



## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date: 12.04.2023

Version number: 2.0 (replaces version 1.0)

Revision: 12.04.2023

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

#### 1.1 Product identifier:

**Trade name:** Binding Buffer BL**UFI:** 4NTW-R123-3006-98PC

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

No further relevant information available.

**Application of the substance / the preparation:** Laboratory chemicals

#### 1.3 Details of the supplier of the safety data sheet:

**Manufacturer/Supplier:**

LGC Genomics GmbH

Ostendstr. 25

12459 Berlin • Germany

Tel. +49 (0)30 5304 2200

Fax. +49 (0)30 5304 2201

Email: techsupport@LGCGroup.com

**Further information obtainable from:** Business Unit Nucleic Acid Preparation

#### 1.4 Emergency telephone number:

GifTinformatiionszentrum Mainz / Poison Information Center Mainz, Germany

Tel.: +49-(0)-6131-19240 / 24 h

### SECTION 2: Hazards identification:

#### 2.1 Classification of the substance or mixture:

**Classification according to Regulation (EC) No 1272/2008:**

GHS05 corrosion

Skin Corr. 1C H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Acute Tox. 4 H312 Harmful in contact with skin.

Acute Tox. 4 H332 Harmful if inhaled.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

#### 2.2 Label elements:

**Labelling according to Regulation (EC) No 1272/2008:**

The product is classified and labelled according to the CLP regulation.

**Hazard pictograms:**

GHS05 GHS07

**Signal word:** Danger**Hazard-determining components of labelling:**

guanidinium thiocyanate

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

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**Hazard statements:**

H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled.

H314 Causes severe skin burns and eye damage.

H412 Harmful to aquatic life with long lasting effects.

**Precautionary statements:**

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read carefully and follow all instructions.

P260 Do not breathe dusts or mists.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER/doctor.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**Additional information:**

EUH032 Contact with acids liberates very toxic gas.

**2.3 Other hazards:****Results of PBT and vPvB assessment:****PBT:** Not applicable.**vPvB:** Not applicable.**SECTION 3: Composition/information on ingredients:****3.2 Mixtures:****Description:** Mixture of substances listed below with nonhazardous additions.**Dangerous components:**

CAS: 593-84-0	guanidinium thiocyanate	>50-≤100%
EINECS: 209-812-1	⚠ Skin Corr. 1C, H314; ⚠ Acute Tox. 4, H302; Acute Tox. 4,	
Reg.nr.: 01-2120735072-65	H312; Acute Tox. 4, H332; Aquatic Chronic 3, H412, EUH032, EUH071	
CAS: 68131-40-8	aliphatic alcohol ethoxylate	>2.5-≤10%
EC number: 614-295-4	Aquatic Chronic 3, H412	
CAS: 6976-37-0	2-[bis(2-hydroxyethyl)amino]-2-(hydroxymethyl)propane-1,3-diol	≥1-≤2.5%
EINECS: 230-237-7	⚠ Eye Dam. 1, H318	

**Additional information:** For the wording of the listed hazard phrases refer to section 16.**SECTION 4: First aid measures:****4.1 Description of first aid measures:****General information:**

Take affected persons out into the fresh air.

Do not leave affected persons unattended.

**After inhalation:** Supply fresh air; consult doctor in case of complaints.**After skin contact:** Immediately wash with water and soap and rinse thoroughly.**After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.**After swallowing:**

Do not induce vomiting; call for medical help immediately.

Call for a doctor immediately.

**4.2 Most important symptoms and effects, both acute and delayed:**

No further relevant information available.

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**4.3 Indication of any immediate medical attention and special treatment needed:**

No further relevant information available.

**SECTION 5: Firefighting measures:****5.1 Extinguishing media:****Suitable extinguishing agents:**CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.**For safety reasons unsuitable extinguishing agents:** Water with full jet**5.2 Special hazards arising from the substance or mixture:** No further relevant information available.**5.3 Advice for firefighters:****Protective equipment:**

Mouth respiratory protective device.

Do not inhale explosion gases or combustion gases.

**SECTION 6: Accidental release measures:****6.1 Personal precautions, protective equipment and emergency procedures:**

Wear protective equipment. Keep unprotected persons away.

**6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.**6.3 Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

**6.4 Reference to other sections:**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

**SECTION 7: Handling and storage:****7.1 Precautions for safe handling:** Keep receptacles tightly sealed.**Information about fire - and explosion protection:** No special measures required.**7.2 Conditions for safe storage, including any incompatibilities:****Storage:****Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.**Information about storage in one common storage facility:**

Store away from foodstuffs.

Do not store together with acids.

**Further information about storage conditions:** None.**Storage class:** 8 B**7.3 Specific end use(s):** No further relevant information available.**SECTION 8: Exposure controls/personal protection:****8.1 Control parameters:****Ingredients with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

**8.2 Exposure controls:****Appropriate engineering controls:** No further data; see item 7.**Individual protection measures, such as personal protective equipment:****General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

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Immediately remove all soiled and contaminated clothing.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

**Respiratory protection:** Use suitable respiratory protective device in case of insufficient ventilation.

**Hand protection:** Protective gloves

**Material of gloves:**

Nitrile rubber, NBR

Recommended thickness of the material:  $\geq 0.35$  mm

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

**Penetration time of glove material:**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Eye/face protection:** Tightly sealed goggles

### SECTION 9: Physical and chemical properties:

#### 9.1 Information on basic physical and chemical properties:

##### General Information:

<b>Colour:</b>	Yellow
<b>Odour:</b>	Characteristic
<b>Odour threshold:</b>	Not determined.
<b>Melting point/freezing point:</b>	Undetermined.
<b>Boiling point or initial boiling point and boiling range:</b>	100 °C
<b>Flammability:</b>	Not applicable.
<b>Lower and upper explosion limit:</b>	
<b>Lower:</b>	Not applicable.
<b>Upper:</b>	Not applicable.
<b>Flash point:</b>	Not applicable.
<b>Decomposition temperature:</b>	Not determined.
<b>pH:</b>	7
<b>Viscosity:</b>	
<b>Kinematic viscosity:</b>	Not determined.
<b>Dynamic:</b>	Not determined.
<b>Solubility:</b>	
<b>water:</b>	Fully miscible.
<b>Partition coefficient n-octanol/water (log value):</b>	Not determined.
<b>Vapour pressure at 20 °C:</b>	23 hPa
<b>Density and/or relative density:</b>	
<b>Density:</b>	Not determined.
<b>Relative density:</b>	Not determined.
<b>Vapour density:</b>	Not determined.

#### 9.2 Other information:

##### Appearance:

**Form:** Fluid

##### Important information on protection of health and environment, and on safety.:

**Auto-ignition temperature:** Product is not selfigniting.

**Explosive properties:** Product does not present an explosion hazard.

**Change in condition:**

**Evaporation rate:** Not determined.

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**Information with regard to physical hazard****classes:**

<b>Explosives:</b>	Void
<b>Flammable gases:</b>	Void
<b>Aerosols:</b>	Void
<b>Oxidising gases:</b>	Void
<b>Gases under pressure:</b>	Void
<b>Flammable liquids:</b>	Void
<b>Flammable solids:</b>	Void
<b>Self-reactive substances and mixtures:</b>	Void
<b>Pyrophoric liquids:</b>	Void
<b>Pyrophoric solids:</b>	Void
<b>Self-heating substances and mixtures:</b>	Void
<b>Substances and mixtures, which emit flammable gases in contact with water:</b>	Void
<b>Oxidising liquids:</b>	Void
<b>Oxidising solids:</b>	Void
<b>Organic peroxides:</b>	Void
<b>Corrosive to metals:</b>	Void
<b>Desensitised explosives:</b>	Void

**SECTION 10: Stability and reactivity:****10.1 Reactivity:** No further relevant information available.**10.2 Chemical stability:****Thermal decomposition / conditions to be avoided:**

No decomposition if used according to specifications.

**10.3 Possibility of hazardous reactions:**

Contact with acids releases toxic gases.

Reacts with acids, alkalis and oxidising agents.

**10.4 Conditions to avoid:** No further relevant information available.**10.5 Incompatible materials:** No further relevant information available.**10.6 Hazardous decomposition products:**

Poisonous gases/vapours

Corrosive gases/vapours

**SECTION 11: Toxicological information:****11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008:****Acute toxicity:**

Harmful if swallowed, in contact with skin or if inhaled.

**LD/LC50 values relevant for classification:****ATE (Acute Toxicity Estimates)**

Oral LD50 1,050 mg/kg (rat)

Dermal LD50 1,947 mg/kg

Inhalative LC50/4 h 2.65 mg/l

**593-84-0 guanidinium thiocyanate**

Oral LD50 593 mg/kg (rat)

Dermal LD50 1,100 mg/kg (ATE)

Inhalative LC50/4 h 1.5 mg/l (ATE)

**Skin corrosion/irritation:**

Causes severe skin burns and eye damage.

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**Serious eye damage/irritation:**

Causes serious eye damage.

**Respiratory or skin sensitisation:** Based on available data, the classification criteria are not met.**Germ cell mutagenicity:** Based on available data, the classification criteria are not met.**Carcinogenicity:** Based on available data, the classification criteria are not met.**Reproductive toxicity:** Based on available data, the classification criteria are not met.**STOT-single exposure:** Based on available data, the classification criteria are not met.**STOT-repeated exposure:** Based on available data, the classification criteria are not met.**Aspiration hazard:** Based on available data, the classification criteria are not met.**11.2 Information on other hazards:****Endocrine disrupting properties:**

None of the ingredients is listed.

**SECTION 12: Ecological information:****12.1 Toxicity:****Aquatic toxicity:****593-84-0 guanidinium thiocyanate**

EC50 42.4 mg/l /48 h (daphnia)

LC50 89.1 mg/l /96 h (fish)

ERC50 130 mg/l /72 h (algae)

**12.2 Persistence and degradability:** No further relevant information available.**12.3 Bioaccumulative potential:** No further relevant information available.**12.4 Mobility in soil:** No further relevant information available.**12.5 Results of PBT and vPvB assessment:****PBT:** Not applicable.**vPvB:** Not applicable.**12.6 Endocrine disrupting properties:**

The product does not contain substances with endocrine disrupting properties.

**12.7 Other adverse effects:****Additional ecological information:****General notes:**

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

**SECTION 13: Disposal considerations:****13.1 Waste treatment methods:****European waste catalogue:**

Dispose of contents/container in accordance with local/regional/national/international regulations.

**Uncleaned packaging:****Recommendation:** Disposal must be made according to official regulations.**SECTION 14: Transport information:****14.1 UN number or ID number:**

ADR, IMDG, IATA

UN1760

**14.2 UN proper shipping name:**

ADR

1760 CORROSIVE LIQUID, N.O.S. (guanidinium thiocyanate)

IMDG, IATA

CORROSIVE LIQUID, N.O.S. (guanidinium thiocyanate)

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**14.3 Transport hazard class(es):**

ADR, IMDG, IATA



<b>Class:</b>	8 Corrosive substances.
<b>Label:</b>	8
<b>14.4 Packing group:</b>	
<b>ADR, IMDG, IATA</b>	III
<b>14.5 Environmental hazards:</b>	
<b>Marine pollutant:</b>	No
<b>14.6 Special precautions for user:</b>	Warning: Corrosive substances.
<b>Hazard identification number (Kemler code):</b>	80
<b>EMS Number:</b>	F-A,S-B
<b>Stowage Category:</b>	A
<b>Stowage Code:</b>	SW2 Clear of living quarters.
<b>14.7 Maritime transport in bulk according to IMO instruments:</b>	Not applicable.

**Transport/Additional information:****ADR**

<b>Limited quantities (LQ):</b>	5L
<b>Transport category:</b>	3
<b>Tunnel restriction code:</b>	E
<b>UN "Model Regulation":</b>	UN 1760 CORROSIVE LIQUID, N.O.S. (GUANIDINIUM THIOCYANATE), 8, III

**SECTION 15: Regulatory information:****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:****Directive 2012/18/EU:**

Named dangerous substances - ANNEX I: None of the ingredients is listed.

**REGULATION (EC) No 1907/2006 ANNEX XVII:** Conditions of restriction: 3**DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II:**

None of the ingredients is listed.

**REGULATION (EU) 2019/1148:****Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3)):**

None of the ingredients is listed.

**Annex II - REPORTABLE EXPLOSIVES PRECURSORS:**

None of the ingredients is listed.

**Regulation (EC) No 273/2004 on drug precursors:**

None of the ingredients is listed.

**Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors:**

None of the ingredients is listed.

**15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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**SECTION 16: Other information:**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**Relevant phrases:**

H302 Harmful if swallowed.  
H312 Harmful in contact with skin.  
H314 Causes severe skin burns and eye damage.  
H318 Causes serious eye damage.  
H332 Harmful if inhaled.  
H412 Harmful to aquatic life with long lasting effects.  
EUH032 Contact with acids liberates very toxic gas.  
EUH071 Corrosive to the respiratory tract.

**Training hints:**

Employees who use the product have to be trained on risks for health, hygiene, use of individual protection, accident preventive actions, rescue actions, etc.,

**Department issuing SDS:**

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**Contact:** Dr. Axel Deeg

**Version number of previous version:** 1.0

**Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
GHS: Globally Harmonised System of Classification and Labelling of Chemicals  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
Acute Tox. 4: Acute toxicity – Category 4  
Skin Corr. 1C: Skin corrosion/irritation – Category 1C  
Eye Dam. 1: Serious eye damage/eye irritation – Category 1  
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3