

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

AccuGENE™ 10X MOPS Buffer

Version 2.3

Revision Date 29.07.2019

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SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

Product name : AccuGENE™ 10X MOPS Buffer
Material number : 50876

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

Use of the Substance/Mixture : Scientific research and development

1.3 Details of the supplier of the safety data sheet

Company : **Lonza Ltd**
Muenchensteinerstrasse 38
CH-4002 Basel, Switzerland
Business Telephone: +41 61 316 81 11

Lonza Verviers Sprl
Parc Industriel de Petit-Rechain
BE-4800 Verviers, Belgium
Business Telephone: +32 8732 1611

Lonza Cologne GmbH
Nattermannallee 1
DE-50829 Köln, Germany
Business Telephone: + 49 221 99 1990

Lonza Copenhagen ApS
Strandhaven 12
DK-2665 Vallensbaek Strand, Denmark
Business Telephone: + 45 4356 7400

E-mail address : sds@lonza.com
Responsible/issuing person

1.4 Emergency telephone number

Emergency telephone number : Lonza Ltd, CH-4002 Basel, Switzerland
Telephone: +41 61 313 94 94 (24h)

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture****Classification (REGULATION (EC) No 1272/2008)**

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

2.2 Label elements**Labelling (REGULATION (EC) No 1272/2008)**

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

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Additional Labelling

EUH210 Safety data sheet available on request.

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.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No. Index-No. REACH Registration Number	Classification	Concentration (% w/w)
4-Morpholinopropanesulphonic acid	1132-61-2 214-478-5	Skin Irrit. 2; H315 Eye Irrit. 2; H319 STOT SE 3; H335	>= 3 - < 5

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

- If inhaled : No special precautions required.
- In case of skin contact : Wash with water and soap as a precaution.
If skin irritation persists, call a physician.
- In case of eye contact : Immediately flush eye(s) with plenty of water.
If eye irritation persists, consult a specialist.
- If swallowed : Immediately give large quantities of water to drink.
Do not induce vomiting without medical advice.
Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

- Symptoms : No information available.

4.3 Indication of any immediate medical attention and special treatment needed

- Treatment : No information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media : Water spray
Dry powder
Foam

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5.2 Special hazards arising from the substance or mixture

Hazardous combustion products : Carbon oxides
Nitrogen oxides (NOx)
Sulphur oxides

5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

Further information : Use water spray to cool unopened containers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.

6.2 Environmental precautions

Environmental precautions : Prevent product from entering drains.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

6.4 Reference to other sections

For personal protection see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : No special precautions required.

Advice on protection against fire and explosion : Take precautionary measures against static discharges.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep tightly closed.

Recommended storage temperature : 18 - 24 °C

7.3 Specific end use(s)

Specific use(s) : No information available.

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Countries not listed may have their own country specific values.

Occupational Exposure Limits

European Union

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Ethane-1,2-diol	107-21-1	TWA	20 ppm 52 mg/m ³	ECTLV
		STEL	40 ppm 104 mg/m ³	ECTLV

Switzerland

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Sodium hydroxide	1310-73-2	STEL (Inhalable fraction.)	2 mg/m ³	SMAK
		TWA (Inhalable fraction.)	2 mg/m ³	SMAK
Ethane-1,2-diol	107-21-1	TWA	20 ppm 52 mg/m ³	ECTLV
		STEL	40 ppm 104 mg/m ³	ECTLV
		TWA (Vapor and aerosol.)	10 ppm 26 mg/m ³	SMAK
		STEL (Vapor and aerosol.)	20 ppm 52 mg/m ³	SMAK

Germany

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Ethane-1,2-diol	107-21-1	(Vapor and aerosol.)	10 ppm 26 mg/m ³	TRGS 900
Peak-limit: excursion factor (category)		Peak-limit: excursion factor (category) 2		
Further information		Sum of vapors and aerosols.		
		MAK (Vapor and aerosol.)	10 ppm 26 mg/m ³	DFG MAK
Peak-limit: excursion factor (category)		Peak-limit: excursion factor (category) 2		

Belgium

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Sodium hydroxide	1310-73-2	TWA	2 mg/m ³	BE/OEL
Ethane-1,2-diol	107-21-1	TWA (Aerosols)	20 ppm 52 mg/m ³	BE/OEL
		STEL (Aerosols)	40 ppm 104 mg/m ³	BE/OEL

Denmark

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
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Sodium hydroxide	1310-73-2	LOFT	2 mg/m3	GV (DK)
Ethane-1,2-diol	107-21-1	GV	10 ppm 26 mg/m3	GV (DK)
		GV (Aerosols)	10 mg/m3	GV (DK)

France

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Sodium hydroxide	1310-73-2	VME	2 mg/m3	FVL
Ethane-1,2-diol	107-21-1	VME (Vapor.)	20 ppm 52 mg/m3	FVL
		VLE (Vapor.)	40 ppm 104 mg/m3	FVL

Italy

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Sodium hydroxide	1310-73-2	TLV-C	2 mg/m3	OEL (IT)
Ethane-1,2-diol	107-21-1	TWA	20 ppm 52 mg/m3	OEL (IT)
		STEL	40 ppm 104 mg/m3	OEL (IT)

Netherlands

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Ethane-1,2-diol	107-21-1	TGG (Vapor.)	52 mg/m3	NL OEL
		TGG (Mist.)	10 mg/m3	NL OEL
		TGG 15 (Vapor.)	104 mg/m3	NL OEL

Spain

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Sodium hydroxide	1310-73-2	STEL	2 mg/m3	VLA
Ethane-1,2-diol	107-21-1	TWA	20 ppm 52 mg/m3	VLA
		STEL	40 ppm 104 mg/m3	VLA

Sweden

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Sodium hydroxide	1310-73-2	TGV (Inhalable dust.)	2 mg/m3	SWO
		TWA (Inhalable dust.)	1 mg/m3	SWO
Ethane-1,2-diol	107-21-1	TWA	10 ppm 25 mg/m3	SWO
		TGV	40 ppm 104 mg/m3	SWO

United Kingdom

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Sodium hydroxide	1310-73-2	STEL	2 mg/m3	EH40 WEL

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Ethane-1,2-diol	107-21-1	TWA (Vapor.)	20 ppm 52 mg/m3	EH40 WEL
		STEL (Vapor.)	40 ppm 104 mg/m3	EH40 WEL
		TWA (Particulate.)	10 mg/m3	EH40 WEL

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
Sodium hydroxide	Workers	Inhalation	Long-term local effects	1 mg/m3
	Consumers	Inhalation	Long-term local effects	1 mg/m3
Ethane-1,2-diol	Workers	Inhalation	Long-term local effects	35 mg/m3
	Workers	Dermal	Long-term systemic effects	106 mg/kg
	Consumers	Inhalation	Long-term local effects	7 mg/m3
	Consumers	Dermal	Long-term systemic effects	53 mg/kg
Ethylenediaminetetraacetic acid disodium salt dihydrate	Workers	Inhalation	Acute local effects	3 mg/m3
	Consumers	Oral	Long-term systemic effects	25 mg/kg
	Consumers	Inhalation	Long-term local effects	0,6 mg/m3
	Consumers	Inhalation	Acute local effects	1,2 mg/m3
	Workers	Inhalation	Long-term local effects	1,5 mg/m3

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
Ethane-1,2-diol	Fresh water	10 mg/l
	Marine water	1 mg/l
	Intermittent use/release	10 mg/l
	Sewage treatment plant	199,5 mg/l
	Fresh water sediment	37 mg/kg dry weight (d.w.)
	Marine sediment	3,7 mg/kg dry weight (d.w.)
	Soil	1,53 mg/kg dry weight (d.w.)
Ethylenediaminetetraacetic acid disodium salt dihydrate	Fresh water	2,2 mg/l
	Soil	0,72 mg/kg
	Sewage treatment plant	43 mg/l
	Intermittent use/release	1,2 mg/l
	Marine water	0,22 mg/l

8.2 Exposure controls

Engineering measures

Use only in area provided with appropriate exhaust ventilation.

Personal protective equipment

Eye protection : Tightly fitting safety goggles

Hand protection

Material : Nitrile rubber

Rate of permeability : > 480 min

Skin and body protection : Choose body protection according to the amount and

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	concentration of the dangerous substance at the work place. No special protective equipment required.
Respiratory protection	: No personal respiratory protective equipment normally required.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	: Aqueous solution
Colour	: clear, colourless
Odour	: odourless
Odour Threshold	: no data available
pH	: 7 - 9
Freezing point	: no data available
Boiling point/boiling range	: ca. 100 °C
Flash point	: does not flash
Evaporation rate	: no data available
Flammability (solid, gas)	: no data available
Upper explosion limit	: no data available
Lower explosion limit	: no data available
Vapour pressure	: no data available
Relative vapour density	: no data available
Relative density	: no data available
Density	: 1,02 g/cm ³
Solubility(ies)	
Water solubility	: soluble
Partition coefficient: n-octanol/water	: no data available
Auto-ignition temperature	: no data available
Decomposition temperature	: no data available
Viscosity	: no data available
Explosive properties	: no data available
Oxidizing properties	: no data available

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9.2 Other information

no data available

SECTION 10: Stability and reactivity

10.1 Reactivity

Stable under recommended storage conditions.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : Stable under normal conditions.

10.4 Conditions to avoid

Conditions to avoid : Oxidizing agents

10.5 Incompatible materials

Materials to avoid : Strong oxidizing agents

10.6 Hazardous decomposition products

No decomposition if stored normally.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Further information

Remarks: There is no data available for this product.

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish : Remarks: no data available

12.2 Persistence and degradability

Biodegradability : Result: no data available

12.3 Bioaccumulative potential

Bioaccumulation : Remarks: no data available

12.4 Mobility in soil

Distribution among environmental compartments : Remarks: no data available

12.5 Results of PBT and vPvB assessment

Assessment : 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.

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12.6 Other adverse effects

Additional ecological information : No data is available on the product itself.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Dispose of in accordance with local regulations.
Contact waste disposal services.

SECTION 14: Transport information

IATA Not dangerous goods

- 14.1 UN number : Not applicable
- 14.2 Proper shipping name : Not applicable
- 14.3 Transport hazard class : Not applicable
- 14.4 Packing group : Not applicable
- 14.5 Environmental hazards : no

IMDG Not dangerous goods

- 14.1 UN number : Not applicable
- 14.2 Proper shipping name : Not applicable
- 14.3 Transport hazard class : Not applicable
- 14.4 Packing group : Not applicable
- 14.5 Environmental hazards : Marine pollutant: no

ADR Not dangerous goods

- 14.1 UN number : Not applicable
- 14.2 Proper shipping name : Not applicable
- 14.3 Transport hazard class : Not applicable
- 14.4 Packing group : Not applicable
- 14.5 Environmental hazards : no

RID Not dangerous goods

- 14.1 UN number : Not applicable
- 14.2 Proper shipping name : Not applicable
- 14.3 Transport hazard class : Not applicable
- 14.4 Packing group : Not applicable
- 14.5 Environmental hazards : no

DOT Not dangerous goods

- 14.1 UN number : Not applicable
- 14.2 Proper shipping name : Not applicable
- 14.3 Transport hazard class : Not applicable
- 14.4 Packing group : Not applicable
- 14.5 Environmental hazards : no

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TDG : Not dangerous goods

14.1 **UN number** : Not applicable
 14.2 **Proper shipping name** : Not applicable
 14.3 **Transport hazard class** : Not applicable
 14.4 **Packing group** : Not applicable
 14.5 **Environmental hazards** : no

14.6 **Special precautions for user** : none

14.7 **Transport in bulk according to Annex II of Marpol and the IBC Code** : Not applicable

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) : Not applicable

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : Not applicable

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable

Regulation (EC) No 850/2004 on persistent organic pollutants : Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.
 Not applicable

National regulatory information

Water contaminating class (Germany) : WGK 1 slightly hazardous to water
 Classification according to AwSV, Annex 1 (5.2)

15.2 Chemical safety assessment

not required

SECTION 16: Other information

Full text of H-Statements

H315 : Causes skin irritation.
 H319 : Causes serious eye irritation.
 H335 : May cause respiratory irritation.

Further information

Full text of other abbreviations

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ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; ATE - Acute Toxicity Estimate; AwSV - Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen / Ordinance on facilities for handling substances that are hazardous to water; BPR – Biocidal Product Regulation; bw - Body weight; CAS - Chemical Abstract Service; CLP - Classification Labelling Packaging Regulation, Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DNEL-Derived No Effect Level; DOT - Department of Transportation; EC – European Community; ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; EmS (Emergency Response Procedures for Ships Carrying Dangerous Goods); EN – European Standard; ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; EU OEL - European Occupational Exposure Limit; GHS -Globally Harmonized System of Classification and Labelling of Chemicals; GLP - Good Laboratory Practice; GV – Danish Exposure Limits for Substances and Materials; 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; IMDG - International Maritime Dangerous Goods; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); LOFT - Danish Threshold Limit Value; MAK - German Threshold Limit Value; MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NIOSH/Guide – National Institute of Safety and Health Guidebook; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NTP - National Toxicology Program; OECD - Organization for Economic Co-operation and Development; PBT - Persistent, Bioaccumulative and Toxic substance; PEL - Permissible Exposure Limit; PNEC - Predicted no Effect Concentration; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; REL - Recommended Exposure Limit; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; STEL - Short-Term Exposure Limit; TDG - Transportation of Dangerous Goods; TGG – Dutch Threshold Limit Value; TGV – Swedish OEL; TLV Threshold Limit Value; TLV-C - Threshold Limit Value Ceiling; TWA -Time Weighted Average; UDS - Unscheduled DNA Synthesis; UN - United Nations; VLE - Valeurs limites d'exposition professionnelle aux agents chimiques en France; VME - Valeur (Limite) Moyenne d'Exposition; VOC - Volatile Organic Compound[s]; WEEL - Workplace Environmental Exposure Level; % w/w Percent weight by weight; %(V) Percent Volume

Date format : dd.mm.yyyy

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