

**Kit SDS Cover Sheet****ProSieve™ ProTrack™ Dual Color Protein Loading Buffer (4X)**

Version 2.0

Revision Date 16.12.2021

Print Date 12.11.2024

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**Product Information**

Product name : ProSieve™ ProTrack™ Dual Color Protein Loading Buffer (4X)

Material number : 00193861

**Components**

ProTrack™ Dual Color Protein Loading Buffer, 4X

SDS attached

Reducing Agent 20X

SDS attached

**SAFETY DATA SHEET**

according to Regulation (EC) No. 1907/2006

**ProTrack™ Dual Color Protein Loading Buffer, 4X**

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

Product name : ProTrack™ Dual Color Protein Loading Buffer, 4X

**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.

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

#### Components

Chemical name	CAS-No. EC-No. Index-No. REACH Registration Number	Classification	Concentration (% w/w)
Sodium dodecyl sulphate SDS	151-21-3 205-788-1 01-2119489461-32-XX XX	Flam. Sol. 2; H228 Acute Tox. 4; H302 Acute Tox. 4; H332 Skin Irrit. 2; H315 Eye Dam. 1; H318 STOT SE 3; H335 (Respiratory system) Aquatic Chronic 3; H4120 - < 10 %  specific concentration limit 2; H319 10 - < 20 % 1; H318 >= 20 %	>= 5 - < 10

For explanation of abbreviations see section 16.

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**SECTION 4: First aid measures****4.1 Description of first aid measures**

- If inhaled : Remove to fresh air.  
If breathing is irregular or stopped, administer artificial respiration.  
When symptoms persist or in all cases of doubt seek medical advice.
- In case of skin contact : After contact with skin, wash immediately with plenty of soap and water.  
Consult a physician.
- In case of eye contact : In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
Call a physician immediately.
- 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.  
If a person feels unwell or symptoms of skin irritation appear, consult a physician.

**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 : Health injuries may be delayed.

**SECTION 5: Firefighting measures****5.1 Extinguishing media**

- Suitable extinguishing media : Dry powder  
Water spray  
Foam

**5.2 Special hazards arising from the substance or mixture**

- Hazardous combustion products : Sodium oxides  
Carbon oxides (COx)  
Sulphur oxides (SOx)

**5.3 Advice for firefighters**

- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.  
Wear a positive-pressure supplied-air respirator with full

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facepiece. Full protective flameproof clothing Exposure to decomposition products may be a hazard to health.

Further information : Use water spray to cool unopened containers. Explosion risk in case of fire.

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

Personal precautions : Use respirator when performing operations involving potential exposure to vapour of the product.

**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 : Sweep up or vacuum up spillage and collect in suitable container for disposal. Do not flush into surface water or sanitary sewer system.

**6.4 Reference to other sections**

For personal protection see section 8.

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**SECTION 7: Handling and storage****7.1 Precautions for safe handling**

Advice on safe handling : Avoid inhalation, ingestion and contact with skin and eyes. Do not heat the product.

Advice on protection against fire and explosion : Take precautionary measures against static discharges. Keep product and empty container away from heat and sources of ignition.

Hygiene measures : Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

**7.2 Conditions for safe storage, including any incompatibilities**

Requirements for storage areas and containers : Storage temperature: < -18°C. Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Protect against light. Keep away from heat. Do not store near combustible materials.

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#### 7.3 Specific end use(s)

Specific use(s) : No information available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Countries not listed may have their own country specific values.

#### Occupational Exposure Limits

##### Switzerland

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Glycerol	56-81-5	TWA (Inhalable fraction.)	50 mg/m3	SMAK
		STEL (Inhalable fraction.)	100 mg/m3	SMAK

##### Germany

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Glycerol	56-81-5	MAK (Inhalable fraction.)	200 mg/m3	DFG MAK
Peak-limit: excursion factor (category)		Peak-limit: excursion factor (category) 2		
		(Inhalable fraction.)	200 mg/m3	TRGS 900
Peak-limit: excursion factor (category)		Peak-limit: excursion factor (category) 2		

##### Belgium

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Glycerol	56-81-5	TWA (Mist.)	10 mg/m3	BE/OEL

##### Denmark

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Glycerol	56-81-5	GV (Total dust.)	3 mg/m3	GV (DK)

##### France

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Glycerol	56-81-5	VME (Aerosols)	10 mg/m3	FVL

##### Italy

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis

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Glycerol	56-81-5	TWA (Inhalable particles.)	10 mg/m <sup>3</sup>	OEL (IT)
		TWA (Respirable particles.)	3 mg/m <sup>3</sup>	OEL (IT)

#### Spain

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Glycerol	56-81-5	TWA (Mist.)	10 mg/m <sup>3</sup>	VLA

#### United Kingdom

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Glycerol	56-81-5	TWA (Mist.)	10 mg/m <sup>3</sup>	EH40 WEL

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

Substance name	End Use	Exposure routes	Potential health effects	Value
Glycerol	Workers	Inhalation	Long-term local effects	56 mg/m <sup>3</sup>
	Consumers	Oral	Long-term systemic effects	229 mg/kg
	Consumers	Inhalation	Long-term local effects	33 mg/m <sup>3</sup>
Sodium dodecyl sulphate	Workers	Dermal	Long-term systemic effects	4060 mg/kg
	Consumers	Oral	Long-term systemic effects	24 mg/kg
	Consumers	Inhalation	Long-term systemic effects	85 mg/m <sup>3</sup>
	Consumers	Dermal	Long-term systemic effects	2440 mg/kg
	Workers	Inhalation	Long-term systemic effects	285 mg/m <sup>3</sup>

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

Substance name	Environmental Compartment	Value
Glycerol	Fresh water	0,885 mg/l
	Marine water	0,088 mg/l
	Intermittent use/release	8,85 mg/l
	Fresh water sediment	3,3 mg/kg
	Marine sediment	0,33 mg/kg
	Soil	0,141 mg/kg
	Sewage treatment plant	1000 mg/l
Sodium dodecyl sulphate	Fresh water	0,137 mg/l
	Soil	0,882 mg/kg
	Marine sediment	0,482 mg/kg
	Fresh water sediment	4,82 mg/kg
	Sewage treatment plant	1084 mg/l
	Intermittent use/release	0,055 mg/l
	Marine water	0,0137 mg/l

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**8.2 Exposure controls****Engineering measures**

Avoid splashes.

Keep containers tightly closed in a dry, cool and well-ventilated place.

**Personal protective equipment**

Eye protection : Tightly fitting safety goggles

Hand protection

Material : Nitrile rubber

Rate of permeability : &gt; 480 min

Skin and body protection

: Choose body protection according to the amount and concentration of the dangerous substance at the work place. No special protective equipment required.

Respiratory protection

: In the case of vapour formation use a respirator with an approved filter.

Respirator with a vapour filter (EN 141)

Respirator with ABEK filter.

**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties**

Physical state : liquid

Appearance : Aqueous solution

Colour : clear, red

Odour : pungent

Melting point/freezing point : no data available

Initial boiling point and boiling range : no data available

Flammability : no data available

Upper explosion limit / upper flammability limit : no data available

Lower explosion limit / Lower flammability limit : no data available

Flash point : no data available



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Auto-ignition temperature	:	no data available
Decomposition temperature	:	no data available
Decomposition temperature	:	no data available
pH	:	no data available
Viscosity	:	no data available
Viscosity, kinematic	:	no data available
Solubility(ies)	:	partly soluble
Water solubility	:	partly soluble
Partition coefficient: n-octanol/water	:	no data available
Vapour pressure	:	no data available
Relative density	:	no data available
Density	:	no data available
Relative vapour density	:	no data available
Particle characteristics	:	no data available

**9.2 Other information**

no data available

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**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. Risk of decomposition. Heating may cause an explosion.
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**10.4 Conditions to avoid**

Conditions to avoid	:	no data available
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**10.5 Incompatible materials**

Materials to avoid	:	Strong oxidizing agents
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**10.6 Hazardous decomposition products**

No decomposition if stored normally.

**SECTION 11: Toxicological information****11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008****Acute toxicity**Acute oral toxicity : Acute toxicity estimate: > 2 000 mg/kg  
Method: Calculation methodAcute inhalation toxicity : Acute toxicity estimate: > 20 mg/l  
Exposure time: 4 h  
Test atmosphere: vapour  
Method: Calculation method**Skin corrosion/irritation**

Remarks: no data available

**Serious eye damage/eye irritation**

Remarks: no data available

**Respiratory or skin sensitisation**

Remarks: no data available

**Germ cell mutagenicity**

Genotoxicity in vitro : Remarks: no data available

**Carcinogenicity**

Remarks: no data available

**Reproductive toxicity**

Effects on fertility : Remarks: no data available

**STOT - single exposure**

Remarks: no data available

**STOT - repeated exposure**

Remarks: no data available

**11.2 Information on other hazards****Endocrine disrupting properties**

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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.

**Further information**

Remarks: No data is available on the product itself.

**The following toxicological data refer to:****Sodium dodecyl sulphate** (CAS-No.: 151-21-3)**Acute toxicity**

Acute oral toxicity : LD50 (Rat): 1 290 mg/kg

Acute dermal toxicity : LD50 (Rabbit): > 2 000 mg/kg  
Method: OECD Test Guideline 402**Serious eye damage/eye irritation**Species: Rabbit  
Assessment: Causes serious eye irritation.  
Method: OECD Test Guideline 405  
Result: Irreversible effects on the eye**Respiratory or skin sensitisation**Test Type: Maximisation Test  
Result: negative**Germ cell mutagenicity**Genotoxicity in vitro : Test Type: Ames test  
Species: Salmonella typhimurium  
Method: OECD Test Guideline 471  
Result: negative: Species: mammalian cells  
Method: OECD Test Guideline 476  
Result: negative**STOT - single exposure**Target Organs: Respiratory system  
Assessment: May cause respiratory irritation.

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**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.

**12.6 Endocrine disrupting properties**

Endocrine disrupting potential : 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**

Endocrine disrupting potential : 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.

Additional ecological information : no data available

**SECTION 13: Disposal considerations****13.1 Waste treatment methods**

Product : Dispose of in accordance with local regulations.

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Contaminated packaging : Dispose of as unused product.

**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-CODE** 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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<b>TDG</b>	:	Not dangerous goods
<b>14.1 UN number</b>	:	Not applicable
<b>14.2 Proper shipping name</b>	:	Not applicable
<b>14.3 Transport hazard class</b>	:	Not applicable
<b>14.4 Packing group</b>	:	Not applicable
<b>14.5 Environmental hazards</b>	:	no

#### 14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

#### 14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

## 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 (EU) 2019/1021 on persistent organic pollutants (recast) : 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 hazard class (Germany) : WGK 2 obviously hazardous to water  
Remarks: Classification according to AwSV, Annex 1 (5.2)

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**15.2 Chemical safety assessment**

not required

**SECTION 16: Other information****Full text of H-Statements**

H228	:	Flammable solid.
H302	:	Harmful if swallowed.
H315	:	Causes skin irritation.
H318	:	Causes serious eye damage.
H332	:	Harmful if inhaled.
H335	:	May cause respiratory irritation.
H412	:	Harmful to aquatic life with long lasting effects.

**Full text of other abbreviations**

Acute Tox.	:	Acute toxicity
Aquatic Chronic	:	Long-term (chronic) aquatic hazard
Eye Dam.	:	Serious eye damage
Flam. Sol.	:	Flammable solids
Skin Irrit.	:	Skin irritation
STOT SE	:	Specific target organ toxicity - single exposure

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 –

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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

**Further information**

Date format : dd.mm.yyyy

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.

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Changes since the last version are highlighted in the margin. This version replaces all previous versions.

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

Product name : Reducing Agent 20X

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

Use of the Substance/Mixture : For Research Use Only. Not for use in diagnostic procedures.

**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)**

Acute toxicity, Category 4	H302: Harmful if swallowed.
Skin irritation, Category 2	H315: Causes skin irritation.
Serious eye damage, Category 1	H318: Causes serious eye damage.

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#### 2.2 Label elements

##### Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal word :

Danger

Hazard statements :

H302 Harmful if swallowed.  
H315 Causes skin irritation.  
H318 Causes serious eye damage.

Precautionary statements :

##### Prevention:

P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P280 Wear protective gloves/ eye protection/ face protection.

##### Response:

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.

##### Disposal:

P501 Dispose of contents/container in accordance with local regulation.

Hazardous components which must be listed on the label:

(R\*,R\*)-1,4-Dimercaptobutane-2,3-diol

#### 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.

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## 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)
(R*,R*)-1,4-Dimercaptobutane-2,3-diol	3483-12-3 222-468-7	Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Dam. 1; H318	>= 30 - < 50

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 (Cox)  
Sulphur oxides (SOx)

**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.

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**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.

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**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 : No special storage conditions required.

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**7.3 Specific end use(s)**

Specific use(s) : No information available.

**SECTION 8: Exposure controls/personal protection****8.1 Control parameters****Occupational Exposure Limits**

Contains no substances with occupational exposure limit values.

**8.2 Exposure controls****Engineering measures**

Avoid splashes.

**Personal protective equipment**

Eye protection : Tightly fitting safety goggles

Hand protection

Material : Nitrile rubber

Rate of permeability : &gt; 480 min

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

Physical state : liquid

Appearance : Aqueous solution

Colour : no data available

Odour : no data available

Melting point/freezing point : no data available

Initial boiling point and boiling range : no data available

Flammability : no data available

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Upper explosion limit / upper flammability limit	:	no data available
Lower explosion limit / Lower flammability limit	:	no data available
Flash point	:	no data available
Auto-ignition temperature	:	no data available
Decomposition temperature Decomposition temperature	:	no data available
pH	:	no data available
Viscosity Viscosity, kinematic	:	no data available
Solubility(ies) Water solubility	:	soluble
Partition coefficient: n-octanol/water	:	no data available
Vapour pressure	:	no data available
Relative density	:	no data available
Density	:	no data available
Relative vapour density	:	no data available
Particle characteristics	:	no data available

**9.2 Other information**

no data available

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**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.

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**10.4 Conditions to avoid**

Conditions to avoid : no data available

**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 hazard classes as defined in Regulation (EC) No 1272/2008****Acute toxicity**Acute oral toxicity : Acute toxicity estimate: 1 112 mg/kg  
Method: Calculation method

Acute inhalation toxicity : Remarks: no data available

Acute dermal toxicity : Remarks: no data available

**Skin corrosion/irritation**

Remarks: no data available

**Serious eye damage/eye irritation**

Remarks: no data available

**Respiratory or skin sensitisation**

Remarks: no data available

**Germ cell mutagenicity**

Genotoxicity in vitro : Remarks: no data available

**Carcinogenicity**

Remarks: no data available

**Reproductive toxicity**

Effects on fertility : Remarks: no data available

**STOT - single exposure**

Remarks: no data available

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**STOT - repeated exposure**

Remarks: no data available

**11.2 Information on other hazards****Endocrine disrupting properties**

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.

**Further information**

Remarks: No data is available on the product itself.

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**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.

**12.6 Endocrine disrupting properties**

Endocrine disrupting potential : 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**



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Endocrine disrupting potential : 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.

Additional ecological information : no data available

**SECTION 13: Disposal considerations****13.1 Waste treatment methods**

Product : Dispose of contents/container in accordance with local regulation.  
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-CODE** 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

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<b>RID</b>	:	Not dangerous goods
<b>14.1 UN number</b>	:	Not applicable
<b>14.2 Proper shipping name</b>	:	Not applicable
<b>14.3 Transport hazard class</b>	:	Not applicable
<b>14.4 Packing group</b>	:	Not applicable
<b>14.5 Environmental hazards</b>	:	no
<b>DOT</b>	:	Not dangerous goods
<b>14.1 UN number</b>	:	Not applicable
<b>14.2 Proper shipping name</b>	:	Not applicable
<b>14.3 Transport hazard class</b>	:	Not applicable
<b>14.4 Packing group</b>	:	Not applicable
<b>14.5 Environmental hazards</b>	:	no
<b>TDG</b>	:	Not dangerous goods
<b>14.1 UN number</b>	:	Not applicable
<b>14.2 Proper shipping name</b>	:	Not applicable
<b>14.3 Transport hazard class</b>	:	Not applicable
<b>14.4 Packing group</b>	:	Not applicable
<b>14.5 Environmental hazards</b>	:	no

#### 14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

#### 14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

## 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 : Not applicable

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

Regulation (EU) 2019/1021 on persistent organic pollutants (recast)      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 hazard class (Germany) : WGK 3 highly hazardous to water  
Remarks: Classification according to AwSV, Annex 1 (5.2)

**15.2 Chemical safety assessment**

not required

**SECTION 16: Other information****Classification of the mixture:**

Acute Tox. 4      H302  
Skin Irrit. 2      H315  
Eye Dam. 1      H318

**Classification procedure:**

Calculation method  
Calculation method  
Calculation method

**Full text of H-Statements**

H302 : Harmful if swallowed.  
H315 : Causes skin irritation.  
H318 : Causes serious eye damage.

**Full text of other abbreviations**

Acute Tox. : Acute toxicity  
Eye Dam. : Serious eye damage  
Skin Irrit. : Skin irritation

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;

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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

**Further information**

Date format : dd.mm.yyyy

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Changes since the last version are highlighted in the margin. This version replaces all previous versions.

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