

**SBR314 - STAR BEADS Reductant**

## Safety Data Sheet

According to Annex II to REACH - Regulation (EU) 2020/878 and to Annex II to UK REACH

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

#### 1.1. Product identifier

Code: SBR314

Product name: STAR BEADS Reductant

Reference Kit: STAR BEADS RNA Extraction Kit - SBK308,1X10; SBK308,1X96  
STAR BEADS RNA Extraction Kit, Prefilled Plates - SBK308,2X32PFI

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

Intended use: Professional Use

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

Name: CYANAGEN S.R.L.  
Full address: Via Andrea Costa 4/2  
District and Country: 40134 Bologna (BO)  
Italia  
Tel. +39 051.534063 Mon-Thu 9:00-17:00, Fri 9:00-13:00  
Fax +39 051.534063  
e-mail address of the competent person responsible for the Safety Data Sheet: technical.support@cyanagen.com

#### 1.4. Emergency telephone number

For urgent inquiries refer to: Israel +972-04-7771900 (24/7)  
UK NPIS 0344 892 0111  
Ireland NPIC (01) 809 2566  
Tox Info Suisse 145, h 24

### SECTION 2. Hazards identification

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

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2020/878. Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:  
Skin corrosion, category 1B H314 Causes severe skin burns and eye damage.  
Serious eye damage, category 1 H318 Causes serious eye damage.



**SBR314 - STAR BEADS Reductant****SECTION 4. First aid measures****4.1. Description of first aid measures**

**EYES:** Remove contact lenses, if present. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. If problem persists, seek medical advice.

**SKIN:** Remove contaminated clothing. Wash immediately with plenty of water. If irritation persists, get medical advice/attention. Wash contaminated clothing before using it again.

**INHALATION:** Remove to open air. In the event of breathing difficulties, get medical advice/attention immediately.

**INGESTION:** Get medical advice/attention. Induce vomiting only if indicated by the doctor. Never give anything by mouth to an unconscious person, unless authorised by a doctor.

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

Specific information on symptoms and effects caused by the product are unknown.

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

Information not available

**SECTION 5. Firefighting measures****5.1. Extinguishing media****SUITABLE EXTINGUISHING EQUIPMENT**

The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.

**UNSUITABLE EXTINGUISHING EQUIPMENT**

None in particular.

**5.2. Special hazards arising from the substance or mixture****HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE**

Do not breathe combustion products.

**5.3. Advice for firefighters****GENERAL INFORMATION**

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

**SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS**

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

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

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

**SBR314 - STAR BEADS Reductant****6.2. Environmental precautions**

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

**6.3. Methods and material for containment and cleaning up**

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.

Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

**6.4. Reference to other sections**

Any information on personal protection and disposal is given in sections 8 and 13.

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

Before handling the product, consult all the other sections of this material safety data sheet. Avoid leakage of the product into the environment. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat.

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

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Keep containers away from any incompatible materials, see section 10 for details.

**7.3. Specific end use(s)**

Information not available

**SECTION 8. Exposure controls/personal protection****8.1. Control parameters**

Information not available

**8.2. Exposure controls**

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.

When choosing personal protective equipment, ask your chemical substance supplier for advice.

Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

**HAND PROTECTION**

Protect hands with category III work gloves.

The following should be considered when choosing work glove material (see standard EN 374): compatibility, degradation, permeability time.

The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

**SBR314 - STAR BEADS Reductant****SKIN PROTECTION**

Wear category II professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

**EYE PROTECTION**

Wear airtight protective goggles (see standard EN ISO 16321).

**RESPIRATORY PROTECTION**

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. Use a mask with a type A filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387).

If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

**ENVIRONMENTAL EXPOSURE CONTROLS**

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

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

Properties	Value	Information
Appearance	liquid	
Colour	colourless	
Odour	typical	
Melting point / freezing point	not available	
Initial boiling point	not available	
Flammability	not available	
Lower explosive limit	not available	
Upper explosive limit	not available	
Flash point	> 60 °C	
Auto-ignition temperature	not available	
Decomposition temperature	not available	
pH	not available	
Kinematic viscosity	not available	
Solubility	not available	
Partition coefficient: n-octanol/water	not available	
Vapour pressure	not available	
Density and/or relative density	not available	
Relative vapour density	not available	
Particle characteristics	not applicable	

**9.2. Other information**

9.2.1. Information with regard to physical hazard classes

**SBR314 - STAR BEADS Reductant**

Information not available

**9.2.2. Other safety characteristics**

Information not available

**SECTION 10. Stability and reactivity****10.1. Reactivity**

There are no particular risks of reaction with other substances in normal conditions of use.

**10.2. Chemical stability**

The product is stable in normal conditions of use and storage.

**10.3. Possibility of hazardous reactions**

No hazardous reactions are foreseeable in normal conditions of use and storage.

**10.4. Conditions to avoid**

None in particular. However the usual precautions used for chemical products should be respected.

**10.5. Incompatible materials**

Information not available

**10.6. Hazardous decomposition products**

Information not available

**SECTION 11. Toxicological information**

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.

It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**Metabolism, toxicokinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

Information not available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

**SBR314 - STAR BEADS Reductant**

Information not available

Interactive effects

Information not available

ACUTE TOXICITY

ATE (Inhalation) of the mixture:	Not classified (no significant component)
ATE (Oral) of the mixture:	Not classified (no significant component)
ATE (Dermal) of the mixture:	Not classified (no significant component)

Tris (2-carboxyethyl) phosphinhydrochlorid

LD50 (Dermal):	> 3000 mg/kg Rat
LD50 (Oral):	3500 mg/kg Rat

SKIN CORROSION / IRRITATION

Corrosive for the skin

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye damage

RESPIRATORY OR SKIN SENSITISATION

Does not meet the classification criteria for this hazard class

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

**SBR314 - STAR BEADS Reductant****11.2. Information on other hazards**

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with human health effects under evaluation.

**SECTION 12. Ecological information**

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation.

**12.1. Toxicity**

Information not available

**12.2. Persistence and degradability**

Information not available

**12.3. Bioaccumulative potential**

Information not available

**12.4. Mobility in soil**

Information not available

**12.5. Results of PBT and vPvB assessment**

On the basis of available data, the product does not contain any PBT or vPvB in percentage  $\geq$  than 0,1%.

**12.6. Endocrine disrupting properties**

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with environmental effects under evaluation.

**12.7. Other adverse effects**

Information not available

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

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

Waste transportation may be subject to ADR restrictions.

CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.



**SBR314 - STAR BEADS Reductant****SECTION 14. Transport information****14.1. UN number or ID number**

ADR / RID, IMDG, IATA: 3265

**14.2. UN proper shipping name**

ADR / RID: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Tris (2-carboxyethyl) phosphinhydrochlorid)  
 IMDG: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Tris (2-carboxyethyl) phosphinhydrochlorid)  
 IATA: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Tris (2-carboxyethyl) phosphinhydrochlorid)

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

ADR / RID: Class: 8 Label: 8

IMDG: Class: 8 Label: 8

IATA: Class: 8 Label: 8

**14.4. Packing group**

ADR / RID, IMDG, IATA: II

**14.5. Environmental hazards**

ADR / RID: NO  
 IMDG: NO  
 IATA: NO

**14.6. Special precautions for user**

ADR / RID:	HIN - Kemler: 80	Limited Quantities: 1 L	Tunnel restriction code: (E)
	Special provision: -		
IMDG:	EMS: F-A, S-B	Limited Quantities: 1 L	
IATA:	Cargo:	Maximum quantity: 30 L	Packaging instructions: 855
	Passengers:	Maximum quantity: 1 L	Packaging instructions: 851
	Special provision:	A3, A803	

**14.7. Maritime transport in bulk according to IMO instruments**

Information not relevant

**SBR314 - STAR BEADS Reductant****SECTION 15. Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

Seveso Category - Directive 2012/18/EU: None

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

Product

Point 3

Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors

not applicable

Substances in Candidate List (Art. 59 REACH)

On the basis of available data, the product does not contain any SVHC in percentage  $\geq$  than 0,1%.

Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to Regulation (EU) 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Healthcare controls

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

**15.2. Chemical safety assessment**

A chemical safety assessment has not been performed for the preparation/for the substances indicated in section 3.

**SECTION 16. Other information**

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

**Skin Corr. 1B**

Skin corrosion, category 1B

**Eye Dam. 1**

Serious eye damage, category 1

**SBR314 - STAR BEADS Reductant**

**H314** Causes severe skin burns and eye damage.

**H318** Causes serious eye damage.

**LEGEND:**

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- ATE: Acute Toxicity Estimate
- CAS: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE: Identifier in ESIS (European archive of existing substances)
- CLP: Regulation (EC) 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: Regulation (EC) 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA: Time-weighted average exposure limit
- TWA STEL: Short-term exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

**GENERAL BIBLIOGRAPHY**

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
3. Regulation (EU) 2020/878 (II Annex of REACH Regulation)
4. Regulation (EC) 790/2009 (I Atp. CLP) of the European Parliament
5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
12. Regulation (EU) 2016/1179 (IX Atp. CLP)
13. Regulation (EU) 2017/776 (X Atp. CLP)
14. Regulation (EU) 2018/669 (XI Atp. CLP)
15. Regulation (EU) 2019/521 (XII Atp. CLP)
16. Delegated Regulation (UE) 2018/1480 (XIII Atp. CLP)
17. Regulation (EU) 2019/1148
18. Delegated Regulation (UE) 2020/217 (XIV Atp. CLP)
19. Delegated Regulation (UE) 2020/1182 (XV Atp. CLP)
20. Delegated Regulation (UE) 2021/643 (XVI Atp. CLP)
21. Delegated Regulation (UE) 2021/849 (XVII Atp. CLP)
22. Delegated Regulation (UE) 2022/692 (XVIII Atp. CLP)
23. Delegated Regulation (UE) 2023/707

**SBR314 - STAR BEADS Reductant**

- The Merck Index. - 10th Edition
- Handling Chemical Safety
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- IFA GESTIS website
- ECHA website
- Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

**Note for users:**

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

**CALCULATION METHODS FOR CLASSIFICATION**

Chemical and physical hazards: Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.

Health hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.

Environmental hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.

**SBD315 - STAR BEADS rDNase I**

## Information Sheet

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

#### 1.1. Product identifier

Code: SBD315

Product name: STAR BEADS rDNase I

Reference Kit: STAR BEADS RNA Extraction Kit - SBK308,1X10; SBK308,1X96  
STAR BEADS RNA Extraction Kit, Prefilled Plates - SBK308,2X32PFI

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

Intended use: Professional use

#### 1.3. Details of the supplier of the Information Sheet

Name: CYANAGEN S.R.L.  
Full address: Via Andrea Costa 4/2  
District and Country: 40134 Bologna (BO)  
Italia  
Tel. +39 051.534063 Mon-Thu 9:00-17:00, Fri 9:00-13:00  
Fax +39 051.534063  
e-mail address of the competent person responsible for the information sheet: technical.support@cyanagen.com

#### 1.4. Emergency telephone number

For urgent inquiries refer to: +39051534063

### SECTION 2. Hazards identification

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

The product is not classified as hazardous pursuant to the provisions set forth in EC Regulation 1272/2008 (CLP) (and subsequent amendments and supplements).

Hazard classification and indication: --

#### 2.2. Label elements

Hazard pictograms: --

Signal words: --

Hazard statements: --

**SBD315 - STAR BEADS rDNase I**

Precautionary statements: --

**2.3. Other hazards**

On the basis of available data, the product does not contain any PBT or vPvB in percentage  $\geq$  than 0,1%.

The product does not contain substances with endocrine disrupting properties in concentration  $\geq$  0.1%.

**SECTION 3. Composition/information on ingredients****3.2. Mixtures**

The product does not contain substances classified as being hazardous to human health or the environment pursuant to the provisions Regulation (EC) 1272/2008 (CLP) (and subsequent amendments and supplements) in such quantities as to require the statement.

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

Not specifically necessary. Observance of good industrial hygiene is recommended.

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

Specific information on symptoms and effects caused by the product are unknown.

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

Information not available

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

SUITABLE EXTINGUISHING EQUIPMENT

The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.

UNSUITABLE EXTINGUISHING EQUIPMENT

None in particular.

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

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Do not breathe combustion products.

**5.3. Advice for firefighters**

GENERAL INFORMATION

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

**SBD315 - STAR BEADS rDNase I****SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS**

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

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

Use breathing equipment if fumes or powders are released into the air. These indications apply for both processing staff and those involved in emergency procedures.

**6.2. Environmental precautions**

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

**6.3. Methods and material for containment and cleaning up**

Confine using earth or inert material. Collect as much material as possible and eliminate the rest using jets of water. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

**6.4. Reference to other sections**

Any information on personal protection and disposal is given in sections 8 and 13.

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

Before handling the product, consult all the other sections of this material safety data sheet. Avoid leakage of the product into the environment. Do not eat, drink or smoke during use.

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

Keep the product in clearly labelled containers. Keep containers away from any incompatible materials, see section 10 for details.

**7.3. Specific end use(s)**

Information not available

**SECTION 8. Exposure controls/personal protection****8.1. Control parameters**

Information not available

**8.2. Exposure controls**

Comply with the safety measures usually applied when handling chemical substances.

**SBD315 - STAR BEADS rDNase I**

**HAND PROTECTION**  
None required.

**SKIN PROTECTION**  
None required.

**EYE PROTECTION**  
None required.

**RESPIRATORY PROTECTION**  
None required, unless indicated otherwise in the chemical risk assessment.

**ENVIRONMENTAL EXPOSURE CONTROLS**  
The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

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

Properties	Value	Information
Appearance	liquid	
Colour	colourless	
Odour	odourless	
Melting point / freezing point	not available	
Initial boiling point	not available	
Flammability	not available	
Lower explosive limit	not available	
Upper explosive limit	not available	
Flash point	> 60 °C	
Auto-ignition temperature	not available	
Decomposition temperature	not available	
pH	not available	
Kinematic viscosity	not available	
Solubility	not available	
Partition coefficient: n-octanol/water	not available	
Vapour pressure	not available	
Density and/or relative density	not available	
Relative vapour density	not available	
Particle characteristics	not applicable	

**9.2. Other information****9.2.1. Information with regard to physical hazard classes**

Information not available



**SBD315 - STAR BEADS rDNase I**

## 9.2.2. Other safety characteristics

Information not available

**SECTION 10. Stability and reactivity****10.1. Reactivity**

There are no particular risks of reaction with other substances in normal conditions of use.

**10.2. Chemical stability**

The product is stable in normal conditions of use and storage.

**10.3. Possibility of hazardous reactions**

No hazardous reactions are foreseeable in normal conditions of use and storage.

**10.4. Conditions to avoid**

None in particular. However the usual precautions used for chemical products should be respected.

**10.5. Incompatible materials**

Information not available

**10.6. Hazardous decomposition products**

Information not available

**SECTION 11. Toxicological information**

According to currently available data, this product has not yet produced health damages. Anyway, it must be handled according to good industrial practices.

**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**Metabolism, toxicokinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

Information not available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Information not available

**SBD315 - STAR BEADS rDNase I**Interactive effects

Information not available

ACUTE TOXICITY

ATE (Inhalation) of the mixture:	Not classified (no significant component)
ATE (Oral) of the mixture:	Not classified (no significant component)
ATE (Dermal) of the mixture:	Not classified (no significant component)

SKIN CORROSION / IRRITATION

Does not meet the classification criteria for this hazard class

SERIOUS EYE DAMAGE / IRRITATION

Does not meet the classification criteria for this hazard class

RESPIRATORY OR SKIN SENSITISATION

Does not meet the classification criteria for this hazard class

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

**11.2. Information on other hazards**

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with human health effects under evaluation.

**SBD315 - STAR BEADS rDNase I****SECTION 12. Ecological information**

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation.

**12.1. Toxicity**

Information not available

**12.2. Persistence and degradability**

Information not available

**12.3. Bioaccumulative potential**

Information not available

**12.4. Mobility in soil**

Information not available

**12.5. Results of PBT and vPvB assessment**

On the basis of available data, the product does not contain any PBT or vPvB in percentage  $\geq$  than 0,1%.

**12.6. Endocrine disrupting properties**

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with environmental effects under evaluation.

**12.7. Other adverse effects**

Information not available

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

Reuse, when possible. Neat product residues should be considered special non-hazardous waste.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

**CONTAMINATED PACKAGING**

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

**SECTION 14. Transport information**

The product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the International Maritime Dangerous Goods Code (IMDG), and of the International Air Transport Association (IATA) regulations.

**SBD315 - STAR BEADS rDNase I****14.1. UN number or ID number**

not applicable

**14.2. UN proper shipping name**

not applicable

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

not applicable

**14.4. Packing group**

not applicable

**14.5. Environmental hazards**

not applicable

**14.6. Special precautions for user**

not applicable

**14.7. Maritime transport in bulk according to IMO instruments**

Information not relevant

**SECTION 15. Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

Seveso Category - Directive 2012/18/EU: None

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

None

Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors

not applicable

Substances in Candidate List (Art. 59 REACH)On the basis of available data, the product does not contain any SVHC in percentage  $\geq$  than 0,1%.Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to Regulation (EU) 649/2012:

**SBD315 - STAR BEADS rDNase I**

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Healthcare controls

Information not available

### 15.2. Chemical safety assessment

A chemical safety assessment has not been performed for the preparation/for the substances indicated in section 3.

## SECTION 16. Other information

### LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- ATE: Acute Toxicity Estimate
- CAS: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE: Identifier in ESIS (European archive of existing substances)
- CLP: Regulation (EC) 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: Regulation (EC) 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA: Time-weighted average exposure limit
- TWA STEL: Short-term exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

**SBD315 - STAR BEADS rDNase I****GENERAL BIBLIOGRAPHY**

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
  2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
  3. Regulation (EU) 2020/878 (II Annex of REACH Regulation)
  4. Regulation (EC) 790/2009 (I Atp. CLP) of the European Parliament
  5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
  6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
  7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
  8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
  9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
  10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
  11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
  12. Regulation (EU) 2016/1179 (IX Atp. CLP)
  13. Regulation (EU) 2017/776 (X Atp. CLP)
  14. Regulation (EU) 2018/669 (XI Atp. CLP)
  15. Regulation (EU) 2019/521 (XII Atp. CLP)
  16. Delegated Regulation (UE) 2018/1480 (XIII Atp. CLP)
  17. Regulation (EU) 2019/1148
  18. Delegated Regulation (UE) 2020/217 (XIV Atp. CLP)
  19. Delegated Regulation (UE) 2020/1182 (XV Atp. CLP)
  20. Delegated Regulation (UE) 2021/643 (XVI Atp. CLP)
  21. Delegated Regulation (UE) 2021/849 (XVII Atp. CLP)
  22. Delegated Regulation (UE) 2022/692 (XVIII Atp. CLP)
  23. Delegated Regulation (UE) 2023/707
- The Merck Index. - 10th Edition
  - Handling Chemical Safety
  - INRS - Fiche Toxicologique (toxicological sheet)
  - Patty - Industrial Hygiene and Toxicology
  - N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
  - IFA GESTIS website
  - ECHA website
  - Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

**Note for users:**

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

**CALCULATION METHODS FOR CLASSIFICATION**

Chemical and physical hazards: Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.

Health hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.

Environmental hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.

## Information Sheet

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

#### 1.1. Product identifier

Code: SBDDDB316

Product name: STAR BEADS DNase Dilution Buffer

Reference Kit: STAR BEADS RNA Extraction Kit - SBK308,1X10; SBK308,1X96  
STAR BEADS RNA Extraction Kit, Prefilled Plates - SBK308,2X32PFI

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

Intended use: Professional use

#### 1.3. Details of the supplier of the Information Sheet

Name: CYANAGEN S.R.L.  
Full address: Via Andrea Costa 4/2  
District and Country: 40134 Bologna (BO)  
Italia  
Tel. +39 051.534063 Mon-Thu 9:00-17:00, Fri 9:00-13:00  
Fax +39 051.534063  
e-mail address of the competent person responsible for the information sheet: technical.support@cyanagen.com

#### 1.4. Emergency telephone number

For urgent inquiries refer to: +39051534063

### SECTION 2. Hazards identification

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

The product is not classified as hazardous pursuant to the provisions set forth in EC Regulation 1272/2008 (CLP) (and subsequent amendments and supplements).

Hazard classification and indication: --

#### 2.2. Label elements

Hazard pictograms: --

Signal words: --

Hazard statements: --

**SBDDDB316 - STAR BEADS DNase Dilution Buffer**

Precautionary statements: --

**2.3. Other hazards**

On the basis of available data, the product does not contain any PBT or vPvB in percentage  $\geq$  than 0,1%.

The product does not contain substances with endocrine disrupting properties in concentration  $\geq$  0.1%.

**SECTION 3. Composition/information on ingredients****3.2. Mixtures**

The product does not contain substances classified as being hazardous to human health or the environment pursuant to the provisions Regulation (EC) 1272/2008 (CLP) (and subsequent amendments and supplements) in such quantities as to require the statement.

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

Not specifically necessary. Observance of good industrial hygiene is recommended.

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

Specific information on symptoms and effects caused by the product are unknown.

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

Information not available

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

SUITABLE EXTINGUISHING EQUIPMENT

The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.

UNSUITABLE EXTINGUISHING EQUIPMENT

None in particular.

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

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Do not breathe combustion products.

**5.3. Advice for firefighters**

GENERAL INFORMATION

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.



**SBDDDB316 - STAR BEADS DNase Dilution Buffer****SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS**

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

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

Use breathing equipment if fumes or powders are released into the air. These indications apply for both processing staff and those involved in emergency procedures.

**6.2. Environmental precautions**

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

**6.3. Methods and material for containment and cleaning up**

Confine using earth or inert material. Collect as much material as possible and eliminate the rest using jets of water. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

**6.4. Reference to other sections**

Any information on personal protection and disposal is given in sections 8 and 13.

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

Before handling the product, consult all the other sections of this material safety data sheet. Avoid leakage of the product into the environment. Do not eat, drink or smoke during use.

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

Keep the product in clearly labelled containers. Keep containers away from any incompatible materials, see section 10 for details.

**7.3. Specific end use(s)**

Information not available

**SECTION 8. Exposure controls/personal protection****8.1. Control parameters**

Information not available

**8.2. Exposure controls**

Comply with the safety measures usually applied when handling chemical substances.

## SBDDDB316 - STAR BEADS DNase Dilution Buffer

**HAND PROTECTION**

None required.

**SKIN PROTECTION**

None required.

**EYE PROTECTION**

None required.

**RESPIRATORY PROTECTION**

None required, unless indicated otherwise in the chemical risk assessment.

**ENVIRONMENTAL EXPOSURE CONTROLS**

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

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

Properties	Value	Information
Appearance	liquid	
Colour	colourless	
Odour	odourless	
Melting point / freezing point	not available	
Initial boiling point	not available	
Flammability	not available	
Lower explosive limit	not available	
Upper explosive limit	not available	
Flash point	> 60 °C	
Auto-ignition temperature	not available	
Decomposition temperature	not available	
pH	8,00	
Kinematic viscosity	not available	
Solubility	not available	
Partition coefficient: n-octanol/water	not available	
Vapour pressure	not available	
Density and/or relative density	not available	
Relative vapour density	not available	
Particle characteristics	not applicable	

**9.2. Other information**

## 9.2.1. Information with regard to physical hazard classes

Information not available

## 9.2.2. Other safety characteristics

Information not available

## **SECTION 10. Stability and reactivity**

### **10.1. Reactivity**

There are no particular risks of reaction with other substances in normal conditions of use.

### **10.2. Chemical stability**

The product is stable in normal conditions of use and storage.

### **10.3. Possibility of hazardous reactions**

No hazardous reactions are foreseeable in normal conditions of use and storage.

### **10.4. Conditions to avoid**

None in particular. However the usual precautions used for chemical products should be respected.

### **10.5. Incompatible materials**

Information not available

### **10.6. Hazardous decomposition products**

Information not available

## **SECTION 11. Toxicological information**

According to currently available data, this product has not yet produced health damages. Anyway, it must be handled according to good industrial practices.

### **11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**

#### Metabolism, toxicokinetics, mechanism of action and other information

Information not available

#### Information on likely routes of exposure

Information not available

#### Delayed and immediate effects as well as chronic effects from short and long-term exposure

Information not available

#### Interactive effects

Information not available

**SBDDDB316 - STAR BEADS DNase Dilution Buffer**ACUTE TOXICITY

ATE (Inhalation) of the mixture: Not classified (no significant component)  
ATE (Oral) of the mixture: Not classified (no significant component)  
ATE (Dermal) of the mixture: Not classified (no significant component)

SKIN CORROSION / IRRITATION

Does not meet the classification criteria for this hazard class

SERIOUS EYE DAMAGE / IRRITATION

Does not meet the classification criteria for this hazard class

RESPIRATORY OR SKIN SENSITISATION

Does not meet the classification criteria for this hazard class

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

**11.2. Information on other hazards**

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with human health effects under evaluation.

**SECTION 12. Ecological information**

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation.

**SBDDDB316 - STAR BEADS DNase Dilution Buffer****12.1. Toxicity**

Information not available

**12.2. Persistence and degradability**

Information not available

**12.3. Bioaccumulative potential**

Information not available

**12.4. Mobility in soil**

Information not available

**12.5. Results of PBT and vPvB assessment**

On the basis of available data, the product does not contain any PBT or vPvB in percentage  $\geq$  than 0,1%.

**12.6. Endocrine disrupting properties**

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with environmental effects under evaluation.

**12.7. Other adverse effects**

Information not available

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

Reuse, when possible. Neat product residues should be considered special non-hazardous waste.  
Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.  
CONTAMINATED PACKAGING  
Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

**SECTION 14. Transport information**

The product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the International Maritime Dangerous Goods Code (IMDG), and of the International Air Transport Association (IATA) regulations.

**14.1. UN number or ID number**

not applicable

**SBDDDB316 - STAR BEADS DNase Dilution Buffer****14.2. UN proper shipping name**

not applicable

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

not applicable

**14.4. Packing group**

not applicable

**14.5. Environmental hazards**

not applicable

**14.6. Special precautions for user**

not applicable

**14.7. Maritime transport in bulk according to IMO instruments**

Information not relevant

**SECTION 15. Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

Seveso Category - Directive 2012/18/EU: None

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

None

Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors

not applicable

Substances in Candidate List (Art. 59 REACH)

On the basis of available data, the product does not contain any SVHC in percentage  $\geq$  than 0,1%.

Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to Regulation (EU) 649/2012:

None

Substances subject to the Rotterdam Convention:

**SBDDDB316 - STAR BEADS DNase Dilution Buffer**

None

Substances subject to the Stockholm Convention:

None

Healthcare controls

Information not available

### 15.2. Chemical safety assessment

A chemical safety assessment has not been performed for the preparation/for the substances indicated in section 3.

## SECTION 16. Other information

### LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- ATE: Acute Toxicity Estimate
- CAS: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE: Identifier in ESIS (European archive of existing substances)
- CLP: Regulation (EC) 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: Regulation (EC) 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA: Time-weighted average exposure limit
- TWA STEL: Short-term exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

### GENERAL BIBLIOGRAPHY

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
3. Regulation (EU) 2020/878 (II Annex of REACH Regulation)
4. Regulation (EC) 790/2009 (I Atp. CLP) of the European Parliament
5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament

**SBDDDB316 - STAR BEADS DNase Dilution Buffer**

9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
  10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
  11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
  12. Regulation (EU) 2016/1179 (IX Atp. CLP)
  13. Regulation (EU) 2017/776 (X Atp. CLP)
  14. Regulation (EU) 2018/669 (XI Atp. CLP)
  15. Regulation (EU) 2019/521 (XII Atp. CLP)
  16. Delegated Regulation (UE) 2018/1480 (XIII Atp. CLP)
  17. Regulation (EU) 2019/1148
  18. Delegated Regulation (UE) 2020/217 (XIV Atp. CLP)
  19. Delegated Regulation (UE) 2020/1182 (XV Atp. CLP)
  20. Delegated Regulation (UE) 2021/643 (XVI Atp. CLP)
  21. Delegated Regulation (UE) 2021/849 (XVII Atp. CLP)
  22. Delegated Regulation (UE) 2022/692 (XVIII Atp. CLP)
  23. Delegated Regulation (UE) 2023/707
- The Merck Index. - 10th Edition
  - Handling Chemical Safety
  - INRS - Fiche Toxicologique (toxicological sheet)
  - Patty - Industrial Hygiene and Toxicology
  - N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
  - IFA GESTIS website
  - ECHA website
  - Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

**Note for users:**

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

**CALCULATION METHODS FOR CLASSIFICATION**

Chemical and physical hazards: Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.

Health hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.

Environmental hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.



**SBDRB317 - STAR BEADS DNase Reaction Buffer**

## Information Sheet

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

#### 1.1. Product identifier

Code: SBDRB317

Product name: STAR BEADS DNase Reaction Buffer

Reference Kit: STAR BEADS RNA Extraction Kit - SBK308,1X10; SBK308,1X96  
STAR BEADS RNA Extraction Kit, Prefilled Plates - SBK308,2X32PFI

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

Intended use: Professional use

#### 1.3. Details of the supplier of the Information Sheet

Name: CYANAGEN S.R.L.  
Full address: Via Andrea Costa 4/2  
District and Country: 40134 Bologna (BO)  
Italia  
Tel. +39 051.534063 Mon-Thu 9:00-17:00, Fri 9:00-13:00  
Fax +39 051.534063  
e-mail address of the competent person responsible for the information sheet: technical.support@cyanagen.com

#### 1.4. Emergency telephone number

For urgent inquiries refer to: +39051534063

### SECTION 2. Hazards identification

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

The product is not classified as hazardous pursuant to the provisions set forth in EC Regulation 1272/2008 (CLP) (and subsequent amendments and supplements).

Hazard classification and indication: --

#### 2.2. Label elements

Hazard pictograms: --

Signal words: --

Hazard statements: --

**SBDRB317 - STAR BEADS DNase Reaction Buffer**

Precautionary statements: --

**2.3. Other hazards**

On the basis of available data, the product does not contain any PBT or vPvB in percentage  $\geq$  than 0,1%.

The product does not contain substances with endocrine disrupting properties in concentration  $\geq$  0.1%.

**SECTION 3. Composition/information on ingredients****3.2. Mixtures**

The product does not contain substances classified as being hazardous to human health or the environment pursuant to the provisions Regulation (EC) 1272/2008 (CLP) (and subsequent amendments and supplements) in such quantities as to require the statement.

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

Not specifically necessary. Observance of good industrial hygiene is recommended.

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

Specific information on symptoms and effects caused by the product are unknown.

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

Information not available

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

SUITABLE EXTINGUISHING EQUIPMENT

The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.

UNSUITABLE EXTINGUISHING EQUIPMENT

None in particular.

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

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Do not breathe combustion products.

**5.3. Advice for firefighters**

GENERAL INFORMATION

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

**SBDRB317 - STAR BEADS DNase Reaction Buffer**

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

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

Use breathing equipment if fumes or powders are released into the air. These indications apply for both processing staff and those involved in emergency procedures.

**6.2. Environmental precautions**

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

**6.3. Methods and material for containment and cleaning up**

Confine using earth or inert material. Collect as much material as possible and eliminate the rest using jets of water. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

**6.4. Reference to other sections**

Any information on personal protection and disposal is given in sections 8 and 13.

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

Before handling the product, consult all the other sections of this material safety data sheet. Avoid leakage of the product into the environment. Do not eat, drink or smoke during use.

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

Keep the product in clearly labelled containers. Keep containers away from any incompatible materials, see section 10 for details.

**7.3. Specific end use(s)**

Information not available

**SECTION 8. Exposure controls/personal protection****8.1. Control parameters**

Information not available

**8.2. Exposure controls**

Comply with the safety measures usually applied when handling chemical substances.

HAND PROTECTION  
None required.

**SBDRB317 - STAR BEADS DNase Reaction Buffer****SKIN PROTECTION**

None required.

**EYE PROTECTION**

None required.

**RESPIRATORY PROTECTION**

None required, unless indicated otherwise in the chemical risk assessment.

**ENVIRONMENTAL EXPOSURE CONTROLS**

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

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

Properties	Value	Information
Appearance	liquid	
Colour	colourless	
Odour	odourless	
Melting point / freezing point	not available	
Initial boiling point	not available	
Flammability	not available	
Lower explosive limit	not available	
Upper explosive limit	not available	
Flash point	> 60 °C	
Auto-ignition temperature	not available	
Decomposition temperature	not available	
pH	7,5	
Kinematic viscosity	not available	
Solubility	not available	
Partition coefficient: n-octanol/water	not available	
Vapour pressure	not available	
Density and/or relative density	not available	
Relative vapour density	not available	
Particle characteristics	not applicable	

**9.2. Other information****9.2.1. Information with regard to physical hazard classes**

Information not available

**9.2.2. Other safety characteristics**

Information not available

**SBDRB317 - STAR BEADS DNase Reaction Buffer****SECTION 10. Stability and reactivity****10.1. Reactivity**

There are no particular risks of reaction with other substances in normal conditions of use.

**10.2. Chemical stability**

The product is stable in normal conditions of use and storage.

**10.3. Possibility of hazardous reactions**

No hazardous reactions are foreseeable in normal conditions of use and storage.

**10.4. Conditions to avoid**

None in particular. However the usual precautions used for chemical products should be respected.

**10.5. Incompatible materials**

Information not available

**10.6. Hazardous decomposition products**

Information not available

**SECTION 11. Toxicological information**

According to currently available data, this product has not yet produced health damages. Anyway, it must be handled according to good industrial practices.

**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**Metabolism, toxicokinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

Information not available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Information not available

Interactive effects

Information not available

**SBDRB317 - STAR BEADS DNase Reaction Buffer**ACUTE TOXICITY

ATE (Inhalation) of the mixture: Not classified (no significant component)  
ATE (Oral) of the mixture: Not classified (no significant component)  
ATE (Dermal) of the mixture: Not classified (no significant component)

SKIN CORROSION / IRRITATION

Does not meet the classification criteria for this hazard class

SERIOUS EYE DAMAGE / IRRITATION

Does not meet the classification criteria for this hazard class

RESPIRATORY OR SKIN SENSITISATION

Does not meet the classification criteria for this hazard class

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

**11.2. Information on other hazards**

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with human health effects under evaluation.

**SECTION 12. Ecological information**

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation.

**SBDRB317 - STAR BEADS DNase Reaction Buffer****12.1. Toxicity**

Information not available

**12.2. Persistence and degradability**

Information not available

**12.3. Bioaccumulative potential**

Information not available

**12.4. Mobility in soil**

Information not available

**12.5. Results of PBT and vPvB assessment**

On the basis of available data, the product does not contain any PBT or vPvB in percentage  $\geq$  than 0,1%.

**12.6. Endocrine disrupting properties**

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with environmental effects under evaluation.

**12.7. Other adverse effects**

Information not available

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

Reuse, when possible. Neat product residues should be considered special non-hazardous waste.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

**SECTION 14. Transport information**

The product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the International Maritime Dangerous Goods Code (IMDG), and of the International Air Transport Association (IATA) regulations.

**14.1. UN number or ID number**

not applicable

**SBDRB317 - STAR BEADS DNase Reaction Buffer****14.2. UN proper shipping name**

not applicable

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

not applicable

**14.4. Packing group**

not applicable

**14.5. Environmental hazards**

not applicable

**14.6. Special precautions for user**

not applicable

**14.7. Maritime transport in bulk according to IMO instruments**

Information not relevant

**SECTION 15. Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

Seveso Category - Directive 2012/18/EU: None

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

None

Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors

not applicable

Substances in Candidate List (Art. 59 REACH)

On the basis of available data, the product does not contain any SVHC in percentage  $\geq$  than 0,1%.

Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to Regulation (EU) 649/2012:

None

Substances subject to the Rotterdam Convention:



**SBDRB317 - STAR BEADS DNase Reaction Buffer**

None

Substances subject to the Stockholm Convention:

None

Healthcare controls

Information not available

### 15.2. Chemical safety assessment

A chemical safety assessment has not been performed for the preparation/for the substances indicated in section 3.

## SECTION 16. Other information

### LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- ATE: Acute Toxicity Estimate
- CAS: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE: Identifier in ESIS (European archive of existing substances)
- CLP: Regulation (EC) 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: Regulation (EC) 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA: Time-weighted average exposure limit
- TWA STEL: Short-term exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

### GENERAL BIBLIOGRAPHY

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
3. Regulation (EU) 2020/878 (II Annex of REACH Regulation)
4. Regulation (EC) 790/2009 (I Atp. CLP) of the European Parliament
5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament

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9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
  10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
  11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
  12. Regulation (EU) 2016/1179 (IX Atp. CLP)
  13. Regulation (EU) 2017/776 (X Atp. CLP)
  14. Regulation (EU) 2018/669 (XI Atp. CLP)
  15. Regulation (EU) 2019/521 (XII Atp. CLP)
  16. Delegated Regulation (UE) 2018/1480 (XIII Atp. CLP)
  17. Regulation (EU) 2019/1148
  18. Delegated Regulation (UE) 2020/217 (XIV Atp. CLP)
  19. Delegated Regulation (UE) 2020/1182 (XV Atp. CLP)
  20. Delegated Regulation (UE) 2021/643 (XVI Atp. CLP)
  21. Delegated Regulation (UE) 2021/849 (XVII Atp. CLP)
  22. Delegated Regulation (UE) 2022/692 (XVIII Atp. CLP)
  23. Delegated Regulation (UE) 2023/707
- The Merck Index. - 10th Edition
  - Handling Chemical Safety
  - INRS - Fiche Toxicologique (toxicological sheet)
  - Patty - Industrial Hygiene and Toxicology
  - N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
  - IFA GESTIS website
  - ECHA website
  - Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

**Note for users:**

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

**CALCULATION METHODS FOR CLASSIFICATION**

Chemical and physical hazards: Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.

Health hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.

Environmental hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.

## SBLB187 - STAR BEADS Lysis Buffer 1

## Safety Data Sheet

According to Annex II to REACH - Regulation 2020/878 and to Annex II to UK REACH

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

#### 1.1. Product identifier

Code: SBLB187

Product name: STAR BEADS Lysis Buffer 1

Reference Kit: STAR BEADS RNA Extraction Kit - SBK308,1X10; SBK308,1X96  
STAR BEADS RNA Extraction Kit, Prefilled Plates - SBK308,2X32PFI

Kit component: STAR BEADS RNA Extraction Plate – SBK313,1X16PFI

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

Intended use: Professional Use

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

Name: CYANAGEN S.R.L.  
Full address: Via Andrea Costa 4/2  
District and Country: 40134 Bologna (BO)  
Italia

Tel. +39 051.534063 Mon-Thu 9:00-17:00, Fri 9:00-13:00  
Fax +39 051.534063

e-mail address of the competent person responsible for the Safety Data Sheet: technical.support@cyanagen.com

#### 1.4. Emergency telephone number

For urgent inquiries refer to: Israel +972-04-7771900 (24/7)  
UK NPIS 0344 892 0111  
Ireland NPIC (01) 809 2566  
Tox Info Suisse 145, h 24

### SECTION 2. Hazards identification

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

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2020/878. Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

Skin corrosion, category 1C	H314	Causes severe skin burns and eye damage.
Serious eye damage, category 1	H318	Causes serious eye damage.

#### 2.2. Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

## SBLB187 - STAR BEADS Lysis Buffer 1

Hazard pictograms:



Signal words: Danger

Hazard statements:

**H314** Causes severe skin burns and eye damage.  
**EUH032** Contact with acids liberates very toxic gas.  
**EUH071** Corrosive to the respiratory tract.

Precautionary statements:

**P260** Do not breathe dust / fume / gas / mist / vapours / spray.  
**P305+P351+P338** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
**P303+P361+P353** IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].  
**P280** Wear protective gloves/ protective clothing / eye protection / face protection.  
**P310** Immediately call a POISON CENTER / doctor.  
**P304+P340** IF INHALED: remove person to fresh air and keep comfortable for breathing.

Contains: Guanidine Thiocyanate

**2.3. Other hazards**

On the basis of available data, the product does not contain any PBT or vPvB in percentage  $\geq$  than 0,1%.

The product does not contain substances with endocrine disrupting properties in concentration  $\geq$  0.1%.

**SECTION 3. Composition/information on ingredients****3.2. Mixtures**

Contains:

Identification	x = Conc. %	Classification (EC) 1272/2008 (CLP)
<b>Guanidine Thiocyanate</b>		
INDEX -	$19,5 \leq x < 21$	Acute Tox. 4 H302, Acute Tox. 4 H312, Acute Tox. 4 H332, Skin Corr. 1C H314, Eye Dam. 1 H318, Aquatic Chronic 3 H412, EUH032, EUH071
EC 209-812-1		LD50 Oral: >593 mg/kg, STA Dermal: 1100 mg/kg, STA Inhalation mists/powders: 1,5 mg/l
CAS 593-84-0		
REACH Reg. 01-2120735072-65-XXXX		

The full wording of hazard (H) phrases is given in section 16 of the sheet.

**SBLB187 - STAR BEADS Lysis Buffer 1****SECTION 4. First aid measures****4.1. Description of first aid measures**

**EYES:** Remove contact lenses, if present. Wash immediately with plenty of water for at least 30-60 minutes, opening the eyelids fully. Get medical advice/attention.

**SKIN:** Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention.

**INGESTION:** Have the subject drink as much water as possible. Get medical advice/attention. Do not induce vomiting unless explicitly authorised by a doctor.

**INHALATION:** Get medical advice/attention immediately. Remove victim to fresh air, away from the accident scene. If the subject stops breathing, administer artificial respiration. Take suitable precautions for rescue workers.

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

Specific information on symptoms and effects caused by the product are unknown.

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

Information not available

**SECTION 5. Firefighting measures****5.1. Extinguishing media****SUITABLE EXTINGUISHING EQUIPMENT**

The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.

**UNSUITABLE EXTINGUISHING EQUIPMENT**

None in particular.

**5.2. Special hazards arising from the substance or mixture****HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE**

Do not breathe combustion products.

**5.3. Advice for firefighters****GENERAL INFORMATION**

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

**SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS**

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

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

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

**6.2. Environmental precautions**

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

**6.3. Methods and material for containment and cleaning up**

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10.

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Absorb the remainder with inert absorbent material.

Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

**6.4. Reference to other sections**

Any information on personal protection and disposal is given in sections 8 and 13.

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

Before handling the product, consult all the other sections of this material safety data sheet. Avoid leakage of the product into the environment. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat.

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

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Keep containers away from any incompatible materials, see section 10 for details.

**7.3. Specific end use(s)**

Information not available

**SECTION 8. Exposure controls/personal protection****8.1. Control parameters****Guanidine Thiocyanate**

Predicted no-effect concentration - PNEC

Normal value in fresh water	42,4	µg/L
Normal value in marine water	4,24	µg/L
Normal value for fresh water sediment	165	µg/kg
Normal value for marine water sediment	16,5	µg/kg
Normal value for water, intermittent release	424	µg/L
Normal value of STP microorganisms	20	mg/l
Normal value for the terrestrial compartment	8,03	µg/kg

**Health - Derived no-effect level - DNEL / DMEL**

Route of exposure	Effects on consumers				Effects on workers			
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				0,155 mg/kg/d				
Inhalation		3,28 mg/m3		0,27 mg/m3				1,092 mg/m3
Skin				0,155 mg/kg/d				0.31 mg/kg/d

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified ; LOW = low hazard ; MED = medium hazard ; HIGH = high hazard.

**8.2. Exposure controls**

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.

When choosing personal protective equipment, ask your chemical substance supplier for advice.

Personal protective equipment must be CE marked, showing that it complies with applicable standards.

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Provide an emergency shower with face and eye wash station.

If the product may or must come into contact or react with acids, suitable technical and/or organisational measures should be taken to prevent the development of toxic and/or inflammable gases.

**HAND PROTECTION**

Protect hands with category III work gloves (see standard EN 374).

The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.

The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

**SKIN PROTECTION**

Wear category II professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

**EYE PROTECTION**

Wear airtight protective goggles (see standard EN 166).

**RESPIRATORY PROTECTION**

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, use a mask with a type A filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

**ENVIRONMENTAL EXPOSURE CONTROLS**

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

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

Properties	Value	Information
Appearance	liquid	
Colour	colourless	
Odour	odourless	
Melting point / freezing point	not available	
Initial boiling point	not available	
Flammability	not available	
Lower explosive limit	not available	
Upper explosive limit	not available	
Flash point	> 60 °C	
Auto-ignition temperature	not available	
Decomposition temperature	not available	
pH	8,00	
Kinematic viscosity	18.30 mm <sup>2</sup> /s	Temperature: 40 °C
Solubility	not available	
Partition coefficient: n-octanol/water	not available	
Vapour pressure	not available	
Density and/or relative density	1,124 kg/l	
Relative vapour density	not available	
Particle characteristics	not applicable	

**SBLB187 - STAR BEADS Lysis Buffer 1****9.2. Other information**

## 9.2.1. Information with regard to physical hazard classes

Information not available

## 9.2.2. Other safety characteristics

Information not available

**SECTION 10. Stability and reactivity****10.1. Reactivity**

There are no particular risks of reaction with other substances in normal conditions of use.

**10.2. Chemical stability**

The product is stable in normal conditions of use and storage.

**10.3. Possibility of hazardous reactions**

No hazardous reactions are foreseeable in normal conditions of use and storage.

**10.4. Conditions to avoid**

None in particular. However the usual precautions used for chemical products should be respected.

**10.5. Incompatible materials**

Information not available

**10.6. Hazardous decomposition products**

Information not available

**SECTION 11. Toxicological information**

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.

It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**Metabolism, toxicokinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

Information not available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

## Guanidine Thiocyanate

The product is a corrosive material. The adoption of gastric lavage or induction of vomiting are contraindicated practices. Possible perforation of the stomach or esophagus should be investigated. Ingestion causes severe swelling, severe damage to the soft tissue and danger of perforation.



**SBLB187 - STAR BEADS Lysis Buffer 1**Interactive effects

Information not available

ACUTE TOXICITY

Corrosive to the respiratory tract.

ATE (Inhalation - mists / powders) of the mixture:	> 5 mg/l
ATE (Oral) of the mixture:	>2000 mg/kg
ATE (Dermal) of the mixture:	>2000 mg/kg

Guanidine Thiocyanate

STA (Dermal):	1100 mg/kg estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture)
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LD50 (Oral):	> 593 mg/kg rat
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SODIUM CHLORIDE

LD50 (Dermal):	> 10000 mg/kg Rat
LD50 (Oral):	3000 mg/kg Rat

Guanidine Thiocyanate  
Category 4

SKIN CORROSION / IRRITATION

Corrosive for the skin

Guanidine Thiocyanate  
Category 1 C

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye damage

Guanidine Thiocyanate  
Category 1

RESPIRATORY OR SKIN SENSITISATION

Does not meet the classification criteria for this hazard class

Respiratory sensitization

Guanidine Thiocyanate  
Based on available data, the classification criteria are not met

Skin sensitization

Guanidine Thiocyanate  
Based on available data, the classification criteria are not met

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

Guanidine Thiocyanate  
Based on available data, the classification criteria are not met

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

**SBLB187 - STAR BEADS Lysis Buffer 1**

Guanidine Thiocyanate

Based on available data, the classification criteria are not met

**REPRODUCTIVE TOXICITY**

Does not meet the classification criteria for this hazard class

Guanidine Thiocyanate

Based on available data, the classification criteria are not met

**STOT - SINGLE EXPOSURE**

Does not meet the classification criteria for this hazard class

Guanidine Thiocyanate

Based on available data, the classification criteria are not met

**STOT - REPEATED EXPOSURE**

Does not meet the classification criteria for this hazard class

Guanidine Thiocyanate

Based on available data, the classification criteria are not met

**Target organs**

Guanidine Thiocyanate

None known

**ASPIRATION HAZARD**

Does not meet the classification criteria for this hazard class

Guanidine Thiocyanate

Not applicable

Solid State

**11.2. Information on other hazards**

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with human health effects under evaluation.

**SECTION 12. Ecological information**

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation.

**12.1. Toxicity**

Guanidine Thiocyanate

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains the following substances which are harmful to the environment.

Guanidine Thiocyanate

LC50 - for Fish > 89,1 mg/L 96h

EC50 - for Crustacea 42,4 mg/L 48h

**12.2. Persistence and degradability**

Guanidine Thiocyanate

Persistence is unlikely.

**SBLB187 - STAR BEADS Lysis Buffer 1**

## SODIUM CHLORIDE

Degradability: information not available

**12.3. Bioaccumulative potential**

Guanidine Thiocyanate  
Bioaccumulation is unlikely.

**12.4. Mobility in soil**

Guanidine Thiocyanate  
The product is water soluble and can spread in water systems. It is likely to be mobile in the environment due to its solubility in water. Very mobile in soils.

**12.5. Results of PBT and vPvB assessment**

Guanidine Thiocyanate  
Substance not regarded as persistent, bioaccumulating or toxic (PBT) / very persistent nor very bioaccumulating (vPvB). On the basis of available data, the product does not contain any PBT or vPvB in percentage  $\geq$  than 0,1%. On the basis of available data, the product does not contain any PBT or vPvB in percentage  $\geq$  than 0,1%.

**12.6. Endocrine disrupting properties**

Guanidine Thiocyanate  
Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with environmental effects under evaluation.

**12.7. Other adverse effects**

Information not available

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

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

Waste transportation may be subject to ADR restrictions.

**CONTAMINATED PACKAGING**

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

**SECTION 14. Transport information****14.1. UN number or ID number**

ADR / RID, IMDG, IATA: 1760

**14.2. UN proper shipping name**

ADR / RID: CORROSIVE LIQUID, N.O.S. (Guanidine Thiocyanate)

IMDG: CORROSIVE LIQUID, N.O.S. (Guanidine Thiocyanate)

IATA: CORROSIVE LIQUID, N.O.S. (Guanidine Thiocyanate)

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

ADR / RID: Class: 8 Label: 8



**SBLB187 - STAR BEADS Lysis Buffer 1**

IMDG: Class: 8 Label: 8



IATA: Class: 8 Label: 8

**14.4. Packing group**

ADR / RID, IMDG, IATA: III

**14.5. Environmental hazards**

ADR / RID: NO

IMDG: NO

IATA: NO

**14.6. Special precautions for user**

ADR / RID: HIN - Kemler: 80

Limited  
Quantities: 5 LTunnel  
restriction  
code: (E)

Special provision: -

IMDG: EMS: F-A, S-B

Limited  
Quantities: 5 L  
Maximum  
quantity: 60 L

IATA: Cargo:

Packaging  
instructions:  
856

Pass.:

Maximum  
quantity: 5 LPackaging  
instructions:  
852

Special provision:

A3, A803

**14.7. Maritime transport in bulk according to IMO instruments**

Information not relevant

**SECTION 15. Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

Seveso Category - Directive 2012/18/EU: None

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006Product  
Point

3

Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors

not applicable

Substances in Candidate List (Art. 59 REACH)On the basis of available data, the product does not contain any SVHC in percentage  $\geq$  than 0,1%.Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to Regulation (EU) 649/2012:

**SBLB187 - STAR BEADS Lysis Buffer 1**

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Healthcare controls

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

### 15.2. Chemical safety assessment

A chemical safety assessment has not been performed for the preparation/for the substances indicated in section 3.

## SECTION 16. Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

<b>Acute Tox. 4</b>	Acute toxicity, category 4
<b>Skin Corr. 1C</b>	Skin corrosion, category 1C
<b>Eye Dam. 1</b>	Serious eye damage, category 1
<b>Aquatic Chronic 3</b>	Hazardous to the aquatic environment, chronic toxicity, category 3
<b>H302</b>	Harmful if swallowed.
<b>H312</b>	Harmful in contact with skin.
<b>H332</b>	Harmful if inhaled.
<b>H314</b>	Causes severe skin burns and eye damage.
<b>H318</b>	Causes serious eye damage.
<b>H412</b>	Harmful to aquatic life with long lasting effects.
<b>EUH032</b>	Contact with acids liberates very toxic gas.
<b>EUH071</b>	Corrosive to the respiratory tract.

#### LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- ATE: Acute Toxicity Estimate
- CAS: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE: Identifier in ESIS (European archive of existing substances)
- CLP: Regulation (EC) 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration

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- REACH: Regulation (EC) 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA: Time-weighted average exposure limit
- TWA STEL: Short-term exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

**GENERAL BIBLIOGRAPHY**

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
  2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
  3. Regulation (EU) 2020/878 (II Annex of REACH Regulation)
  4. Regulation (EC) 790/2009 (I Atp. CLP) of the European Parliament
  5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
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  14. Regulation (EU) 2018/669 (XI Atp. CLP)
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  17. Regulation (EU) 2019/1148
  18. Delegated Regulation (UE) 2020/217 (XIV Atp. CLP)
  19. Delegated Regulation (UE) 2020/1182 (XV Atp. CLP)
  20. Delegated Regulation (UE) 2021/643 (XVI Atp. CLP)
  21. Delegated Regulation (UE) 2021/849 (XVII Atp. CLP)
  22. Delegated Regulation (UE) 2022/692 (XVIII Atp. CLP)
- The Merck Index. - 10th Edition
  - Handling Chemical Safety
  - INRS - Fiche Toxicologique (toxicological sheet)
  - Patty - Industrial Hygiene and Toxicology
  - N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
  - IFA GESTIS website
  - ECHA website
  - Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

**Note for users:**

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

**CALCULATION METHODS FOR CLASSIFICATION**

Chemical and physical hazards: Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.

Health hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.

Environmental hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.

## Safety Data Sheet

According to Annex II to REACH - Regulation (EU) 2020/878 and to Annex II to UK REACH

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

#### 1.1. Product identifier

Code: SBB188

Product name: STAR BEADS Magnetic Beads

Reference Kit: STAR BEADS RNA Extraction Kit - SBK308,1X10; SBK308,1X96  
STAR BEADS RNA Extraction Kit, Prefilled Plates - SBK308,2X32PFI

Kit component: STAR BEADS RNA Extraction Plate – SBK313,1X16PFI

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

Intended use: Professional Use

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

Name: CYANAGEN S.R.L.  
Full address: Via Andrea Costa 4/2  
District and Country: 40134 Bologna (BO)  
Italia  
Tel. +39 051.534063 Mon-Thu 9:00-17:00, Fri 9:00-13:00  
Fax +39 051.534063  
e-mail address of the competent person responsible for the Safety Data Sheet: technical.support@cyanagen.com

#### 1.4. Emergency telephone number

For urgent inquiries refer to: Israel +972-04-7771900 (24/7)  
UK NPIS 0344 892 0111  
Ireland NPIC (01) 809 2566  
Tox Info Suisse 145, h 24

### SECTION 2. Hazards identification

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

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2020/878. Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:  
Skin corrosion, category 1C H314 Causes severe skin burns and eye damage.  
Serious eye damage, category 1 H318 Causes serious eye damage.

## SBB188 - STAR BEADS Magnetic Beads

**2.2. Label elements**

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:



Signal words: Danger

Hazard statements:

**H314** Causes severe skin burns and eye damage.  
**EUH032** Contact with acids liberates very toxic gas.  
**EUH071** Corrosive to the respiratory tract.

Precautionary statements:

**P260** Do not breathe dust / fume / gas / mist / vapours / spray.  
**P305+P351+P338** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
**P303+P361+P353** IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].  
**P280** Wear protective gloves/ protective clothing / eye protection / face protection.  
**P310** Immediately call a POISON CENTER / doctor.  
**P304+P340** IF INHALED: remove person to fresh air and keep comfortable for breathing.

Contains: Guanidine Thiocyanate

**2.3. Other hazards**

On the basis of available data, the product does not contain any PBT or vPvB in percentage  $\geq$  than 0,1%.

The product does not contain substances with endocrine disrupting properties in concentration  $\geq$  0.1%.

**SECTION 3. Composition/information on ingredients****3.2. Mixtures**

Contains:

Identification	x = Conc. %	Classification (EC) 1272/2008 (CLP)
<b>Guanidine Thiocyanate</b>		
INDEX -	$22,5 \leq x < 24$	Acute Tox. 4 H302, Acute Tox. 4 H312, Acute Tox. 4 H332, Skin Corr. 1C H314, Eye Dam. 1 H318, Aquatic Chronic 3 H412, EUH032, EUH071
EC 209-812-1		LD50 Oral: >593 mg/kg, ATE Dermal: 1100 mg/kg, ATE Inhalation mists/powders: 1,5 mg/l
CAS 593-84-0		
REACH Reg. 01-2120735072 -65-XXXX		

The full wording of hazard (H) phrases is given in section 16 of the sheet.



**SBB188 - STAR BEADS Magnetic Beads****SECTION 4. First aid measures****4.1. Description of first aid measures**

**EYES:** Remove contact lenses, if present. Wash immediately with plenty of water for at least 30-60 minutes, opening the eyelids fully. Get medical advice/attention.

**SKIN:** Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention.

**INGESTION:** Have the subject drink as much water as possible. Get medical advice/attention. Do not induce vomiting unless explicitly authorised by a doctor.

**INHALATION:** Get medical advice/attention immediately. Remove victim to fresh air, away from the accident scene. If the subject stops breathing, administer artificial respiration. Take suitable precautions for rescue workers.

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

Specific information on symptoms and effects caused by the product are unknown.

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

Information not available

**SECTION 5. Firefighting measures****5.1. Extinguishing media****SUITABLE EXTINGUISHING EQUIPMENT**

The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.

**UNSUITABLE EXTINGUISHING EQUIPMENT**

None in particular.

**5.2. Special hazards arising from the substance or mixture****HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE**

Do not breathe combustion products.

**5.3. Advice for firefighters****GENERAL INFORMATION**

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

**SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS**

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

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

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

**SBB188 - STAR BEADS Magnetic Beads****6.2. Environmental precautions**

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

**6.3. Methods and material for containment and cleaning up**

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.

Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

**6.4. Reference to other sections**

Any information on personal protection and disposal is given in sections 8 and 13.

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

Before handling the product, consult all the other sections of this material safety data sheet. Avoid leakage of the product into the environment. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat.

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

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Keep containers away from any incompatible materials, see section 10 for details.

**7.3. Specific end use(s)**

Information not available

**SECTION 8. Exposure controls/personal protection****8.1. Control parameters****Guanidine Thiocyanate****Predicted no-effect concentration - PNEC**

Normal value in fresh water	42,4	µg/L
Normal value in marine water	4,24	µg/L
Normal value for fresh water sediment	165	µg/kg
Normal value for marine water sediment	16,5	µg/kg
Normal value for water, intermittent release	424	µg/L
Normal value of STP microorganisms	20	mg/l
Normal value for the terrestrial compartment	8,03	µg/kg

**Health - Derived no-effect level - DNEL / DMEL**

Route of exposure	Effects on consumers			Effects on workers				
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				0,155 mg/kg/d				
Inhalation		3,28 mg/m3		0,27 mg/m3				1,092 mg/m3
Skin				0,155 mg/kg/d				0.31 mg/kg/d

**SBB188 - STAR BEADS Magnetic Beads**

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified ; LOW = low hazard ; MED = medium hazard ; HIGH = high hazard.

**8.2. Exposure controls**

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.

When choosing personal protective equipment, ask your chemical substance supplier for advice.

Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

If the product may or must come into contact or react with acids, suitable technical and/or organisational measures should be taken to prevent the development of toxic and/or inflammable gases.

**HAND PROTECTION**

Protect hands with category III work gloves.

The following should be considered when choosing work glove material (see standard EN 374): compatibility, degradation, permeability time.

The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

**SKIN PROTECTION**

Wear category II professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

**EYE PROTECTION**

Wear airtight protective goggles (see standard EN ISO 16321).

**RESPIRATORY PROTECTION**

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. Use a mask with a type A filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387).

If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

**ENVIRONMENTAL EXPOSURE CONTROLS**

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

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

Properties	Value	Information
Appearance	liquid	
Colour	Black suspension	
Odour	odourless	
Melting point / freezing point	not available	
Initial boiling point	not available	
Flammability	not available	
Lower explosive limit	not available	
Upper explosive limit	not available	

**SBB188 - STAR BEADS Magnetic Beads**

Flash point	> 60 °C	
Auto-ignition temperature	not available	
Decomposition temperature	not available	
pH	7,00	
Kinematic viscosity	not available	
Dynamic viscosity	18,60 mm <sup>2</sup> /s	Temperature: 40 °C
Solubility	not available	
Partition coefficient: n-octanol/water	not available	
Vapour pressure	not available	
Density and/or relative density	1,056 kg/l	
Relative vapour density	not available	
Particle characteristics	not applicable	

**9.2. Other information**

## 9.2.1. Information with regard to physical hazard classes

Information not available

## 9.2.2. Other safety characteristics

Information not available

**SECTION 10. Stability and reactivity****10.1. Reactivity**

There are no particular risks of reaction with other substances in normal conditions of use.

**10.2. Chemical stability**

The product is stable in normal conditions of use and storage.

**10.3. Possibility of hazardous reactions**

No hazardous reactions are foreseeable in normal conditions of use and storage.

**10.4. Conditions to avoid**

None in particular. However the usual precautions used for chemical products should be respected.

**10.5. Incompatible materials**

Information not available

**10.6. Hazardous decomposition products**

Information not available

**SBB188 - STAR BEADS Magnetic Beads****SECTION 11. Toxicological information**

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.

It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**Metabolism, toxicokinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

Information not available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

## Guanidine Thiocyanate

The product is a corrosive material. The adoption of gastric lavage or induction of vomiting are contraindicated practices. Possible perforation of the stomach or esophagus should be investigated. Ingestion causes severe swelling, severe damage to the soft tissue and danger of perforation.

Interactive effects

Information not available

ACUTE TOXICITY

Corrosive to the respiratory tract.

ATE (Inhalation - mists / powders) of the mixture:	> 5 mg/l
ATE (Oral) of the mixture:	>2000 mg/kg
ATE (Dermal) of the mixture:	>2000 mg/kg

## Guanidine Thiocyanate

ATE (Dermal):	1100 mg/kg estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture)
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LD50 (Oral):	> 593 mg/kg rat
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Guanidine Thiocyanate  
Category 4

SKIN CORROSION / IRRITATION

Corrosive for the skin

Guanidine Thiocyanate  
Category 1 C

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye damage

**SBB188 - STAR BEADS Magnetic Beads**

Guanidine Thiocyanate  
Category 1

**RESPIRATORY OR SKIN SENSITISATION**

Does not meet the classification criteria for this hazard class

**Respiratory sensitization**

Guanidine Thiocyanate  
Based on available data, the classification criteria are not met

**Skin sensitization**

Guanidine Thiocyanate  
Based on available data, the classification criteria are not met

**GERM CELL MUTAGENICITY**

Does not meet the classification criteria for this hazard class

Guanidine Thiocyanate  
Based on available data, the classification criteria are not met

**CARCINOGENICITY**

Does not meet the classification criteria for this hazard class

Guanidine Thiocyanate  
Based on available data, the classification criteria are not met  
This product contains no known carcinogenic chemicals

**REPRODUCTIVE TOXICITY**

Does not meet the classification criteria for this hazard class

Guanidine Thiocyanate  
Based on available data, the classification criteria are not met

**STOT - SINGLE EXPOSURE**

Does not meet the classification criteria for this hazard class

Guanidine Thiocyanate  
Based on available data, the classification criteria are not met

**STOT - REPEATED EXPOSURE**

Does not meet the classification criteria for this hazard class

Guanidine Thiocyanate  
Based on available data, the classification criteria are not met

**SBB188 - STAR BEADS Magnetic Beads**Target organs

Guanidine Thiocyanate  
None known

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

Guanidine Thiocyanate  
Not applicable  
Solid State

**11.2. Information on other hazards**

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with human health effects under evaluation.

**SECTION 12. Ecological information**

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation.

**12.1. Toxicity**

Guanidine Thiocyanate  
Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains the following substances which are harmful to the environment.

Guanidine Thiocyanate	
LC50 - for Fish	> 89,1 mg/L 96h
EC50 - for Crustacea	42,4 mg/L 48h

**12.2. Persistence and degradability**

Guanidine Thiocyanate  
Persistence is unlikely.

**12.3. Bioaccumulative potential**

Guanidine Thiocyanate  
Bioaccumulation is unlikely.

**12.4. Mobility in soil**

Guanidine Thiocyanate  
The product is water soluble and can spread in water systems. It is likely to be mobile in the environment due to its solubility in water. Very mobile in soils.

**12.5. Results of PBT and vPvB assessment**

Guanidine Thiocyanate  
Substance not regarded as persistent, bioaccumulating or toxic (PBT) / very persistent nor very bioaccumulating (vPvB).

**SBB188 - STAR BEADS Magnetic Beads**

On the basis of available data, the product does not contain any PBT or vPvB in percentage  $\geq$  than 0,1%.

**12.6. Endocrine disrupting properties**

Guanidine Thiocyanate

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with environmental effects under evaluation.

**12.7. Other adverse effects**

Information not available

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

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

**SECTION 14. Transport information**

The product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the International Maritime Dangerous Goods Code (IMDG), and of the International Air Transport Association (IATA) regulations.

**14.1. UN number or ID number**

not applicable

**14.2. UN proper shipping name**

not applicable

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

not applicable

**14.4. Packing group**

not applicable

**14.5. Environmental hazards**

not applicable

**14.6. Special precautions for user**

not applicable



**SBB188 - STAR BEADS Magnetic Beads****14.7. Maritime transport in bulk according to IMO instruments**

Information not relevant

**SECTION 15. Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

Seveso Category - Directive 2012/18/EU: None

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

Product

Point 3

Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors

not applicable

Substances in Candidate List (Art. 59 REACH)

On the basis of available data, the product does not contain any SVHC in percentage  $\geq$  than 0,1%.

Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to Regulation (EU) 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Healthcare controls

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

**15.2. Chemical safety assessment**

A chemical safety assessment has not been performed for the preparation/for the substances indicated in section 3.

**SBB188 - STAR BEADS Magnetic Beads****SECTION 16. Other information**

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

<b>Acute Tox. 4</b>	Acute toxicity, category 4
<b>Skin Corr. 1C</b>	Skin corrosion, category 1C
<b>Eye Dam. 1</b>	Serious eye damage, category 1
<b>Aquatic Chronic 3</b>	Hazardous to the aquatic environment, chronic toxicity, category 3
<b>H302</b>	Harmful if swallowed.
<b>H312</b>	Harmful in contact with skin.
<b>H332</b>	Harmful if inhaled.
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<b>EUH071</b>	Corrosive to the respiratory tract.

**LEGEND:**

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- ATE: Acute Toxicity Estimate
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- TWA STEL: Short-term exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

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**SBB188 - STAR BEADS Magnetic Beads**

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  18. Delegated Regulation (UE) 2020/217 (XIV Atp. CLP)
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  20. Delegated Regulation (UE) 2021/643 (XVI Atp. CLP)
  21. Delegated Regulation (UE) 2021/849 (XVII Atp. CLP)
  22. Delegated Regulation (UE) 2022/692 (XVIII Atp. CLP)
  23. Delegated Regulation (UE) 2023/707
- The Merck Index. - 10th Edition
  - Handling Chemical Safety
  - INRS - Fiche Toxicologique (toxicological sheet)
  - Patty - Industrial Hygiene and Toxicology
  - N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
  - IFA GESTIS website
  - ECHA website
  - Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

**Note for users:**

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

**CALCULATION METHODS FOR CLASSIFICATION**

Chemical and physical hazards: Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.

Health hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.

Environmental hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.

## SBWB284 - STAR BEADS Washing Buffer 1G

## Safety Data Sheet

According to Annex II to REACH - Regulation 2020/878 and to Annex II to UK REACH

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

#### 1.1. Product identifier

Code: SBWB284

Product name: STAR BEADS Washing Buffer 1G

Reference Kit: STAR BEADS RNA Extraction Kit – SBK308,1X10; SBK308,1X96  
STAR BEADS RNA Extraction Kit, Prefilled Plates – SBK308,2X32PFI

Kit Component: STAR BEADS RNA Extraction Plate – SBK313,1X16PFI

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

Intended use: Professional Use

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

Name: CYANAGEN S.R.L.  
Full address: Via Andrea Costa 4/2  
District and Country: 40134 Bologna (BO)  
Italia

Tel. +39 051.534063 Mon-Thu 9:00-17:00, Fri 9:00-13:00  
Fax +39 051.534063

e-mail address of the competent person responsible for the Safety Data Sheet: technical.support@cyanagen.com

#### 1.4. Emergency telephone number

For urgent inquiries refer to: Israel +972-04-7771900 (24/7)  
UK NPIS 0344 892 0111  
Ireland NPIC (01) 809 2566  
Tox Info Suisse 145, h 24

### SECTION 2. Hazards identification

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

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2020/878. Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

Flammable liquid, category 3	H226	Flammable liquid and vapour.
Acute toxicity, category 4	H302	Harmful if swallowed.
Acute toxicity, category 4	H332	Harmful if inhaled.
Eye irritation, category 2	H319	Causes serious eye irritation.
Skin irritation, category 2	H315	Causes skin irritation.

## SBWB284 - STAR BEADS Washing Buffer 1G

**2.2. Label elements**

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:



Signal words: Warning

Hazard statements:

**H226** Flammable liquid and vapour.  
**H302+H332** Harmful if swallowed or if inhaled.  
**H319** Causes serious eye irritation.  
**H315** Causes skin irritation.

Precautionary statements:

**P210** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
**P280** Wear protective gloves/ protective clothing / eye protection / face protection.  
**P370+P378** In case of fire: use carbon dioxide, foam, chemical powder to extinguish.  
**P261** Avoid breathing dust / fume / gas / mist / vapours / spray.  
**P312** Call a POISON CENTRE / doctor if you feel unwell.  
**P264** Wash hands thoroughly after handling.

**Contains:** Guanidine hydrochloride

**2.3. Other hazards**

In case of fire: Use carbon dioxide, foam, chemical powder for extinction.  
 On the basis of available data, the product does not contain any PBT or vPvB in percentage  $\geq$  than 0,1%.  
 The product does not contain substances with endocrine disrupting properties in concentration  $\geq$  0.1%.

**SECTION 3. Composition/information on ingredients****3.2. Mixtures**

Contains:

Identification	x = Conc. %	Classification (EC) 1272/2008 (CLP)
<b>ETHANOL</b>		
INDEX 603-002-00-5	$45 \leq x < 47,5$	Flam. Liq. 2 H225
EC 200-578-6		
CAS 64-17-5		
<b>Guanidine hydrochloride</b>		
INDEX 607-148-00-0	$32,5 \leq x < 35$	Acute Tox. 4 H302, Acute Tox. 4 H332, Eye Irrit. 2 H319, Skin Irrit. 2 H315
EC 200-002-3		LD50 Oral: >475 mg/kg, STA Inhalation mists/powders: 1,5 mg/l
CAS 50-01-1		

**SBWB284 - STAR BEADS Washing Buffer 1G**

REACH Reg. 01-2119977063-35-XXXX

The full wording of hazard (H) phrases is given in section 16 of the sheet.

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

**EYES:** Remove contact lenses, if present. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. If problem persists, seek medical advice.

**SKIN:** Remove contaminated clothing. Wash immediately with plenty of water. If irritation persists, get medical advice/attention. Wash contaminated clothing before using it again.

**INHALATION:** Remove to open air. In the event of breathing difficulties, get medical advice/attention immediately.

**INGESTION:** Get medical advice/attention. Induce vomiting only if indicated by the doctor. Never give anything by mouth to an unconscious person, unless authorised by a doctor.

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

Specific information on symptoms and effects caused by the product are unknown.

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

Information not available

**SECTION 5. Firefighting measures****5.1. Extinguishing media****SUITABLE EXTINGUISHING EQUIPMENT**

Extinguishing substances are: carbon dioxide, foam, chemical powder. For product loss or leakage that has not caught fire, water spray can be used to disperse flammable vapours and protect those trying to stem the leak.

**UNSUITABLE EXTINGUISHING EQUIPMENT**

Do not use jets of water. Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.

**5.2. Special hazards arising from the substance or mixture****HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE**

Excess pressure may form in containers exposed to fire at a risk of explosion. Do not breathe combustion products.

**5.3. Advice for firefighters****GENERAL INFORMATION**

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

**SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS**

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

**SBWB284 - STAR BEADS Washing Buffer 1G****SECTION 6. Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

Send away individuals who are not suitably equipped. Use explosion-proof equipment. Eliminate all sources of ignition (cigarettes, flames, sparks, etc.) from the leakage site.

**6.2. Environmental precautions**

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

**6.3. Methods and material for containment and cleaning up**

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.

Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

**6.4. Reference to other sections**

Any information on personal protection and disposal is given in sections 8 and 13.

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

Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Without adequate ventilation, vapours may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges. When performing transfer operations involving large containers, connect to an earthing system and wear antistatic footwear. Vigorous stirring and flow through the tubes and equipment may cause the formation and accumulation of electrostatic charges. In order to avoid the risk of fires and explosions, never use compressed air when handling. Open containers with caution as they may be pressurised. Do not eat, drink or smoke during use. Avoid leakage of the product into the environment.

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

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Store in a cool and well ventilated place, keep far away from sources of heat, naked flames and sparks and other sources of ignition. Keep containers away from any incompatible materials, see section 10 for details.

**7.3. Specific end use(s)**

Information not available

## SBWB284 - STAR BEADS Washing Buffer 1G

## SECTION 8. Exposure controls/personal protection

## 8.1. Control parameters

## Regulatory References:

DEU	Deutschland	Technischen Regeln für Gefahrstoffe (TRGS 900) - Liste der Arbeitsplatzgrenzwerte und Kurzzeitwerte. MAK- und BAT-Werte-Liste 2020, Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe, Mitteilung 56
ESP	España	Límites de exposición profesional para agentes químicos en España 2021
FRA	France	Valeurs limites d'exposition professionnelle aux agents chimiques en France. ED 984 - INRS
GRC	Ελλάδα	Π.Δ. 26/2020 (ΦΕΚ 50/Α` 6.3.2020) Εναρμόνιση της ελληνικής νομοθεσίας προς τις διατάξεις των οδηγιών 2017/2398/ΕΕ, 2019/130/ΕΕ και 2019/983/ΕΕ «για την τροποποίηση της οδηγίας 2004/37/ΕΚ σχετικά με την προστασία των εργαζομένων από τους κινδύνους που συνδέονται με την έκθεση σε καρκινογόνους ή μεταλλαξιογόνους παράγοντες κατά την εργασία» Rozporządzenie ministra rozwoju, pracy i technologii z dnia 18 lutego 2021 r. Zmieniające rozporządzenie w sprawie najwyższych dopuszczalnych stężeń i natężeń czynników szkodliwych dla zdrowia w środowisku pracy
POL	Polska	Pravilnik o varovanju delavcev pred tveganji zaradi izpostavljenosti kemičnim snovem pri delu (Uradni list RS, št. 100/01, 39/05, 53/07, 102/10, 43/11 – ZVZD-1, 38/15, 78/18 in 78/19)
SVN	Slovenija	EH40/2005 Workplace exposure limits (Fourth Edition 2020)
GBR	United Kingdom	TLV-ACGIH

## ETHANOL

## Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
AGW	DEU	380	200	1520	800	
MAK	DEU	380	200	1520	800	
VLA	ESP			1910	1000	
VLEP	FRA	1900	1000	9500	5000	
TLV	GRC	1900	1000			
NDS/NDSch	POL	1900				
MV	SVN	960	500	1920	1000	
WEL	GBR	1920	1000			
TLV-ACGIH				1884	1000	

## Guanidine hydrochloride

## Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers			Effects on workers				
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				0,5 mg/kg				
Inhalation				0,87 mg/m3	10,5	10,5 mg/m3		3,5 mg/m3
Skin				0,5 mg/kg				1 mg/kg

## Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified ; LOW = low hazard ; MED = medium hazard ; HIGH = high hazard.



**SBWB284 - STAR BEADS Washing Buffer 1G****8.2. Exposure controls**

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.

When choosing personal protective equipment, ask your chemical substance supplier for advice.

Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

**HAND PROTECTION**

Protect hands with category III work gloves (see standard EN 374).

The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.

The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

**SKIN PROTECTION**

Wear category II professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

Consider the appropriateness of providing antistatic clothing in the case of working environments in which there is a risk of explosion.

**EYE PROTECTION**

Wear airtight protective goggles (see standard EN 166).

In the presence of risks of exposure to splashes or squirts during work, adequate mouth, nose and eye protection should be used to prevent accidental absorption.

**RESPIRATORY PROTECTION**

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, wear a mask with a type AX filter, whose limit of use will be defined by the manufacturer (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

**ENVIRONMENTAL EXPOSURE CONTROLS**

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

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

Properties	Value	Information
Appearance	liquid	
Colour	colourless	
Odour	odourless	
Melting point / freezing point	not available	
Initial boiling point	> 98 °C	
Flammability	flammable liquid	

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Lower explosive limit	not available	
Upper explosive limit	not available	
Flash point	30 °C	
Auto-ignition temperature	not available	
Decomposition temperature	not available	
pH	6,00	Concentration: 100 %
Kinematic viscosity	26.50 mm <sup>2</sup> /s	
Solubility	not available	
Partition coefficient: n-octanol/water	not available	
Vapour pressure	not available	
Density and/or relative density	0,99 kg/l	
Relative vapour density	not available	
Particle characteristics	not applicable	

**9.2. Other information**

## 9.2.1. Information with regard to physical hazard classes

Information not available

## 9.2.2. Other safety characteristics

Information not available

**SECTION 10. Stability and reactivity****10.1. Reactivity**

There are no particular risks of reaction with other substances in normal conditions of use.

**10.2. Chemical stability**

The product is stable in normal conditions of use and storage.

**10.3. Possibility of hazardous reactions**

The vapours may also form explosive mixtures with the air.

**ETHANOL**

Risk of explosion on contact with: alkaline metals, alkaline oxides, calcium hypochlorite, sulphur monofluoride, acetic anhydride, acids, concentrated hydrogen peroxide, perchlorates, perchloric acid, perchloronitrile, mercury nitrate, nitric acid, silver, silver nitrate, ammonia, silver oxide, ammonia, strong oxidising agents, nitrogen dioxide. May react dangerously with: bromoacetylene, chlorine acetylene, bromine trifluoride, chromium trioxide, chromyl chloride, fluorine, potassium tert-butoxide, lithium hydride, phosphorus trioxide, black platinum, zirconium (IV) chloride, zirconium (IV) iodide. Forms explosive mixtures with: air.

**10.4. Conditions to avoid**

Avoid overheating. Avoid bunching of electrostatic charges. Avoid all sources of ignition.

## SBWB284 - STAR BEADS Washing Buffer 1G

## ETHANOL

Avoid exposure to: sources of heat, naked flames.

**10.5. Incompatible materials**

Information not available

**10.6. Hazardous decomposition products**

In the event of thermal decomposition or fire, gases and vapours that are potentially dangerous to health may be released.

**SECTION 11. Toxicological information**

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.

It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**Metabolism, toxicokinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

Information not available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Information not available

Interactive effects

Information not available

ACUTE TOXICITY

ATE (Inhalation - mists / powders) of the mixture:	4,3 mg/l
ATE (Oral) of the mixture:	1357,43 mg/kg
ATE (Dermal) of the mixture:	Not classified (no significant component)

## ETHANOL

LD50 (Oral):	> 5000 mg/kg Rat
LC50 (Inhalation vapours):	117 mg/l/4h Rat

**SBWB284 - STAR BEADS Washing Buffer 1G**

Guanidine hydrochloride

LD50 (Dermal): > 2000 mg/kg Rabbit  
LD50 (Oral): > 475 mg/kg Rat  
LC50 (Inhalation vapours): > 3,2 mg/l/4h Rat  
STA (Inhalation mists/powders): 1,5 mg/l  
(figure used for calculation of the acute toxicity estimate of the mixture)

Guanidine hydrochloride  
Category 4

**SKIN CORROSION / IRRITATION**

Causes skin irritation

Guanidine hydrochloride  
Category 2

**SERIOUS EYE DAMAGE / IRRITATION**

Causes serious eye irritation

Guanidine hydrochloride  
Category 2

**RESPIRATORY OR SKIN SENSITISATION**

Does not meet the classification criteria for this hazard class

Guanidine hydrochloride  
Based on available data, the classification criteria are not met

**Respiratory sensitization**

Guanidine hydrochloride  
Based on available data, the classification criteria are not met

**Skin sensitization**

Guanidine hydrochloride  
Based on available data, the classification criteria are not met

**GERM CELL MUTAGENICITY**

Does not meet the classification criteria for this hazard class

Guanidine hydrochloride  
Based on available data, the classification criteria are not met  
Not mutagenic in the AMES test

**CARCINOGENICITY**

Does not meet the classification criteria for this hazard class

Guanidine hydrochloride  
Based on available data, the classification criteria are not met

**SBWB284 - STAR BEADS Washing Buffer 1G**

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

Guanidine hydrochloride  
Based on available data, the classification criteria are not met

STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

Guanidine hydrochloride  
Based on available data, the classification criteria are not met

Target organs

Guanidine hydrochloride  
None known.

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

Guanidine hydrochloride  
Based on available data, the classification criteria are not met

Target organs

Guanidine hydrochloride  
None known.

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

Guanidine hydrochloride  
Not applicable  
Solid State

**11.2. Information on other hazards**

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with human health effects under evaluation.

**SECTION 12. Ecological information**

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation.

**SBWB284 - STAR BEADS Washing Buffer 1G****12.1. Toxicity**

Guanidine hydrochloride

LC50 - for Fish 1850 mg/l/96h

EC50 - for Crustacea 70 mg/l/48h

EC50 - for Algae / Aquatic Plants 33 mg/l/72h

**12.2. Persistence and degradability**

ETHANOL

Solubility in water 1000 - 10000 mg/l

Rapidly degradable

**12.3. Bioaccumulative potential**

ETHANOL

Partition coefficient: n-octanol/water -0,35

**12.4. Mobility in soil**

Information not available

**12.5. Results of PBT and vPvB assessment**

On the basis of available data, the product does not contain any PBT or vPvB in percentage  $\geq$  than 0,1%.

**12.6. Endocrine disrupting properties**

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with environmental effects under evaluation.

**12.7. Other adverse effects**

Information not available

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

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

Waste transportation may be subject to ADR restrictions.

**CONTAMINATED PACKAGING**

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

## SBWB284 - STAR BEADS Washing Buffer 1G

**SECTION 14. Transport information****14.1. UN number or ID number**

ADR / RID, IMDG, IATA: 1170

**14.2. UN proper shipping name**

ADR / RID: ETHANOL (ETHYL ALCOHOL) or ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)  
 IMDG: ETHANOL (ETHYL ALCOHOL) or ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)  
 IATA: ETHANOL (ETHYL ALCOHOL) or ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)

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

ADR / RID: Class: 3 Label: 3

IMDG: Class: 3 Label: 3

IATA: Class: 3 Label: 3

**14.4. Packing group**

ADR / RID, IMDG, IATA: III

**14.5. Environmental hazards**

ADR / RID: NO

IMDG: NO

IATA: NO

**14.6. Special precautions for user**

ADR / RID:	HIN - Kemler: 33	Limited Quantities: 5 L	Tunnel restriction code: (D/E)
	Special provision: -		
IMDG:	EMS: F-E, S-D	Limited Quantities: 5 L	
IATA:	Cargo:	Maximum quantity: 220 L	Packaging instructions: 366
	Pass.:	Maximum quantity: 60 L	Packaging instructions: 355
	Special provision:	A3, A58, A180	

**14.7. Maritime transport in bulk according to IMO instruments**

Information not relevant

## SBWB284 - STAR BEADS Washing Buffer 1G

**SECTION 15. Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

Seveso Category - Directive 2012/18/EU: P5c

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

Product

Point 3 - 40

Contained substance

Point 75

Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors

not applicable

Substances in Candidate List (Art. 59 REACH)

On the basis of available data, the product does not contain any SVHC in percentage  $\geq$  than 0,1%.

Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to Regulation (EU) 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Healthcare controls

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

**15.2. Chemical safety assessment**

A chemical safety assessment has not been performed for the preparation/for the substances indicated in section 3.



## SBWB284 - STAR BEADS Washing Buffer 1G

**SECTION 16. Other information**

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

<b>Flam. Liq. 2</b>	Flammable liquid, category 2
<b>Acute Tox. 4</b>	Acute toxicity, category 4
<b>Eye Irrit. 2</b>	Eye irritation, category 2
<b>Skin Irrit. 2</b>	Skin irritation, category 2
<b>H225</b>	Highly flammable liquid and vapour.
<b>H302</b>	Harmful if swallowed.
<b>H302+H332</b>	Harmful if swallowed or if inhaled.
<b>H332</b>	Harmful if inhaled.
<b>H319</b>	Causes serious eye irritation.
<b>H315</b>	Causes skin irritation.

**LEGEND:**

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- ATE: Acute Toxicity Estimate
- CAS: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE: Identifier in ESIS (European archive of existing substances)
- CLP: Regulation (EC) 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: Regulation (EC) 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA: Time-weighted average exposure limit
- TWA STEL: Short-term exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

**GENERAL BIBLIOGRAPHY**

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
3. Regulation (EU) 2020/878 (II Annex of REACH Regulation)
4. Regulation (EC) 790/2009 (I Atp. CLP) of the European Parliament
5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament

**SBWB284 - STAR BEADS Washing Buffer 1G**

11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
  12. Regulation (EU) 2016/1179 (IX Atp. CLP)
  13. Regulation (EU) 2017/776 (X Atp. CLP)
  14. Regulation (EU) 2018/669 (XI Atp. CLP)
  15. Regulation (EU) 2019/521 (XII Atp. CLP)
  16. Delegated Regulation (UE) 2018/1480 (XIII Atp. CLP)
  17. Regulation (EU) 2019/1148
  18. Delegated Regulation (UE) 2020/217 (XIV Atp. CLP)
  19. Delegated Regulation (UE) 2020/1182 (XV Atp. CLP)
  20. Delegated Regulation (UE) 2021/643 (XVI Atp. CLP)
  21. Delegated Regulation (UE) 2021/849 (XVII Atp. CLP)
  22. Delegated Regulation (UE) 2022/692 (XVIII Atp. CLP)
- The Merck Index. - 10th Edition
  - Handling Chemical Safety
  - INRS - Fiche Toxicologique (toxicological sheet)
  - Patty - Industrial Hygiene and Toxicology
  - N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
  - IFA GESTIS website
  - ECHA website
  - Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

**Note for users:**

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

**CALCULATION METHODS FOR CLASSIFICATION**

Chemical and physical hazards: Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.

Health hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.

Environmental hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.

**SBWB285 - STAR BEADS Washing Buffer 2G**

## Safety Data Sheet

According to Annex II to REACH - Regulation 2020/878 and to Annex II to UK REACH

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

#### 1.1. Product identifier

Code: SBWB285

Product name: STAR BEADS Washing Buffer 2G

Reference Kit: STAR BEADS RNA Extraction Kit – SBK308,1X10; SBK308,1X96  
STAR BEADS RNA Extraction Kit, Prefilled Plates – SBK308,2X32PFI

Kit Component: STAR BEADS RNA Extraction Plate – SBK313,1X16PFI

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

Intended use: Professional Use

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

Name: CYANAGEN S.R.L.  
Full address: Via Andrea Costa 4/2  
District and Country: 40134 Bologna (BO)  
Italia  
Tel. +39 051.534063 Mon-Thu 9:00-17:00, Fri 9:00-13:00  
Fax +39 051.534063

e-mail address of the competent person responsible for the Safety Data Sheet: technical.support@cyanagen.com

#### 1.4. Emergency telephone number

For urgent inquiries refer to: Israel +972-04-7771900 (24/7)  
UK NPIS 0344 892 0111  
Ireland NPIC (01) 809 2566  
Tox Info Suisse 145, h 24

### SECTION 2. Hazards identification

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

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2020/878. Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:  
Flammable liquid, category 3 H226 Flammable liquid and vapour.

#### 2.2. Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

## SBWB285 - STAR BEADS Washing Buffer 2G

Hazard pictograms:



Signal words: Warning

Hazard statements:

**H226** Flammable liquid and vapour.

Precautionary statements:

**P210** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
**P280** Wear protective gloves/ protective clothing / eye protection / face protection.  
**P370+P378** In case of fire: use carbon dioxide, foam, chemical powder to extinguish.

### 2.3. Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage  $\geq$  than 0,1%.

The product does not contain substances with endocrine disrupting properties in concentration  $\geq$  0.1%.

## SECTION 3. Composition/information on ingredients

### 3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification (EC) 1272/2008 (CLP)
<b>ETHANOL</b>		
INDEX 603-002-00-5	$70 \leq x < 74$	Flam. Liq. 2 H225
EC 200-578-6		
CAS 64-17-5		

The full wording of hazard (H) phrases is given in section 16 of the sheet.

## SECTION 4. First aid measures

### 4.1. Description of first aid measures

No episodes of harm to the staff authorised to use the product have been reported. The following general measures should be adopted as necessary:  
 INHALATION: Remove to open air. If the subject stops breathing, administer artificial respiration. Get medical advice/attention.  
 INGESTION: Get medical advice/attention. Induce vomiting only if indicated by the doctor. Do not give anything by mouth to an unconscious person.  
 EYES and SKIN: Wash with plenty of water. In the event of persistent irritation, get medical advice/attention.

### 4.2. Most important symptoms and effects, both acute and delayed

Specific information on symptoms and effects caused by the product are unknown.

### 4.3. Indication of any immediate medical attention and special treatment needed

Information not available

**SBWB285 - STAR BEADS Washing Buffer 2G****SECTION 5. Firefighting measures****5.1. Extinguishing media**

## SUITABLE EXTINGUISHING EQUIPMENT

Extinguishing substances are: carbon dioxide, foam, chemical powder. For product loss or leakage that has not caught fire, water spray can be used to disperse flammable vapours and protect those trying to stem the leak.

## UNSUITABLE EXTINGUISHING EQUIPMENT

Do not use jets of water. Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.

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

## HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Excess pressure may form in containers exposed to fire at a risk of explosion. Do not breathe combustion products.

**5.3. Advice for firefighters**

## GENERAL INFORMATION

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

## SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

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

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

Send away individuals who are not suitably equipped. Use explosion-proof equipment. Eliminate all sources of ignition (cigarettes, flames, sparks, etc.) from the leakage site.

**6.2. Environmental precautions**

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

**6.3. Methods and material for containment and cleaning up**

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.

Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

**6.4. Reference to other sections**

Any information on personal protection and disposal is given in sections 8 and 13.

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

Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Without adequate ventilation, vapours may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges. When performing transfer operations involving large containers, connect to an earthing system and wear antistatic footwear. Vigorous stirring and flow through the tubes and equipment may cause the formation and accumulation of electrostatic charges. In order to avoid the risk of fires and explosions, never use compressed air when handling. Open containers with caution as they may be pressurised. Do not eat, drink or smoke during use. Avoid leakage of the product into the environment.

## SBWB285 - STAR BEADS Washing Buffer 2G

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

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Store in a cool and well ventilated place, keep far away from sources of heat, naked flames and sparks and other sources of ignition. Keep containers away from any incompatible materials, see section 10 for details.

**7.3. Specific end use(s)**

Information not available

**SECTION 8. Exposure controls/personal protection****8.1. Control parameters**

Regulatory References:

DEU	Deutschland	Technischen Regeln für Gefahrstoffe (TRGS 900) - Liste der Arbeitsplatzgrenzwerte und Kurzzeitwerte. MAK- und BAT-Werte-Liste 2020, Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe, Mitteilung 56
ESP	España	Límites de exposición profesional para agentes químicos en España 2021
FRA	France	Valeurs limites d'exposition professionnelle aux agents chimiques en France. ED 984 - INRS
GRC	Ελλάδα	Π.Δ. 26/2020 (ΦΕΚ 50/Α' 6.3.2020) Εναρμόνιση της ελληνικής νομοθεσίας προς τις διατάξεις των οδηγιών 2017/2398/ΕΕ, 2019/130/ΕΕ και 2019/983/ΕΕ «για την τροποποίηση της οδηγίας 2004/37/ΕΚ ``σχετικά με την προστασία των εργαζομένων από τους κινδύνους που συνδέονται με την έκθεση σε καρκινογόνους ή μεταλλαξιογόνους παράγοντες κατά την εργασία``»
POL	Polska	Rozporządzenie ministra rozwoju, pracy i technologii z dnia 18 lutego 2021 r. Zmieniające rozporządzenie w sprawie najwyższych dopuszczalnych stężeń i natężeń czynników szkodliwych dla zdrowia w środowisku pracy
SVN	Slovenija	Pravilnik o varovanju delavcev pred tveganji zaradi izpostavljenosti kemičnim snovem pri delu (Uradni list RS, št. 100/01, 39/05, 53/07, 102/10, 43/11 – ZVZD-1, 38/15, 78/18 in 78/19)
GBR	United Kingdom TLV-ACGIH	EH40/2005 Workplace exposure limits (Fourth Edition 2020) ACGIH 2021

**ETHANOL****Threshold Limit Value**

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
AGW	DEU	380	200	1520	800	
MAK	DEU	380	200	1520	800	
VLA	ESP			1910	1000	
VLEP	FRA	1900	1000	9500	5000	
TLV	GRC	1900	1000			
NDS/NDSch	POL	1900				
MV	SVN	960	500	1920	1000	
WEL	GBR	1920	1000			
TLV-ACGIH				1884	1000	

Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

**8.2. Exposure controls**

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.

**HAND PROTECTION**

Protect hands with category III work gloves (see standard EN 374).

The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.

The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration

## SBWB285 - STAR BEADS Washing Buffer 2G

and type of use.

**SKIN PROTECTION**

Wear category I professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

Consider the appropriateness of providing antistatic clothing in the case of working environments in which there is a risk of explosion.

**EYE PROTECTION**

Wear airtight protective goggles (see standard EN 166).

**RESPIRATORY PROTECTION**

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, use a mask with a type A filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

**ENVIRONMENTAL EXPOSURE CONTROLS**

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

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

Properties	Value	Information
Appearance	liquid	
Colour	colourless	
Odour	alcoholic	
Melting point / freezing point	not available	
Initial boiling point	98 °C	
Flammability	flammable liquid	
Lower explosive limit	not available	
Upper explosive limit	not available	
Flash point	25 °C	
Auto-ignition temperature	not available	
Decomposition temperature	not available	
pH	5,00	
Kinematic viscosity	23,40 mm <sup>2</sup> /s	Temperature: 40 °C
Solubility	not available	
Partition coefficient: n-octanol/water	not available	
Vapour pressure	not available	
Density and/or relative density	0,855 kg/l	
Relative vapour density	not available	
Particle characteristics	not applicable	

**9.2. Other information**

9.2.1. Information with regard to physical hazard classes

**SBWB285 - STAR BEADS Washing Buffer 2G**

Information not available

#### 9.2.2. Other safety characteristics

Information not available

## SECTION 10. Stability and reactivity

### 10.1. Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

### 10.2. Chemical stability

The product is stable in normal conditions of use and storage.

### 10.3. Possibility of hazardous reactions

The vapours may also form explosive mixtures with the air.

#### ETHANOL

Risk of explosion on contact with: alkaline metals, alkaline oxides, calcium hypochlorite, sulphur monofluoride, acetic anhydride, acids, concentrated hydrogen peroxide, perchlorates, perchloric acid, perchloronitrile, mercury nitrate, nitric acid, silver, silver nitrate, ammonia, silver oxide, ammonia, strong oxidising agents, nitrogen dioxide. May react dangerously with: bromoacetylene, chlorine acetylene, bromine trifluoride, chromium trioxide, chromyl chloride, fluorine, potassium tert-butoxide, lithium hydride, phosphorus trioxide, black platinum, zirconium (IV) chloride, zirconium (IV) iodide. Forms explosive mixtures with: air.

### 10.4. Conditions to avoid

Avoid overheating. Avoid bunching of electrostatic charges. Avoid all sources of ignition.

#### ETHANOL

Avoid exposure to: sources of heat, naked flames.

### 10.5. Incompatible materials

Information not available

### 10.6. Hazardous decomposition products

In the event of thermal decomposition or fire, gases and vapours that are potentially dangerous to health may be released.

## SECTION 11. Toxicological information

According to currently available data, this product has not yet produced health damages. Anyway, it must be handled according to good industrial practices.

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Metabolism, toxicokinetics, mechanism of action and other information

Information not available

#### Information on likely routes of exposure

Information not available



**SBWB285 - STAR BEADS Washing Buffer 2G**Delayed and immediate effects as well as chronic effects from short and long-term exposure

Information not available

Interactive effects

Information not available

ACUTE TOXICITY

ATE (Inhalation) of the mixture:	Not classified (no significant component)
ATE (Oral) of the mixture:	Not classified (no significant component)
ATE (Dermal) of the mixture:	Not classified (no significant component)

ETHANOL

LD50 (Oral):	> 5000 mg/kg Rat
LC50 (Inhalation vapours):	117 mg/l/4h Rat

SKIN CORROSION / IRRITATION

Does not meet the classification criteria for this hazard class

SERIOUS EYE DAMAGE / IRRITATION

Does not meet the classification criteria for this hazard class

RESPIRATORY OR SKIN SENSITISATION

Does not meet the classification criteria for this hazard class

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

**11.2. Information on other hazards**

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with human health effects under evaluation.

## SBWB285 - STAR BEADS Washing Buffer 2G

**SECTION 12. Ecological information**

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation.

**12.1. Toxicity**

Information not available

**12.2. Persistence and degradability**

ETHANOL

Solubility in water 1000 - 10000 mg/l

Rapidly degradable

**12.3. Bioaccumulative potential**

ETHANOL

Partition coefficient: n-octanol/water -0,35

**12.4. Mobility in soil**

Information not available

**12.5. Results of PBT and vPvB assessment**

On the basis of available data, the product does not contain any PBT or vPvB in percentage  $\geq$  than 0,1%.

**12.6. Endocrine disrupting properties**

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with environmental effects under evaluation.

**12.7. Other adverse effects**

Information not available

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

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

Waste transportation may be subject to ADR restrictions.

CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

**SECTION 14. Transport information****14.1. UN number or ID number**

ADR / RID, IMDG, IATA: 1170

**14.2. UN proper shipping name**

ADR / RID: ETHANOL (ETHYL ALCOHOL) or ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)

IMDG: ETHANOL (ETHYL ALCOHOL) or ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)

IATA: ETHANOL (ETHYL ALCOHOL) or ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)

**SBWB285 - STAR BEADS Washing Buffer 2G****14.3. Transport hazard class(es)**

ADR / RID: Class: 3 Label: 3

IMDG: Class: 3 Label: 3

IATA: Class: 3 Label: 3

**14.4. Packing group**

ADR / RID, IMDG, IATA: III

**14.5. Environmental hazards**

ADR / RID: NO

IMDG: NO

IATA: NO

**14.6. Special precautions for user**

ADR / RID:	HIN - Kemler: 30	Limited Quantities: 5 L	Tunnel restriction code: (D/E)
	Special provision: -		
IMDG:	EMS: F-E, S-D	Limited Quantities: 5 L	
IATA:	Cargo:	Maximum quantity: 220 L	Packaging instructions: 366
	Pass.:	Maximum quantity: 60 L	Packaging instructions: 355
	Special provision:	A3, A58, A180	

**14.7. Maritime transport in bulk according to IMO instruments**

Information not relevant

**SECTION 15. Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

Seveso Category - Directive 2012/18/EU: P5c

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006Product

Point 3 - 40

Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors

not applicable

Substances in Candidate List (Art. 59 REACH)On the basis of available data, the product does not contain any SVHC in percentage  $\geq$  than 0,1%.

**SBWB285 - STAR BEADS Washing Buffer 2G**Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to Regulation (EU) 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Healthcare controls

Information not available

**15.2. Chemical safety assessment**

A chemical safety assessment has not been performed for the preparation/for the substances indicated in section 3.

**SECTION 16. Other information**

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

<b>Flam. Liq. 2</b>	Flammable liquid, category 2
<b>Flam. Liq. 3</b>	Flammable liquid, category 3
<b>H225</b>	Highly flammable liquid and vapour.
<b>H226</b>	Flammable liquid and vapour.

**LEGEND:**

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- ATE: Acute Toxicity Estimate
- CAS: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE: Identifier in ESIS (European archive of existing substances)
- CLP: Regulation (EC) 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: Regulation (EC) 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA: Time-weighted average exposure limit
- TWA STEL: Short-term exposure limit

**SBWB285 - STAR BEADS Washing Buffer 2G**

- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

**GENERAL BIBLIOGRAPHY**

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
3. Regulation (EU) 2020/878 (II Annex of REACH Regulation)
4. Regulation (EC) 790/2009 (I Atp. CLP) of the European Parliament
5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
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13. Regulation (EU) 2017/776 (X Atp. CLP)
14. Regulation (EU) 2018/669 (XI Atp. CLP)
15. Regulation (EU) 2019/521 (XII Atp. CLP)
16. Delegated Regulation (UE) 2018/1480 (XIII Atp. CLP)
17. Regulation (EU) 2019/1148
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- ECHA website

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**Note for users:**

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

**CALCULATION METHODS FOR CLASSIFICATION**

Chemical and physical hazards: Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.

Health hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.

Environmental hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.

**SBEB228 - STAR BEADS Elution Buffer**

## Information Sheet

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

#### 1.1. Product identifier

Code: SBEB228

Product name: STAR BEADS Elution Buffer

Reference Kit: STAR BEADS RNA Extraction Kit - SBK308,1X10; SBK308,1X96  
STAR BEADS RNA Extraction Kit, Prefilled Plates - SBK308,2X32PFI

Kit component: STAR BEADS RNA Extraction Plate - SBK313,1X16PFI

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

Intended use: Professional Use

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

Name: CYANAGEN S.R.L.  
Full address: Via Andrea Costa 4/2  
District and Country: 40134 Bologna (BO)  
Italy  
Tel. +39 051.534063 Mon-Thu 9:00-17:00, Fri 9:00-13:00  
Fax +39 051.534063

e-mail address of the competent person responsible for the Safety Data Sheet: technical.support@cyanagen.com

#### 1.4. Emergency telephone number

For urgent inquiries refer to: Israel +972-04-7771900 (24/7)  
UK NPIS 0344 892 0111  
Ireland NPIC (01) 809 2566  
Tox Info Suisse 145, h 24

### SECTION 2. Hazards identification

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

The product is not classified as hazardous pursuant to the provisions set forth in EC Regulation 1272/2008 (CLP) (and subsequent amendments and supplements).

Hazard classification and indication:

**SBEB228 - STAR BEADS Elution Buffer****2.2. Label elements**

Hazard pictograms: --

Signal words: --

Hazard statements: --

Precautionary statements: --

**2.3. Other hazards**

On the basis of available data, the product does not contain any PBT or vPvB in percentage  $\geq$  than 0,1%.

The product does not contain substances with endocrine disrupting properties in concentration  $\geq$  0.1%.

**SECTION 3. Composition/information on ingredients****3.2. Mixtures**

The product does not contain substances classified as being hazardous to human health or the environment pursuant to the provisions Regulation (EC) 1272/2008 (CLP) (and subsequent amendments and supplements) in such quantities as to require the statement.

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

Not specifically necessary. Observance of good industrial hygiene is recommended.

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

Specific information on symptoms and effects caused by the product are unknown.

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

Information not available

**SECTION 5. Firefighting measures****5.1. Extinguishing media****SUITABLE EXTINGUISHING EQUIPMENT**

The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.

**UNSUITABLE EXTINGUISHING EQUIPMENT**

None in particular.

**SBEB228 - STAR BEADS Elution Buffer****5.2. Special hazards arising from the substance or mixture****HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE**

Do not breathe combustion products.

**5.3. Advice for firefighters****GENERAL INFORMATION**

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

**SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS**

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

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

Use breathing equipment if fumes or powders are released into the air. These indications apply for both processing staff and those involved in emergency procedures.

**6.2. Environmental precautions**

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

**6.3. Methods and material for containment and cleaning up**

Confine using earth or inert material. Collect as much material as possible and eliminate the rest using jets of water. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

**6.4. Reference to other sections**

Any information on personal protection and disposal is given in sections 8 and 13.

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

Before handling the product, consult all the other sections of this material safety data sheet. Avoid leakage of the product into the environment. Do not eat, drink or smoke during use.

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

Keep the product in clearly labelled containers. Keep containers away from any incompatible materials, see section 10 for details.

**7.3. Specific end use(s)**

Information not available



**SBEB228 - STAR BEADS Elution Buffer****SECTION 8. Exposure controls/personal protection****8.1. Control parameters**

Information not available

**8.2. Exposure controls**

Comply with the safety measures usually applied when handling chemical substances.

Comply with the safety measures usually applied when handling chemical substances.

**HAND PROTECTION**

None required.

**SKIN PROTECTION**

None required.

**EYE PROTECTION**

None required.

**RESPIRATORY PROTECTION**

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, use a mask with a type B filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

**ENVIRONMENTAL EXPOSURE CONTROLS**

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

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

Properties	Value	Information
Appearance	liquid	
Colour	transparent	
Odour	odourless	
Melting point / freezing point	Not available	
Initial boiling point	Not available	
Flammability	Not available	
Lower explosive limit	Not available	
Upper explosive limit	Not available	

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Flash point	> 60 °C
Auto-ignition temperature	Not available
pH	7,1
Kinematic viscosity	Not available
Solubility	Not available
Partition coefficient: n-octanol/water	Not available
Vapour pressure	Not available
Density and/or relative density	1,00 kg/l
Relative vapour density	Not available
Particle characteristics	Not applicable

**9.2. Other information**

## 9.2.1. Information with regard to physical hazard classes

Information not available

## 9.2.2. Other safety characteristics

Information not available

**SECTION 10. Stability and reactivity****10.1. Reactivity**

There are no particular risks of reaction with other substances in normal conditions of use.

**10.2. Chemical stability**

The product is stable in normal conditions of use and storage.

**10.3. Possibility of hazardous reactions**

No hazardous reactions are foreseeable in normal conditions of use and storage.

**10.4. Conditions to avoid**

None in particular. However the usual precautions used for chemical products should be respected.

**10.5. Incompatible materials**

Information not available

**10.6. Hazardous decomposition products**

Information not available

**SBEB228 - STAR BEADS Elution Buffer**

**SECTION 11. Toxicological information**

According to currently available data, this product has not yet produced health damages. Anyway, it must be handled according to good industrial practices.

**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**

Metabolism, toxicokinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

Information not available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Information not available

Interactive effects

Information not available

ACUTE TOXICITY

ATE (Inhalation) of the mixture:	Not classified (no significant component)
ATE (Oral) of the mixture:	Not classified (no significant component)
ATE (Dermal) of the mixture:	Not classified (no significant component)

SKIN CORROSION / IRRITATION

Does not meet the classification criteria for this hazard class

SERIOUS EYE DAMAGE / IRRITATION

Does not meet the classification criteria for this hazard class

RESPIRATORY OR SKIN SENSITISATION

Does not meet the classification criteria for this hazard class

Respiratory sensitization

Information not available

Skin sensitization

Information not available

GERM CELL MUTAGENICITY

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Does not meet the classification criteria for this hazard class

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

Adverse effects on sexual function and fertility

Information not available

Adverse effects on development of the offspring

Information not available

Effects on or via lactation

Information not available

STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

Target organs

Information not available

Route of exposure

Information not available

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

Target organs

Information not available

Route of exposure

Information not available

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

**SBEB228 - STAR BEADS Elution Buffer****11.2. Information on other hazards**

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with human health effects under evaluation.

**SECTION 12. Ecological information**

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation.

**12.1. Toxicity**

Information not available

**12.2. Persistence and degradability**

Information not available

**12.3. Bioaccumulative potential**

Information not available

**12.4. Mobility in soil**

Information not available

**12.5. Results of PBT and vPvB assessment**

On the basis of available data, the product does not contain any PBT or vPvB in percentage  $\geq$  than 0,1%.

**12.6. Endocrine disrupting properties**

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with environmental effects under evaluation.

**12.7. Other adverse effects**

Information not available

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

Reuse, when possible. Neat product residues should be considered special non-hazardous waste. Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.  
CONTAMINATED PACKAGING  
Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

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**SECTION 14. Transport information**

The product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the International Maritime Dangerous Goods Code (IMDG), and of the International Air Transport Association (IATA) regulations.

**14.1. UN number or ID number**

Not applicable

**14.2. UN proper shipping name**

Not applicable

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

Not applicable

**14.4. Packing group**

Not applicable

**14.5. Environmental hazards**

Not applicable

**14.6. Special precautions for user**

Not applicable

**14.7. Maritime transport in bulk according to IMO instruments**

Information not relevant

**SECTION 15. Regulatory information**

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

Seveso Category - Directive 2012/18/EU: None

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

None

Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors

Not applicable

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Substances in Candidate List (Art. 59 REACH)

On the basis of available data, the product does not contain any SVHC in percentage  $\geq$  than 0,1%.

Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to Regulation (EU) 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Healthcare controls

Information not available

Reg. 746/2017/CE IVDR.

**15.2. Chemical safety assessment**

A chemical safety assessment has not been performed for the preparation/for the substances indicated in section 3.

**SECTION 16. Other information**

LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- ATE: Acute Toxicity Estimate
- CAS: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE: Identifier in ESIS (European archive of existing substances)
- CLP: Regulation (EC) 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level

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- PNEC: Predicted no effect concentration
- REACH: Regulation (EC) 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA: Time-weighted average exposure limit
- TWA STEL: Short-term exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

**GENERAL BIBLIOGRAPHY**

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
  2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
  3. Regulation (EU) 2020/878 (II Annex of REACH Regulation)
  4. Regulation (EC) 790/2009 (I Atp. CLP) of the European Parliament
  5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
  6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
  7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
  8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
  9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
  10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
  11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
  12. Regulation (EU) 2016/1179 (IX Atp. CLP)
  13. Regulation (EU) 2017/776 (X Atp. CLP)
  14. Regulation (EU) 2018/669 (XI Atp. CLP)
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  16. Delegated Regulation (UE) 2018/1480 (XIII Atp. CLP)
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  21. Delegated Regulation (UE) 2021/849 (XVII Atp. CLP)
- The Merck Index. - 10th Edition
  - Handling Chemical Safety
  - INRS - Fiche Toxicologique (toxicological sheet)
  - Patty - Industrial Hygiene and Toxicology
  - N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
  - IFA GESTIS website
  - ECHA website
  - Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

**Note for users:**

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

**CALCULATION METHODS FOR CLASSIFICATION**

Chemical and physical hazards: Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.

Health hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.

Environmental hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.