492)

Respiratory or skin sensitization

Local lymph node assay (LLNA) - Mouse



Result: negative
(OECD Test Guideline 429)

Germ cell mutagenicity

Test Type: Ames test

Test system: Escherichia coli/Salmonella typhimurium

Result: negative

Test Type: Mutagenicity (mammal cell test): micronucleus.

Test system: Human lymphocytes

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Test system: Chinese hamster fibroblasts

Result: Positive results were obtained in some in vitro tests.

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

Aspiration hazard

No data available

acrylamide

Acute toxicity

LD50 Oral - Rat - female - 177 mg/kg

(OECD Test Guideline 401)

Acute toxicity estimate Oral - 177 mg/kg

(ATE value derived from LD50/LC50 value)

Acute toxicity estimate Inhalation - 1.6 mg/l - dust/mist

(Expert judgment)

LD50 Dermal - Rabbit - male and female - 1,141 mg/kg

(OECD Test Guideline 402)

Remarks: (Regulation (EC) No 1272/2008, Annex VI)

Acute toxicity estimate Dermal - 1,141 mg/kg

(ATE value derived from LD50/LC50 value)

Skin corrosion/irritation

Remarks: Causes skin irritation.

(Regulation (EC) No 1272/2008, Annex VI)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Eye irritation - 24 h

(OECD Test Guideline 405)

Remarks: (Regulation (EC) No 1272/2008, Annex VI)

Respiratory or skin sensitization

Maximization Test - Guinea pig



Result: positive
(OECD Test Guideline 406)
Remarks: (Regulation (EC) No 1272/2008, Annex VI)

Germ cell mutagenicity

May cause genetic defects.
Test Type: Ames test
Test system: Salmonella typhimurium
Result: negative
Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster lung cells
Result: positive
Test Type: In vitro mammalian cell gene mutation test
Test system: Chinese hamster ovary cells
Result: negative
Method: OECD Test Guideline 478
Species: Rat - male
Result: positive

Carcinogenicity

Presumed to have carcinogenic potential for humans

Reproductive toxicity

Suspected of damaging fertility.

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

Oral - Causes damage to organs through prolonged or repeated exposure.
- Peripheral nervous system

Aspiration hazard

No data available

N,N'-methylenediacrylamide

Acute toxicity

LD50 Oral - Rat - female - 50 - 300 mg/kg
(OECD Test Guideline 423)
Inhalation: No data available
LD50 Dermal - Rabbit - male and female - 1,141 mg/kg
(OECD Test Guideline 402)
Acute toxicity estimate Dermal - 1,141 mg/kg
(Calculation method)

Skin corrosion/irritation

Skin - reconstructed human epidermis (RhE)
Result: No skin irritation - 1 h
(OECD Test Guideline 439)

Serious eye damage/eye irritation

Eyes - Mammal
Result: No eye irritation - 1 h



(OECD Test Guideline 437)

Respiratory or skin sensitization

Local lymph node assay (LLNA) - Mouse

Result: negative

(OECD Test Guideline 442B)

Germ cell mutagenicity

May cause genetic defects.

Test Type: Ames test

Test system: Salmonella typhimurium

Result: positive

Remarks: (National Toxicology Program)

Method: OECD Test Guideline 478

Species: Rat - male

Result: positive

Result: positive

Remarks: The value is given based on a SAR/AAR approach using OECD Toolbox, DEREK, VEGA QSAR models (CAESAR models), etc.

Carcinogenicity

Presumed to have carcinogenic potential for humans

Reproductive toxicity

Suspected of damaging the unborn child.

Suspected of damaging fertility.

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

Oral - Causes damage to organs through prolonged or repeated exposure.

- Peripheral nervous system

Aspiration hazard

No data available

SECTION 12: Ecological information

12.1 Toxicity

Mixture

No data available

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at

Millipore- LUXRGTSTK

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levels of 0.1% or higher.

12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

No data available

Components

2-[Bis(2-hydroxyethyl)amino]-2-(hydroxymethyl)propane-1,3-diol

Toxicity to fish	static test LC50 - Danio rerio (zebra fish) - > 100 mg/l - 96 h (OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae	static test ErC50 - Pseudokirchneriella subcapitata (green algae) - > 100 mg/l - 72 h (OECD Test Guideline 201)
Toxicity to bacteria	static test EC10 - activated sludge - > 1,000 mg/l - 3 h (OECD Test Guideline 209)

acrylamide

Toxicity to daphnia and other aquatic invertebrates	flow-through test EC50 - Daphnia magna (Water flea) - 98 mg/l - 48 h (US-EPA)
Toxicity to algae	static test NOEC - Pseudokirchneriella subcapitata - 56 mg/l - 72 h (OECD Test Guideline 201)
Toxicity to bacteria	EC50 - Photobacterium phosphoreum - 13,500 mg/l Remarks: (IUCLID)
Toxicity to fish(Chronic toxicity)	NOEC - Cyprinus carpio (Carp) - 5 mg/l - 28 d Remarks: (ECHA)

N,N'-methylenediacrylamide

Toxicity to fish	NOEC - Danio rerio (zebra fish) - 100 mg/l - 96 h (OECD Test Guideline 203) LC50 - Danio rerio (zebra fish) - > 100 mg/l - 96 h (OECD Test Guideline 203)
Toxicity to algae	static test NOEC - Raphidocelis subcapitata (freshwater green



Other regulations

Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

Take note of Dir 94/33/EC on the protection of young people at work.

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

SECTION 16: Other information

Full text of H-Statements

H301	Toxic if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H340	May cause genetic defects.
H350	May cause cancer.
H361f	Suspected of damaging fertility.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure if swallowed.



Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Classification of the mixture

Eye Dam.1	H318
Skin Sens.1	H317
Muta.1B	H340
Carc.1B	H350
Repr.2	H361f
STOT RE2	H373

Classification procedure:

Calculation method

Further information

The information is believed to be correct but is not exhaustive and will be used solely as a guideline, which is based on current knowledge of the chemical substance or mixture and is applicable to appropriate safety precautions for the product. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact



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