

22.02.2022

Kit Components

Product code	Description
UN0001	RIDA®UNITY Universal Extraction Kit

Components:

RB-LB-10	RIDA®UNITY Lysis buffer
RB-BB-22	RIDA®UNITY Binding buffer
RB-WB-EtOH-1	RIDA®UNITY Wash buffer 1
RB-WB-EtOH-2	RIDA®UNITY Wash buffer 2
RB-EB-H1	RIDA®UNITY Elution buffer

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 22.02.2022

Version number 1.0

Revision: 22.02.2022

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

1.1 Product identifier

Trade name: RIDA@UNITY Lysis buffer

Article number: RB-LB-10

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

No further relevant information available.

Application of the substance / the preparation: In vitro

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

R-Biopharm AG

An der neuen Bergstraße 17

D-64297 Darmstadt

Further information obtainable from: e-mail: info@r-biopharm.de

1.4 Emergency telephone number:

CHEMTREC (worldwide): +1 703-741-5970 / 1-800-424-9300

CHEMTREC (United Kingdom): 44-870-8200418 and 44-2038073798 (toll free)

For additional worldwide local emergency numbers refer to section 16.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008



corrosion

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

Eye Dam. 1 H318 Causes serious eye damage.



Acute Tox. 4 H302 Harmful if swallowed.

Acute Tox. 4 H332 Harmful if inhaled.

Skin Sens. 1 H317 May cause an allergic skin reaction.

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

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

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

Hazard pictograms GHS05, GHS07

Signal word Danger

Hazard-determining components of labelling:

guanidinium thiocyanate

maleic acid

Hazard statements

H302+H332 Harmful if swallowed or if inhaled.

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H412 Harmful to aquatic life with long lasting effects.

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Precautionary statements

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

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

P310 Immediately call a POISON CENTER/doctor.

P321 Specific treatment (see on this label).

P362+P364 Take off contaminated clothing and wash it before reuse.

P405 Store locked up.

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

Additional information:

EUH032 Contact with acids liberates very toxic gas.

2.3 Other hazards**Results of PBT and vPvB assessment**

PBT: Not applicable.

vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

3.2 Chemical characterisation: Mixtures

Description: Mixture: consisting of the following components.

Dangerous components:

CAS: 593-84-0 EINECS: 209-812-1	guanidinium thiocyanate ☠ Skin Corr. 1B, H314 ☠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332 Aquatic Chronic 3, H412	25-50%
CAS: 110-16-7 EINECS: 203-742-5	maleic acid ☠ Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	0.1-1%

Additional information: For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures**General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

After inhalation:

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

After skin contact: Immediately wash with water and soap and rinse thoroughly.

After eye contact:

Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing:

Call for a doctor immediately.

Drink plenty of water and provide fresh air. Call for a doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

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4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Firefighting measures**5.1 Extinguishing media****Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.**5.2 Special hazards arising from the substance or mixture**

During heating or in case of fire poisonous gases are produced.

5.3 Advice for firefighters**Protective equipment:** Mouth respiratory protective device.**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

Mount respiratory protective device.

Wear protective equipment. Keep unprotected persons away.

6.2 Environmental precautions:

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

Inform respective authorities in case of seepage into water course or sewage system.

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

6.3 Methods and material for containment and cleaning up:

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

Use neutralising agent.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage**7.1 Precautions for safe handling** Prevent formation of aerosols.**Information about fire - and explosion protection:** Keep respiratory protective device available.**7.2 Conditions for safe storage, including any incompatibilities****Storage:****Requirements to be met by storerooms and receptacles:** No special requirements.**Information about storage in one common storage facility:** Not required.**Further information about storage conditions:** Keep container tightly sealed.**7.3 Specific end use(s)** No further relevant information available.**SECTION 8: Exposure controls/personal protection****8.1 Control parameters****Additional information about design of technical facilities:** No further data; see item 7.**Ingredients with limit values that require monitoring at the workplace:**

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

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Additional information: The lists valid during the making were used as basis.

8.2 Exposure controls

Personal protective equipment:

General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

Respiratory protection: Not required.

Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

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

For the permanent contact gloves made of the following materials are suitable:

Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.11 mm

Value for the permeation: Level ≤ 480

As protection from splashes gloves made of the following materials are suitable:

Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.11 mm

Value for the permeation: Level ≤ 480

Eye protection:



Tightly sealed goggles

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Appearance:

Form:

Fluid

Colour:

Colourless

Odour:

Characteristic

Odour threshold:

Not determined.

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pH-value at 20 °C:	6
Change in condition	
Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	100 °C
Flash point:	Not applicable.
Flammability (solid, gas):	Not applicable.
Decomposition temperature:	Not determined.
Auto-ignition temperature:	Product is not selfigniting.
Explosive properties:	Product does not present an explosion hazard.
Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
Vapour pressure at 20 °C:	23 hPa
Density at 20 °C:	1.14 g/cm ³
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with water:	Fully miscible.
Partition coefficient: n-octanol/water:	Not determined.
Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
Solvent content:	
Water:	34.1 %
Solids content:	74.4 %
9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity No further relevant information available.

10.2 Chemical stability

Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

10.3 Possibility of hazardous reactions No dangerous reactions known.

10.4 Conditions to avoid No further relevant information available.

10.5 Incompatible materials: No further relevant information available.

10.6 Hazardous decomposition products: No dangerous decomposition products known.

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SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Harmful if swallowed or if inhaled.

LD/LC50 values relevant for classification:

593-84-0 guanidinium thiocyanate

Oral LD50 593 mg/kg (rat)

9005-64-5 Polysorbate 20

Oral LD50 40,370 mg/kg (rat)

Primary irritant effect:

Skin corrosion/irritation

Causes severe skin burns and eye damage.

Serious eye damage/irritation

Causes serious eye damage.

Respiratory or skin sensitisation

May cause an allergic skin reaction.

Additional toxicological information:

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Germ cell mutagenicity Based on available data, the classification criteria are not met.

Carcinogenicity Based on available data, the classification criteria are not met.

Reproductive toxicity Based on available data, the classification criteria are not met.

STOT-single exposure Based on available data, the classification criteria are not met.

STOT-repeated exposure Based on available data, the classification criteria are not met.

Aspiration hazard Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity:

593-84-0 guanidinium thiocyanate

EC50/48h 42.4 mg/l (aquatic invertebrates)

ErC50/72h 130 mg/l (Algae)

12.2 Persistence and degradability No further relevant information available.

12.3 Bioaccumulative potential No further relevant information available.

12.4 Mobility in soil No further relevant information available.

Ecotoxicological effects:

Remark: Harmful to fish

Additional ecological information:

General notes:

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

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

Must not reach sewage water or drainage ditch undiluted or unneutralised.

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

Harmful to aquatic organisms

12.5 Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

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12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Disposal must be made according to official regulations.

Uncleaned packaging:

Recommendation: Disposal must be made according to official regulations.

Recommended cleansing agents: Water, if necessary together with cleansing agents.

SECTION 14: Transport information

14.1 UN-Number
ADR, IMDG, IATA

UN1760

14.2 UN proper shipping name
ADR

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

IMDG, IATA

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

14.3 Transport hazard class(es)

ADR



Class
Label

8 (C9) Corrosive substances.
8

IMDG, IATA



Class
Label

8 Corrosive substances.
8

14.4 Packing group
ADR, IMDG, IATA

III

14.5 Environmental hazards:

Not applicable.

14.6 Special precautions for user

Warning: Corrosive substances.

Hazard identification number (Kemler code):

80

EMS Number:

F-A,S-B

Stowage Category

B

Stowage Code

SW2 Clear of living quarters.

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

Transport/Additional information:**ADR**

Limited quantities (LQ)
Excepted quantities (EQ)

5L
Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml

Transport category
Tunnel restriction code

3
E

IMDG

Limited quantities (LQ)
Excepted quantities (EQ)

5L
Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml

UN "Model Regulation":

UN 1760 CORROSIVE LIQUID, N.O.S. (GUANIDINIUM THIOCYANATE), 8, III

SECTION 15: Regulatory information

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

Directive 2012/18/EU**Named dangerous substances - ANNEX I** None of the ingredients is listed.**National regulations:****Waterhazard class:** Water hazard class 2 (Self-assessment): hazardous for water.**15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.**SECTION 16: Other information**

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

Relevant phrases

H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H412 Harmful to aquatic life with long lasting effects.

Department issuing SDS: QS 0049-6151-8102-0**Contact:** QS 0049-6151-8102-0

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Worldwide local emergency numbers

Argentina Spanish Local (City) Buenos Aires Americas 54-1159839431
 Australia English Local (City) Sydney Oceania 61-290372994
 Austria German Local (City) Vienna Europe 43-13649237
 Belgium French Local (City) Brussels Europe 32-28083237
 Brazil Portuguese Local (City) Rio De Janeiro Americas 55-2139581449
 Brazil Portuguese Local (City) Sao Paulo Americas 55-1143491359
 Brazil - Toll Free Portuguese Toll free Mobile-Enabled Americas 0800 892 0479
 Bulgaria Bulgarian Local (City) Plovdiv Europe 359-32570104
 Cayman Islands English Local (National) Americas 345-749-8392
 Chile Spanish Local (City) Santiago Americas 56 2 2581 4934
 China Mandarin Local (National) Asia 4001-204937
 Colombia Spanish Toll Free Americas 01800-710-2151
 Costa Rica Spanish Local (National) Americas 506-40003869
 Croatia Croatian Local (City) Zagreb Europe 385-17776920
 Czech Republic Czech Local (City) Prague Europe 420-228880039
 Denmark Danish Local (National) Europe 45-69918573
 Dominican Republic Spanish Local (City) Santo Domingo Americas (829) 956-7588
 El Salvador Spanish Local (City) San Salvador Americas 503 2136 7633
 Estonia Estonian Local (National) Europe 372-6681294
 Finland Finnish Local (City) Helsinki Europe 358-942419014
 France French National Europe 33-975181407
 Germany German Local (City) Frankfurt Europe 49-69643508409 0800-181-7059
 Greece Greek Local (City) Athens Europe 30-2111768478
 Grenada English Local (City) St George Americas 1 (473) 230-0165
 Guinea French Americas 224 660 71 03 00
 Hong Kong Toll Free Asia 800-968-793
 Hungary Hungarian Local (City) Budapest Europe 36-18088425
 Iceland Icelandic Local (City) Reykjavik Europe 354 539 0655
 India Hindi, Bengali, English Asia 000-800-100-7141
 Indonesia Indonesian Toll Free Asia 001-803-017-9114
 Ireland English Local (City) Dublin Europe 353-19014670
 Israel Hebrew Local (City) Tel Aviv Asia 972-37630639
 Italy Italian Local (City) Milan Europe 39-0245557031 800-789-767
 Japan Japanese Local (City) Tokyo Asia 81-345209637
 Latvia Latvian Lettish Local (City) Riga Europe 371-66165504
 Lithuania Lithuanian Local (City) Vilnius Europe 370-52140238
 Luxembourg French and German Europe 352-20202416
 Macedonia Macedonian Local (City) Skopje Europe 389 2 551 7456
 Malaysia Malay Local (City) Kuala Lumpur Asia 60-39212579 41-800-815-308
 Mexico Spanish Americas 01-800-681-9531
 Netherlands Dutch Europe 31-858880596
 New Zealand English Local (City) Auckland Oceania 64-98010034
 Nigeria Hausa Local (City) Lagos Europe 234 1 227 8883
 Panama Spanish Local (National) Americas 507-8322475
 Peru Spanish Local (City) Lima Americas 51-17071295
 Philippines Tagalog Local (City) Manila Asia 1-800-1-116-1020
 Poland Polish Local (City) Warsaw Europe 48-223988029
 Portugal Portuguese Local (National) Europe 351-308801773
 Romania Romanian Local (National) Europe 40-37-6300026
 Russia Russian Toll Free Mobile-Enabled Asia 8-800-100-6346
 Saudi Arabia Arabic and English CHEMTREC DID Only Asia 966-8111095861
 Singapore English and Mandarin Asia 65-31581349 or 800-101-2201
 Slovakia Slovak Local (City) Bratislava Europe 421-233057972
 Slovenia Slovenian Local (City) Ljubljana Europe 38-61888016
 South Africa English Toll Free Africa 0-800-983-611

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South Korea Korean Toll Free Asia 003-0813-2549 and 080-822-1374
 Spain Spanish Local (City) Barcelona Europe 34-931768545 and 900-868538
 Sweden Swedish Local (City) Stockholm Europe 46-852503403
 Switzerland German and French and Italian Zurich Europe 41-435082011
 Taiwan Mandarin Local (City) Taipei Asia 886-2-7741-4207 and 00801-14-8954
 Thailand Thai Toll Free Asia 01-800-13-203-9987
 Trinidad and Tobago English Local (National) Americas 1-868-224-5716
 Turkey Turkish Local (City) Istanbul Europe 90-212-7055340
 Ukraine Ukrainian Europe 380-947101374
 United Kingdom English Local (City) London Europe 44-870-8200418 and 44-2038073798

Abbreviations and acronyms:

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
 IMDG: International Maritime Code for Dangerous Goods
 IATA: International Air Transport Association
 GHS: Globally Harmonised System of Classification and Labelling of Chemicals
 EINECS: European Inventory of Existing Commercial Chemical Substances
 ELINCS: European List of Notified Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 PBT: Persistent, Bioaccumulative and Toxic
 vPvB: very Persistent and very Bioaccumulative
 Acute Tox. 4: Acute toxicity – Category 4
 Skin Corr. 1B: Skin corrosion/irritation – Category 1B
 Skin Irrit. 2: Skin corrosion/irritation – Category 2
 Eye Dam. 1: Serious eye damage/eye irritation – Category 1
 Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
 Skin Sens. 1: Skin sensitisation – Category 1
 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
 Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

* **Data compared to the previous version altered.**

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Revision: 17.02.2022

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

1.1 Product identifier

Trade name: RIDA@UNITY Binding buffer**Article number:** RB-BB-22

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

No further relevant information available.

Application of the substance / the preparation: In vitro

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

R-Biopharm AG

An der neuen Bergstraße 17

D-64297 Darmstadt

Further information obtainable from: e-mail: info@r-biopharm.de

1.4 Emergency telephone number:

CHEMTREC (worldwide): +1 703-741-5970 / 1-800-424-9300

CHEMTREC (United Kingdom): 44-870-8200418 and 44-2038073798 (toll free)

For additional worldwide local emergency numbers refer to section 16.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



corrosion

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

Eye Dam. 1 H318 Causes serious eye damage.



Skin Sens. 1 H317 May cause an allergic skin reaction.

STOT SE 3 H336 May cause drowsiness or dizziness.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

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

Hazard pictograms GHS02, GHS05, GHS07**Signal word** Danger**Hazard-determining components of labelling:**

guanidinium thiocyanate

propan-2-ol

maleic acid

Hazard statements

H226 Flammable liquid and vapour.

H314 Causes severe skin burns and eye damage.

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H317 May cause an allergic skin reaction.

H336 May cause drowsiness or dizziness.

Precautionary statements

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

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

P310 Immediately call a POISON CENTER/doctor.

P321 Specific treatment (see on this label).

P362+P364 Take off contaminated clothing and wash it before reuse.

P405 Store locked up.

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

Additional information:

EUH032 Contact with acids liberates very toxic gas.

2.3 Other hazards**Results of PBT and vPvB assessment**

PBT: Not applicable.

vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

3.2 Chemical characterisation: Mixtures

Description: Mixture: consisting of the following components.

Dangerous components:

CAS: 67-63-0 EINECS: 200-661-7	propan-2-ol ⚠ Flam. Liq. 2, H225 ⚠ Eye Irrit. 2, H319; STOT SE 3, H336	25-50%
CAS: 593-84-0 EINECS: 209-812-1	guanidinium thiocyanate ⚠ Skin Corr. 1B, H314 ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332 Aquatic Chronic 3, H412	10-25%
CAS: 110-16-7 EINECS: 203-742-5	maleic acid ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	0.1-1%

Additional information: For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information: Immediately remove any clothing soiled by the product.

After inhalation:

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

After skin contact: Immediately wash with water and soap and rinse thoroughly.

After eye contact:

Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing: Drink plenty of water and provide fresh air. Call for a doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

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4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Firefighting measures**5.1 Extinguishing media****Suitable extinguishing agents:**CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.**5.2 Special hazards arising from the substance or mixture**

During heating or in case of fire poisonous gases are produced.

5.3 Advice for firefighters**Protective equipment:** Mouth respiratory protective device.**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

Mount respiratory protective device.

Wear protective equipment. Keep unprotected persons away.

6.2 Environmental precautions:

Prevent seepage into sewage system, workpits and cellars.

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

6.3 Methods and material for containment and cleaning up:

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

Use neutralising agent.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage**7.1 Precautions for safe handling** Prevent formation of aerosols.**Information about fire - and explosion protection:**

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Keep respiratory protective device available.

7.2 Conditions for safe storage, including any incompatibilities**Storage:****Requirements to be met by storerooms and receptacles:** No special requirements.**Information about storage in one common storage facility:** Not required.**Further information about storage conditions:** Keep container tightly sealed.**7.3 Specific end use(s)** No further relevant information available.**SECTION 8: Exposure controls/personal protection****8.1 Control parameters****Additional information about design of technical facilities:** No further data; see item 7.

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Ingredients with limit values that require monitoring at the workplace:
67-63-0 propan-2-ol

WEL	Short-term value: 1250 mg/m ³ , 500 ppm
	Long-term value: 999 mg/m ³ , 400 ppm

Additional information: The lists valid during the making were used as basis.

8.2 Exposure controls
Personal protective equipment:
General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

Respiratory protection: Not required.

Protection of hands:

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

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

For the permanent contact gloves made of the following materials are suitable:

Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.11 mm

Value for the permeation: Level ≤ 480

As protection from splashes gloves made of the following materials are suitable:

Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.11 mm

Value for the permeation: Level ≤ 480

Eye protection:

Tightly sealed goggles

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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Appearance:

Form:	Fluid
Colour:	Colourless
Odour:	Characteristic
Odour threshold:	Not determined.

pH-value at 20 °C: 6

Change in condition

Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	Undetermined.

Flash point: 25 °C

Flammability (solid, gas): Not applicable.

Decomposition temperature: Not determined.

Auto-ignition temperature: Product is not selfigniting.

Explosive properties: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

Explosion limits:

Lower:	2 Vol %
Upper:	12 Vol %

Vapour pressure at 20 °C: 43 hPa

Density at 20 °C:	0.97 g/cm ³
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not determined.

Solubility in / Miscibility with water: Fully miscible.

Partition coefficient: n-octanol/water: Not determined.

Viscosity:

Dynamic:	Not determined.
Kinematic:	Not determined.

Solvent content:

Organic solvents:	43.2 %
Water:	24.9 %

Solids content: 32.2 %

9.2 Other information No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity No further relevant information available.

10.2 Chemical stability

Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

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10.3 Possibility of hazardous reactions No dangerous reactions known.**10.4 Conditions to avoid** No further relevant information available.**10.5 Incompatible materials:** No further relevant information available.**10.6 Hazardous decomposition products:** No dangerous decomposition products known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects**Acute toxicity** Based on available data, the classification criteria are not met.**LD/LC50 values relevant for classification:****67-63-0 propan-2-ol**

Oral	LD50	5,045 mg/kg (rat)
Dermal	LD50	12,800 mg/kg (rabbit)
Inhalative	LC50	72.6 mg/l (rat)

593-84-0 guanidinium thiocyanate

Oral	LD50	593 mg/kg (rat)
------	------	-----------------

9005-64-5 Polysorbate 20

Oral	LD50	38,900 mg/kg (rat)
Inhalative	LC50/4h	5.1 mg/l (rat)

Primary irritant effect:**Skin corrosion/irritation**

Causes severe skin burns and eye damage.

Serious eye damage/irritation

Causes serious eye damage.

Respiratory or skin sensitisation

May cause an allergic skin reaction.

Additional toxicological information:**CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)****Germ cell mutagenicity** Based on available data, the classification criteria are not met.**Carcinogenicity** Based on available data, the classification criteria are not met.**Reproductive toxicity** Based on available data, the classification criteria are not met.**STOT-single exposure**

May cause drowsiness or dizziness.

STOT-repeated exposure Based on available data, the classification criteria are not met.**Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1 Toxicity**Aquatic toxicity:****593-84-0 guanidinium thiocyanate**

EC50/48h	42.4 mg/l (aquatic invertebrates)
ErC50/72h	130 mg/l (Algae)

12.2 Persistence and degradability No further relevant information available.**12.3 Bioaccumulative potential** No further relevant information available.**12.4 Mobility in soil** No further relevant information available.

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Additional ecological information:**General notes:**

Do not allow product to reach ground water, water course or sewage system.
 Must not reach sewage water or drainage ditch undiluted or unneutralised.
 Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
 Danger to drinking water if even small quantities leak into the ground.

12.5 Results of PBT and vPvB assessment**PBT:** Not applicable.**vPvB:** Not applicable.**12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods**Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Disposal must be made according to official regulations.

Uncleaned packaging:

Recommendation: Disposal must be made according to official regulations.

Recommended cleansing agents: Water, if necessary together with cleansing agents.

SECTION 14: Transport information

**14.1 UN-Number
ADR, IMDG, IATA**

UN2924

**14.2 UN proper shipping name
ADR**

 2924 FLAMMABLE LIQUID, CORROSIVE, N.O.S.
 (guanidinium thiocyanate, ISOPROPANOL
 (ISOPROPYL ALCOHOL))

IMDG, IATA

 FLAMMABLE LIQUID, CORROSIVE, N.O.S.
 (guanidinium thiocyanate, ISOPROPANOL
 (ISOPROPYL ALCOHOL))
14.3 Transport hazard class(es)**ADR**
**Class
Label**

 3 (FC) Flammable liquids.
3+8
IMDG**Class**

3 Flammable liquids.

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Label	3/8
IATA	
	
Class	3 Flammable liquids.
Label	3 (8)
14.4 Packing group ADR, IMDG, IATA	III
14.5 Environmental hazards:	Not applicable.
14.6 Special precautions for user	Warning: Flammable liquids.
Hazard identification number (Kemler code):	38
EMS Number:	F-E,S-C
Stowage Category	A
Stowage Code	SW2 Clear of living quarters.
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
Transport/Additional information:	
ADR	
Limited quantities (LQ)	5L
Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
Transport category	3
Tunnel restriction code	D/E
IMDG	
Limited quantities (LQ)	5L
Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
UN "Model Regulation":	UN 2924 FLAMMABLE LIQUID, CORROSIVE, N.O.S. (GUANIDINIUM THIOCYANATE, ISOPROPANOL (ISOPROPYL ALCOHOL)), 3 (8), III

SECTION 15: Regulatory information

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

Directive 2012/18/EU

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

Seveso category P5c FLAMMABLE LIQUIDS

Qualifying quantity (tonnes) for the application of lower-tier requirements 5.000 t

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Qualifying quantity (tonnes) for the application of upper-tier requirements 50.000 t

National regulations:
Waterhazard class: Water hazard class 2 (Self-assessment): hazardous for water.

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

SECTION 16: Other information

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

Relevant phrases

H225 Highly flammable liquid and vapour.
 H302 Harmful if swallowed.
 H312 Harmful in contact with skin.
 H314 Causes severe skin burns and eye damage.
 H315 Causes skin irritation.
 H317 May cause an allergic skin reaction.
 H319 Causes serious eye irritation.
 H332 Harmful if inhaled.
 H335 May cause respiratory irritation.
 H336 May cause drowsiness or dizziness.
 H412 Harmful to aquatic life with long lasting effects.

Department issuing SDS: QS 0049-6151-8102-0

Contact: QS 0049-6151-8102-0

Worldwide local emergency numbers

Argentina Spanish Local (City) Buenos Aires Americas 54-1159839431
 Australia English Local (City) Sydney Oceania 61-290372994
 Austria German Local (City) Vienna Europe 43-13649237
 Belgium French Local (City) Brussels Europe 32-28083237
 Brazil Portuguese Local (City) Rio De Janeiro Americas 55-2139581449
 Brazil Portuguese Local (City) Sao Paulo Americas 55-1143491359
 Brazil - Toll Free Portuguese Toll free Mobile-Enabled Americas 0800 892 0479
 Bulgaria Bulgarian Local (City) Plovdiv Europe 359-32570104
 Cayman Islands English Local (National) Americas 345-749-8392
 Chile Spanish Local (City) Santiago Americas 56 2 2581 4934
 China Mandarin Local (National) Asia 4001-204937
 Colombia Spanish Toll Free Americas 01800-710-2151
 Costa Rica Spanish Local (National) Americas 506-40003869
 Croatia Croatian Local (City) Zagreb Europe 385-17776920
 Czech Republic Czech Local (City) Prague Europe 420-228880039
 Denmark Danish Local (National) Europe 45-69918573
 Dominican Republic Spanish Local (City) Santo Domingo Americas (829) 956-7588
 El Salvador Spanish Local (City) San Salvador Americas 503 2136 7633
 Estonia Estonian Local (National) Europe 372-6681294
 Finland Finnish Local (City) Helsinki Europe 358-942419014
 France French National Europe 33-975181407
 Germany German Local (City) Frankfurt Europe 49-69643508409 0800-181-7059
 Greece Greek Local (City) Athens Europe 30-2111768478
 Grenada English Local (City) St George Americas 1 (473) 230-0165
 Guinea French Americas 224 660 71 03 00
 Hong Kong Toll Free Asia 800-968-793
 Hungary Hungarian Local (City) Budapest Europe 36-18088425
 Iceland Icelandic Local (City) Reykjavik Europe 354 539 0655
 India Hindi, Bengali, English Asia 000-800-100-7141

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Indonesia Indonesian Toll Free Asia 001-803-017-9114
 Ireland English Local (City) Dublin Europe 353-19014670
 Israel Hebrew Local (City) Tel Aviv Asia 972-37630639
 Italy Italian Local (City) Milan Europe 39-0245557031 800-789-767
 Japan Japanese Local (City) Tokyo Asia 81-345209637
 Latvia Latvian Lettish Local (City) Riga Europe 371-66165504
 Lithuania Lithuanian Local (City) Vilnius Europe 370-52140238
 Luxembourg French and German Europe 352-20202416
 Macedonia Macedonian Local (City) Skopje Europe 389 2 551 7456
 Malaysia Malay Local (City) Kuala Lumpur Asia 60-39212579 41-800-815-308
 Mexico Spanish Americas 01-800-681-9531
 Netherlands Dutch Europe 31-858880596
 New Zealand English Local (City) Auckland Oceania 64-98010034
 Nigeria Hausa Local (City) Lagos Europe 234 1 227 8883
 Panama Spanish Local (National) Americas 507-8322475
 Peru Spanish Local (City) Lima Americas 51-17071295
 Philippines Tagalog Local (City) Manila Asia 1-800-1-116-1020
 Poland Polish Local (City) Warsaw Europe 48-223988029
 Portugal Portuguese Local (National) Europe 351-308801773
 Romania Romanian Local (National) Europe 40-37-6300026
 Russia Russian Toll Free Mobile-Enabled Asia 8-800-100-6346
 Saudi Arabia Arabic and English CHEMTREC DID Only Asia 966-8111095861
 Singapore English and Mandarin Asia 65-31581349 or 800-101-2201
 Slovakia Slovak Local (City) Bratislava Europe 421-233057972
 Slovenia Slovenian Local (City) Ljubljana Europe 38-618888016
 South Africa English Toll Free Africa 0-800-983-611
 South Korea Korean Toll Free Asia 003-0813-2549 and 080-822-1374
 Spain Spanish Local (City) Barcelona Europe 34-931768545 and 900-868538
 Sweden Swedish Local (City) Stockholm Europe 46-852503403
 Switzerland German and French and Italian Zurich Europe 41-435082011
 Taiwan Mandarin Local (City) Taipei Asia 886-2-7741-4207 and 00801-14-8954
 Thailand Thai Toll Free Asia 01-800-13-203-9987
 Trinidad and Tobago English Local (National) Americas 1-868-224-5716
 Turkey Turkish Local (City) Istanbul Europe 90-212-7055340
 Ukraine Ukrainian Europe 380-947101374
 United Kingdom English Local (City) London Europe 44-870-8200418 and 44-2038073798

Abbreviations and acronyms:

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Flammable liquids – Category 2

Flam. Liq. 3: Flammable liquids – Category 3

Acute Tox. 4: Acute toxicity – Category 4

Skin Corr. 1B: Skin corrosion/irritation – Category 1B

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Skin Sens. 1: Skin sensitisation – Category 1

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

* **Data compared to the previous version altered.**

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

1.1 Product identifier

Trade name: RIDA@UNITY Wash buffer 1

Article number: RB-WB-EtOH-1

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

No further relevant information available.

Application of the substance / the preparation: In vitro

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

R-Biopharm AG

An der neuen Bergstraße 17

D-64297 Darmstadt

Further information obtainable from: e-mail: info@r-biopharm.de

1.4 Emergency telephone number:

CHEMTREC (worldwide): +1 703-741-5970 / 1-800-424-9300

CHEMTREC (United Kingdom): 44-870-8200418 and 44-2038073798 (toll free)

For additional worldwide local emergency numbers refer to section 16.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008



flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



Acute Tox. 4 H302 Harmful if swallowed.

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

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

Hazard pictograms GHS02, GHS07

Signal word Warning

Hazard-determining components of labelling:

guanidinium chloride

Hazard statements

H226 Flammable liquid and vapour.

H302 Harmful if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye 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/hearing protection.

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P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
 P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards**Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

3.2 Chemical characterisation: Mixtures**Description:** Mixture: consisting of the following components.**Dangerous components:**

CAS: 64-17-5 EINECS: 200-578-6	ethanol ⚠ Flam. Liq. 2, H225 ⚠ Eye Irrit. 2, H319	50-100%
CAS: 50-01-1 EINECS: 200-002-3	guanidinium chloride ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332; Skin Irrit. 2, H315; ⚠ Eye Irrit. 2, H319	25-50%

Additional information: For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures**General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

After inhalation:

In case of unconsciousness place patient stably in side position for transportation.

After skin contact: Immediately wash with water and soap and rinse thoroughly.**After eye contact:**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

After swallowing: Call for a doctor immediately.**4.2 Most important symptoms and effects, both acute and delayed**

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media**Suitable extinguishing agents:**CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.**5.2 Special hazards arising from the substance or mixture**

No further relevant information available.

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5.3 Advice for firefighters**Protective equipment:** No special measures required.**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

6.2 Environmental precautions:

Prevent seepage into sewage system, workpits and cellars.

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

6.3 Methods and material for containment and cleaning up:

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

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

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

Open and handle receptacle with care.

No special precautions are necessary if used correctly.

Information about fire - and explosion protection:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

7.2 Conditions for safe storage, including any incompatibilities**Storage:****Requirements to be met by storerooms and receptacles:** No special requirements.**Information about storage in one common storage facility:** Not required.**Further information about storage conditions:** Keep container tightly sealed.**7.3 Specific end use(s)** No further relevant information available.**SECTION 8: Exposure controls/personal protection****8.1 Control parameters****Additional information about design of technical facilities:** No further data; see item 7.**Ingredients with limit values that require monitoring at the workplace:****64-17-5 ethanol**WEL Long-term value: 1920 mg/m³, 1000 ppm**Additional information:** The lists valid during the making were used as basis.**8.2 Exposure controls****Personal protective equipment:****General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

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Respiratory protection: Not required.**Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

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

For the permanent contact gloves made of the following materials are suitable:

Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.11 mmValue for the permeation: Level ≤ 480 **As protection from splashes gloves made of the following materials are suitable:**

Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.11 mmValue for the permeation: Level ≤ 480 **Eye protection:**

Tightly sealed goggles

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties**General Information****Appearance:**

Form:	Fluid
Colour:	Colourless
Odour:	Alcohol-like
Odour threshold:	Not determined.

pH-value at 20 °C:	5.2
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Change in condition

Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	78.3 °C

Flash point:	22 °C
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Flammability (solid, gas):	Not applicable.
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Decomposition temperature:	Not determined.
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Auto-ignition temperature:	Product is not selfigniting.
Explosive properties:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
Explosion limits:	
Lower:	3.5 Vol %
Upper:	15 Vol %
Vapour pressure at 20 °C:	59 hPa
Density at 20 °C:	0.89 g/cm ³
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with water:	Fully miscible.
Partition coefficient: n-octanol/water:	Not determined.
Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
Solvent content:	
Organic solvents:	57.0 %
Water:	14.3 %
Solids content:	28.7 %
9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity No further relevant information available.

10.2 Chemical stability

Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

10.3 Possibility of hazardous reactions No dangerous reactions known.

10.4 Conditions to avoid No further relevant information available.

10.5 Incompatible materials: No further relevant information available.

10.6 Hazardous decomposition products: No dangerous decomposition products known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Harmful if swallowed.

LD/LC50 values relevant for classification:

64-17-5 ethanol

Oral	LD50	7,060 mg/kg (rat)
Inhalative	LC50/4h	20,000 mg/l (rat)

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50-01-1 guanidinium chloride

Oral	LD50	556.5 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)

Primary irritant effect:**Skin corrosion/irritation**

Causes skin irritation.

Serious eye damage/irritation

Causes serious eye irritation.

Respiratory or skin sensitisation Based on available data, the classification criteria are not met.**Additional toxicological information:****CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)****Germ cell mutagenicity** Based on available data, the classification criteria are not met.**Carcinogenicity** Based on available data, the classification criteria are not met.**Reproductive toxicity** Based on available data, the classification criteria are not met.**STOT-single exposure** Based on available data, the classification criteria are not met.**STOT-repeated exposure** Based on available data, the classification criteria are not met.**Aspiration hazard** Based on available data, the classification criteria are not met.**SECTION 12: Ecological information****12.1 Toxicity****Aquatic toxicity:****50-01-1 guanidinium chloride**

EC50/48h	70.2 mg/l (aquatic invertebrates)
ErC50/72h	33.5 mg/l (Algae)

12.2 Persistence and degradability No further relevant information available.**12.3 Bioaccumulative potential** No further relevant information available.**12.4 Mobility in soil** No further relevant information available.**Additional ecological information:****General notes:**

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

12.5 Results of PBT and vPvB assessment**PBT:** Not applicable.**vPvB:** Not applicable.**12.6 Other adverse effects** No further relevant information available.**SECTION 13: Disposal considerations****13.1 Waste treatment methods****Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Disposal must be made according to official regulations.

Uncleaned packaging:**Recommendation:** Disposal must be made according to official regulations.

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Recommended cleansing agents: Water, if necessary together with cleansing agents.

SECTION 14: Transport information

14.1 UN-Number
 ADR, IMDG, IATA

UN1170

14.2 UN proper shipping name
 ADR
 IMDG
 IATA

 1170 ETHANOL (ETHYL ALCOHOL)
 ETHANOL (ETHYL ALCOHOL) mixture
 ETHANOL

14.3 Transport hazard class(es)

ADR


Class
Label

 3 (F1) Flammable liquids.
 3

IMDG, IATA


Class
Label

 3 Flammable liquids.
 3

14.4 Packing group
 ADR, IMDG, IATA

III

14.5 Environmental hazards:

Not applicable.

14.6 Special precautions for user
Hazard identification number (Kemler code):
EMS Number:
Stowage Category

 Warning: Flammable liquids.
 30
 F-E,S-D
 A

14.7 Transport in bulk according to Annex II
of Marpol and the IBC Code

Not applicable.

Transport/Additional information:

ADR

Limited quantities (LQ)
Excepted quantities (EQ)

 5L
 Code: E1
 Maximum net quantity per inner packaging: 30 ml
 Maximum net quantity per outer packaging: 1000 ml

Transport category
Tunnel restriction code

 3
 D/E

IMDG

Limited quantities (LQ)
Excepted quantities (EQ)

 5L
 Code: E1
 Maximum net quantity per inner packaging: 30 ml

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Safety data sheet

according to 1907/2006/EC, Article 31

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Trade name: RIDA®UNITY Wash buffer 1

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	Maximum net quantity per outer packaging: 1000 ml
--	---

UN "Model Regulation":	UN 1170 ETHANOL (ETHYL ALCOHOL), 3, III
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SECTION 15: Regulatory information

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

Directive 2012/18/EU

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

Seveso category P5c FLAMMABLE LIQUIDS

Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t

Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 t

National regulations:

Waterhazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.

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

SECTION 16: Other information

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

Relevant phrases

H225 Highly flammable liquid and vapour.

H302 Harmful if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

Department issuing SDS: QS 0049-6151-8102-0

Contact: QS 0049-6151-8102-0

Worldwide local emergency numbers

Argentina Spanish Local (City) Buenos Aires Americas 54-1159839431

Australia English Local (City) Sydney Oceania 61-290372994

Austria German Local (City) Vienna Europe 43-13649237

Belgium French Local (City) Brussels Europe 32-28083237

Brazil Portuguese Local (City) Rio De Janeiro Americas 55-2139581449

Brazil Portuguese Local (City) Sao Paulo Americas 55-1143491359

Brazil - Toll Free Portuguese Toll free Mobile-Enabled Americas 0800 892 0479

Bulgaria Bulgarian Local (City) Plovdiv Europe 359-32570104

Cayman Islands English Local (National) Americas 345-749-8392

Chile Spanish Local (City) Santiago Americas 56 2 2581 4934

China Mandarin Local (National) Asia 4001-204937

Colombia Spanish Toll Free Americas 01800-710-2151

Costa Rica Spanish Local (National) Americas 506-40003869

Croatia Croatian Local (City) Zagreb Europe 385-17776920

Czech Republic Czech Local (City) Prague Europe 420-228880039

Denmark Danish Local (National) Europe 45-69918573

Dominican Republic Spanish Local (City) Santo Domingo Americas (829) 956-7588

El Salvador Spanish Local (City) San Salvador Americas 503 2136 7633

Estonia Estonian Local (National) Europe 372-6681294

Finland Finnish Local (City) Helsinki Europe 358-942419014

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Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 22.02.2022

Version number 1.0

Revision: 17.02.2022

Trade name: RIDA®UNITY Wash buffer 1

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France French National Europe 33-975181407
 Germany German Local (City) Frankfurt Europe 49-69643508409 0800-181-7059
 Greece Greek Local (City) Athens Europe 30-2111768478
 Grenada English Local (City) St George Americas 1 (473) 230-0165
 Guinea French Americas 224 660 71 03 00
 Hong Kong Toll Free Asia 800-968-793
 Hungary Hungarian Local (City) Budapest Europe 36-18088425
 Iceland Icelandic Local (City) Reykjavik Europe 354 539 0655
 India Hindi, Bengali, English Asia 000-800-100-7141
 Indonesia Indonesian Toll Free Asia 001-803-017-9114
 Ireland English Local (City) Dublin Europe 353-19014670
 Israel Hebrew Local (City) Tel Aviv Asia 972-37630639
 Italy Italian Local (City) Milan Europe 39-0245557031 800-789-767
 Japan Japanese Local (City) Tokyo Asia 81-345209637
 Latvia Latvian Lettish Local (City) Riga Europe 371-66165504
 Lithuania Lithuanian Local (City) Vilnius Europe 370-52140238
 Luxembourg French and German Europe 352-20202416
 Macedonia Macedonian Local (City) Skopje Europe 389 2 551 7456
 Malaysia Malay Local (City) Kuala Lumpur Asia 60-39212579 41-800-815-308
 Mexico Spanish Americas 01-800-681-9531
 Netherlands Dutch Europe 31-858880596
 New Zealand English Local (City) Auckland Oceania 64-98010034
 Nigeria Hausa Local (City) Lagos Europe 234 1 227 8883
 Panama Spanish Local (National) Americas 507-8322475
 Peru Spanish Local (City) Lima Americas 51-17071295
 Philippines Tagalog Local (City) Manila Asia 1-800-1-116-1020
 Poland Polish Local (City) Warsaw Europe 48-223988029
 Portugal Portuguese Local (National) Europe 351-308801773
 Romania Romanian Local (National) Europe 40-37-6300026
 Russia Russian Toll Free Mobile-Enabled Asia 8-800-100-6346
 Saudi Arabia Arabic and English CHEMTREC DID Only Asia 966-8111095861
 Singapore English and Mandarin Asia 65-31581349 or 800-101-2201
 Slovakia Slovak Local (City) Bratislava Europe 421-233057972
 Slovenia Slovenian Local (City) Ljubljana Europe 38-618888016
 South Africa English Toll Free Africa 0-800-983-611
 South Korea Korean Toll Free Asia 003-0813-2549 and 080-822-1374
 Spain Spanish Local (City) Barcelona Europe 34-931768545 and 900-868538
 Sweden Swedish Local (City) Stockholm Europe 46-852503403
 Switzerland German and French and Italian Zurich Europe 41-435082011
 Taiwan Mandarin Local (City) Taipei Asia 886-2-7741-4207 and 00801-14-8954
 Thailand Thai Toll Free Asia 01-800-13-203-9987
 Trinidad and Tobago English Local (National) Americas 1-868-224-5716
 Turkey Turkish Local (City) Istanbul Europe 90-212-7055340
 Ukraine Ukrainian Europe 380-947101374
 United Kingdom English Local (City) London Europe 44-870-8200418 and 44-2038073798

Abbreviations and acronyms:

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
 IMDG: International Maritime Code for Dangerous Goods
 IATA: International Air Transport Association
 GHS: Globally Harmonised System of Classification and Labelling of Chemicals
 EINECS: European Inventory of Existing Commercial Chemical Substances
 ELINCS: European List of Notified Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 PBT: Persistent, Bioaccumulative and Toxic

(Contd. on page 10)

Safety data sheet according to 1907/2006/EC, Article 31

Printing date 22.02.2022

Version number 1.0

Revision: 17.02.2022

Trade name: RIDA®UNITY Wash buffer 1

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vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Flam. Liq. 3: Flammable liquids – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

* **Data compared to the previous version altered.**

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 22.02.2022

Version number 1.0

Revision: 17.02.2022

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

1.1 Product identifier

Trade name: RIDA@UNITY Wash buffer 2**Article number:** RB-WB-EtOH-2

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

No further relevant information available.

Application of the substance / the preparation: In vitro

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

R-Biopharm AG

An der neuen Bergstraße 17

D-64297 Darmstadt

Further information obtainable from: e-mail: info@r-biopharm.de

1.4 Emergency telephone number:

CHEMTREC (worldwide): +1 703-741-5970 / 1-800-424-9300

CHEMTREC (United Kingdom): 44-870-8200418 and 44-2038073798 (toll free)

For additional worldwide local emergency numbers refer to section 16.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



Eye Irrit. 2 H319 Causes serious eye irritation.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

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

Hazard pictograms GHS02, GHS07**Signal word** Danger**Hazard statements**

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P240 Ground and bond container and receiving equipment.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

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

P337+P313 If eye irritation persists: Get medical advice/attention.

2.3 Other hazards

Results of PBT and vPvB assessment**PBT:** Not applicable.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 22.02.2022

Version number 1.0

Revision: 17.02.2022

Trade name: RIDA®UNITY Wash buffer 2

vPvB: Not applicable.

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SECTION 3: Composition/information on ingredients

3.2 Chemical characterisation: Mixtures

Description: Mixture: consisting of the following components.

Dangerous components:

CAS: 64-17-5	ethanol	 Flam. Liq. 2, H225	50-100%
EINECS: 200-578-6		 Eye Irrit. 2, H319	

Additional information: For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

After inhalation: Supply fresh air; consult doctor in case of complaints.

After skin contact: Immediately wash with water and soap and rinse thoroughly.

After eye contact:

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

After swallowing: If symptoms persist consult doctor.

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents:

 CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

5.2 Special hazards arising from the substance or mixture

No further relevant information available.

5.3 Advice for firefighters

Protective equipment: No special measures required.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

6.2 Environmental precautions:

Prevent seepage into sewage system, workpits and cellars.

Dilute with plenty of water.

6.3 Methods and material for containment and cleaning up:

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

Ensure adequate ventilation.

6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

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Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 22.02.2022

Version number 1.0

Revision: 17.02.2022

Trade name: RIDA®UNITY Wash buffer 2

See Section 13 for disposal information.

(Contd. of page 2)

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Open and handle receptacle with care.

No special precautions are necessary if used correctly.

Information about fire - and explosion protection:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

7.2 Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles: Store in a cool location.

Information about storage in one common storage facility: Not required.

Further information about storage conditions:

Keep container tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Additional information about design of technical facilities: No further data; see item 7.

Ingredients with limit values that require monitoring at the workplace:

64-17-5 ethanol

WEL Long-term value: 1920 mg/m³, 1000 ppm
Additional information: The lists valid during the making were used as basis.

8.2 Exposure controls

Personal protective equipment:

General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

Respiratory protection: Not required.

Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

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Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 22.02.2022

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Revision: 17.02.2022

Trade name: RIDA®UNITY Wash buffer 2

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Penetration time of glove material

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

For the permanent contact gloves made of the following materials are suitable:

Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.11 mmValue for the permeation: Level ≤ 480 **As protection from splashes gloves made of the following materials are suitable:**

Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.11 mmValue for the permeation: Level ≤ 480 **Eye protection:**

Tightly sealed goggles

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties**General Information****Appearance:**

Form:	Fluid
Colour:	Colourless
Odour:	Alcohol-like
Odour threshold:	Not determined.

pH-value at 20 °C: 7.5

Change in condition

Melting point/freezing point:	0 °C
Initial boiling point and boiling range:	78 °C

Flash point: 22 °C

Flammability (solid, gas): Not applicable.

Decomposition temperature: Not determined.

Auto-ignition temperature: Product is not selfigniting.

Explosive properties: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

Explosion limits:

Lower:	3.5 Vol %
Upper:	15 Vol %

Vapour pressure at 20 °C: 59 hPa

Density at 20 °C:	0.89 g/cm ³
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not determined.

Solubility in / Miscibility with water: Fully miscible.

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Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 22.02.2022

Version number 1.0

Revision: 17.02.2022

Trade name: RIDA®UNITY Wash buffer 2

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Partition coefficient: n-octanol/water: Not determined.

Viscosity:

Dynamic at 20 °C: 0.952 mPas
Kinematic: Not determined.

Solvent content:

Organic solvents: 55.3 %
Water: 44.0 %

Solids content: 0.7 %

9.2 Other information No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity No further relevant information available.

10.2 Chemical stability

Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

10.3 Possibility of hazardous reactions No dangerous reactions known.

10.4 Conditions to avoid No further relevant information available.

10.5 Incompatible materials: No further relevant information available.

10.6 Hazardous decomposition products: No dangerous decomposition products known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity Based on available data, the classification criteria are not met.

LD/LC50 values relevant for classification:**64-17-5 ethanol**

Oral	LD50	7,060 mg/kg (rat)
Inhalative	LC50/4h	20,000 mg/l (rat)

Primary irritant effect:

Skin corrosion/irritation Based on available data, the classification criteria are not met.

Serious eye damage/irritation

Causes serious eye irritation.

Respiratory or skin sensitisation Based on available data, the classification criteria are not met.

Additional toxicological information:**CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

Germ cell mutagenicity Based on available data, the classification criteria are not met.

Carcinogenicity Based on available data, the classification criteria are not met.

Reproductive toxicity Based on available data, the classification criteria are not met.

STOT-single exposure Based on available data, the classification criteria are not met.

STOT-repeated exposure Based on available data, the classification criteria are not met.

Aspiration hazard Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity: No further relevant information available.

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Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 22.02.2022

Version number 1.0

Revision: 17.02.2022

Trade name: RIDA®UNITY Wash buffer 2

(Contd. of page 5)

12.2 Persistence and degradability No further relevant information available.**12.3 Bioaccumulative potential** No further relevant information available.**12.4 Mobility in soil** No further relevant information available.**Additional ecological information:****General notes:** Not hazardous for water.**12.5 Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.**12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods**Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Disposal must be made according to official regulations.

Uncleaned packaging:**Recommendation:** Disposal must be made according to official regulations.**Recommended cleansing agents:** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

14.1 UN-Number
ADR, IMDG, IATA

UN1170

14.2 UN proper shipping nameADR
IMDG
IATA1170 ETHANOL (ETHYL ALCOHOL)
ETHANOL (ETHYL ALCOHOL) mixture
ETHANOL**14.3 Transport hazard class(es)**

ADR

Class
Label3 (F1) Flammable liquids.
3

IMDG, IATA

Class
Label3 Flammable liquids.
3**14.4 Packing group**
ADR, IMDG, IATA

II

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 22.02.2022

Version number 1.0

Revision: 17.02.2022

Trade name: RIDA®UNITY Wash buffer 2

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14.5 Environmental hazards:	Not applicable.
14.6 Special precautions for user	Warning: Flammable liquids.
Hazard identification number (Kemler code):	33
EMS Number:	F-E,S-D
Stowage Category	A
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
Transport/Additional information:	
ADR	
Limited quantities (LQ)	1L
Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
Transport category	2
Tunnel restriction code	D/E
IMDG	
Limited quantities (LQ)	1L
Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
UN "Model Regulation":	UN 1170 ETHANOL (ETHYL ALCOHOL), 3, II

SECTION 15: Regulatory information

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

Directive 2012/18/EU

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

Seveso category P5c FLAMMABLE LIQUIDS

Qualifying quantity (tonnes) for the application of lower-tier requirements 5.000 t

Qualifying quantity (tonnes) for the application of upper-tier requirements 50.000 t

National regulations:

Waterhazard class: Generally not hazardous for water.

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

SECTION 16: Other information

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

Relevant phrases

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

Department issuing SDS: QS 0049-6151-8102-0

Contact: QS 0049-6151-8102-0

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Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 22.02.2022

Version number 1.0

Revision: 17.02.2022

Trade name: RIDA®UNITY Wash buffer 2

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Worldwide local emergency numbers

Argentina Spanish Local (City) Buenos Aires Americas 54-1159839431
 Australia English Local (City) Sydney Oceania 61-290372994
 Austria German Local (City) Vienna Europe 43-13649237
 Belgium French Local (City) Brussels Europe 32-28083237
 Brazil Portuguese Local (City) Rio De Janeiro Americas 55-2139581449
 Brazil Portuguese Local (City) Sao Paulo Americas 55-1143491359
 Brazil - Toll Free Portuguese Toll free Mobile-Enabled Americas 0800 892 0479
 Bulgaria Bulgarian Local (City) Plovdiv Europe 359-32570104
 Cayman Islands English Local (National) Americas 345-749-8392
 Chile Spanish Local (City) Santiago Americas 56 2 2581 4934
 China Mandarin Local (National) Asia 4001-204937
 Colombia Spanish Toll Free Americas 01800-710-2151
 Costa Rica Spanish Local (National) Americas 506-40003869
 Croatia Croatian Local (City) Zagreb Europe 385-17776920
 Czech Republic Czech Local (City) Prague Europe 420-228880039
 Denmark Danish Local (National) Europe 45-69918573
 Dominican Republic Spanish Local (City) Santo Domingo Americas (829) 956-7588
 El Salvador Spanish Local (City) San Salvador Americas 503 2136 7633
 Estonia Estonian Local (National) Europe 372-6681294
 Finland Finnish Local (City) Helsinki Europe 358-942419014
 France French National Europe 33-975181407
 Germany German Local (City) Frankfurt Europe 49-69643508409 0800-181-7059
 Greece Greek Local (City) Athens Europe 30-2111768478
 Grenada English Local (City) St George Americas 1 (473) 230-0165
 Guinea French Americas 224 660 71 03 00
 Hong Kong Toll Free Asia 800-968-793
 Hungary Hungarian Local (City) Budapest Europe 36-18088425
 Iceland Icelandic Local (City) Reykjavik Europe 354 539 0655
 India Hindi, Bengali, English Asia 000-800-100-7141
 Indonesia Indonesian Toll Free Asia 001-803-017-9114
 Ireland English Local (City) Dublin Europe 353-19014670
 Israel Hebrew Local (City) Tel Aviv Asia 972-37630639
 Italy Italian Local (City) Milan Europe 39-0245557031 800-789-767
 Japan Japanese Local (City) Tokyo Asia 81-345209637
 Latvia Latvian Lettish Local (City) Riga Europe 371-66165504
 Lithuania Lithuanian Local (City) Vilnius Europe 370-52140238
 Luxembourg French and German Europe 352-20202416
 Macedonia Macedonian Local (City) Skopje Europe 389 2 551 7456
 Malaysia Malay Local (City) Kuala Lumpur Asia 60-39212579 41-800-815-308
 Mexico Spanish Americas 01-800-681-9531
 Netherlands Dutch Europe 31-858880596
 New Zealand English Local (City) Auckland Oceania 64-98010034
 Nigeria Hausa Local (City) Lagos Europe 234 1 227 8883
 Panama Spanish Local (National) Americas 507-8322475
 Peru Spanish Local (City) Lima Americas 51-17071295
 Philippines Tagalog Local (City) Manila Asia 1-800-1-116-1020
 Poland Polish Local (City) Warsaw Europe 48-223988029
 Portugal Portuguese Local (National) Europe 351-308801773
 Romania Romanian Local (National) Europe 40-37-6300026
 Russia Russian Toll Free Mobile-Enabled Asia 8-800-100-6346
 Saudi Arabia Arabic and English CHEMTREC DID Only Asia 966-8111095861
 Singapore English and Mandarin Asia 65-31581349 or 800-101-2201
 Slovakia Slovak Local (City) Bratislava Europe 421-233057972
 Slovenia Slovenian Local (City) Ljubljana Europe 38-61888016
 South Africa English Toll Free Africa 0-800-983-611

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Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 22.02.2022

Version number 1.0

Revision: 17.02.2022

Trade name: RIDA®UNITY Wash buffer 2

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South Korea Korean Toll Free Asia 003-0813-2549 and 080-822-1374
Spain Spanish Local (City) Barcelona Europe 34-931768545 and 900-868538
Sweden Swedish Local (City) Stockholm Europe 46-852503403
Switzerland German and French and Italian Zurich Europe 41-435082011
Taiwan Mandarin Local (City) Taipei Asia 886-2-7741-4207 and 00801-14-8954
Thailand Thai Toll Free Asia 01-800-13-203-9987
Trinidad and Tobago English Local (National) Americas 1-868-224-5716
Turkey Turkish Local (City) Istanbul Europe 90-212-7055340
Ukraine Ukrainian Europe 380-947101374
United Kingdom English Local (City) London Europe 44-870-8200418 and 44-2038073798

Abbreviations and acronyms:

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

* **Data compared to the previous version altered.**

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 22.02.2022

Version number 1.0

Revision: 25.01.2022

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

1.1 Product identifier

Trade name: RIDA@UNITY Elution buffer**Article number:** RB-EB-H1

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

No further relevant information available.

Application of the substance / the preparation: In vitro

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

R-Biopharm AG

An der neuen Bergstraße 17

D-64297 Darmstadt

Further information obtainable from: e-mail: info@r-biopharm.de

1.4 Emergency telephone number:

CHEMTREC (worldwide): +1 703-741-5970 / 1-800-424-9300

CHEMTREC (United Kingdom): 44-870-8200418 and 44-2038073798 (toll free)

For additional worldwide local emergency numbers refer to section 16.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

The product is not classified, according to the CLP regulation.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 Void**Hazard pictograms** Void**Signal word** Void**Hazard statements** Void

2.3 Other hazards

Results of PBT and vPvB assessment**PBT:** Not applicable.**vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

3.2 Chemical characterisation: Mixtures

Description: Mixture of substances with nonhazardous additions.**Dangerous components:** Void**Additional information:** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information: No special measures required.**After inhalation:** Supply fresh air; consult doctor in case of complaints.**After skin contact:** Immediately wash with water and soap and rinse thoroughly.**After eye contact:** Rinse opened eye for several minutes under running water.**After swallowing:** If symptoms persist consult doctor.

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4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Firefighting measures**5.1 Extinguishing media****Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.**5.2 Special hazards arising from the substance or mixture**

No further relevant information available.

5.3 Advice for firefighters**Protective equipment:** No special measures required.**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective clothing.

6.2 Environmental precautions: No special measures required.**6.3 Methods and material for containment and cleaning up:**

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

6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage**7.1 Precautions for safe handling** No special measures required.**Information about fire - and explosion protection:** No special measures required.**7.2 Conditions for safe storage, including any incompatibilities****Storage:****Requirements to be met by storerooms and receptacles:** No special requirements.**Information about storage in one common storage facility:** Not required.**Further information about storage conditions:** None.**7.3 Specific end use(s)** No further relevant information available.**SECTION 8: Exposure controls/personal protection****8.1 Control parameters****Additional information about design of technical facilities:** No further data; see item 7.**Ingredients with limit values that require monitoring at the workplace:**

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

Additional information: The lists valid during the making were used as basis.**8.2 Exposure controls****Personal protective equipment:****General protective and hygienic measures:**

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

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Respiratory protection: Not required.

Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

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

For the permanent contact gloves made of the following materials are suitable:

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

As protection from splashes gloves made of the following materials are suitable:

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

Eye protection: Goggles recommended during refilling

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information
Appearance:

Form:	Fluid
Colour:	Colourless
Odour:	Undistinguishable.
Odour threshold:	Not determined.

pH-value at 20 °C:	8
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Change in condition

Melting point/freezing point:	0 °C
Initial boiling point and boiling range:	Undetermined.

Flash point:	Not applicable.
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Flammability (solid, gas):	Not applicable.
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Decomposition temperature:	Not determined.
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Auto-ignition temperature:	Product is not selfigniting.
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Explosive properties:	Product does not present an explosion hazard.
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Explosion limits:

Lower:	Not determined.
Upper:	Not determined.

Vapour pressure at 20 °C:	23 hPa
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Density at 20 °C:	1.48345 g/cm ³
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Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not determined.

Solubility in / Miscibility with water:	Not miscible or difficult to mix.
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Partition coefficient: n-octanol/water:	Not determined.
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Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.

Solvent content:	
Water:	99.8 %

Solids content:	0.2 %
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9.2 Other information	No further relevant information available.
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SECTION 10: Stability and reactivity

10.1 Reactivity No further relevant information available.

10.2 Chemical stability

Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

10.3 Possibility of hazardous reactions No dangerous reactions known.

10.4 Conditions to avoid No further relevant information available.

10.5 Incompatible materials: No further relevant information available.

10.6 Hazardous decomposition products: No dangerous decomposition products known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity Based on available data, the classification criteria are not met.

Primary irritant effect:

Skin corrosion/irritation Based on available data, the classification criteria are not met.

Serious eye damage/irritation Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation Based on available data, the classification criteria are not met.

Additional toxicological information:

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Germ cell mutagenicity Based on available data, the classification criteria are not met.

Carcinogenicity Based on available data, the classification criteria are not met.

Reproductive toxicity Based on available data, the classification criteria are not met.

STOT-single exposure Based on available data, the classification criteria are not met.

STOT-repeated exposure Based on available data, the classification criteria are not met.

Aspiration hazard Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity: No further relevant information available.

12.2 Persistence and degradability No further relevant information available.

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12.3 Bioaccumulative potential No further relevant information available.**12.4 Mobility in soil** No further relevant information available.**Additional ecological information:****General notes:** Not hazardous for water.**12.5 Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.**12.6 Other adverse effects** No further relevant information available.**SECTION 13: Disposal considerations****13.1 Waste treatment methods****Recommendation** Disposal must be made according to official regulations.**Uncleaned packaging:****Recommendation:** Disposal must be made according to official regulations.**SECTION 14: Transport information****14.1 UN-Number**
ADR, IMDG, IATA

Void

14.2 UN proper shipping name
ADR, IMDG, IATA

Void

14.3 Transport hazard class(es)ADR, ADN, IMDG, IATA
Class

Void

14.4 Packing group
ADR, IMDG, IATA

Void

14.5 Environmental hazards:

Not applicable.

14.6 Special precautions for user

Not applicable.

14.7 Transport in bulk according to Annex II
of Marpol and the IBC Code

Not applicable.

Transport/Additional information:

Not dangerous according to the above specifications.

UN "Model Regulation":

Void

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****Directive 2012/18/EU****Named dangerous substances - ANNEX I** None of the ingredients is listed.**National regulations:****Waterhazard class:** Generally not hazardous for water.

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

SECTION 16: Other information

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

Department issuing SDS: QS 0049-6151-8102-0

Contact: QS 0049-6151-8102-0

Worldwide local emergency numbers

Argentina Spanish Local (City) Buenos Aires Americas 54-1159839431
 Australia English Local (City) Sydney Oceania 61-290372994
 Austria German Local (City) Vienna Europe 43-13649237
 Belgium French Local (City) Brussels Europe 32-28083237
 Brazil Portuguese Local (City) Rio De Janeiro Americas 55-2139581449
 Brazil Portuguese Local (City) Sao Paulo Americas 55-1143491359
 Brazil - Toll Free Portuguese Toll free Mobile-Enabled Americas 0800 892 0479
 Bulgaria Bulgarian Local (City) Plovdiv Europe 359-32570104
 Cayman Islands English Local (National) Americas 345-749-8392
 Chile Spanish Local (City) Santiago Americas 56 2 2581 4934
 China Mandarin Local (National) Asia 4001-204937
 Colombia Spanish Toll Free Americas 01800-710-2151
 Costa Rica Spanish Local (National) Americas 506-40003869
 Croatia Croatian Local (City) Zagreb Europe 385-17776920
 Czech Republic Czech Local (City) Prague Europe 420-228880039
 Denmark Danish Local (National) Europe 45-69918573
 Dominican Republic Spanish Local (City) Santo Domingo Americas (829) 956-7588
 El Salvador Spanish Local (City) San Salvador Americas 503 2136 7633
 Estonia Estonian Local (National) Europe 372-6681294
 Finland Finnish Local (City) Helsinki Europe 358-942419014
 France French National Europe 33-975181407
 Germany German Local (City) Frankfurt Europe 49-69643508409 0800-181-7059
 Greece Greek Local (City) Athens Europe 30-2111768478
 Grenada English Local (City) St George Americas 1 (473) 230-0165
 Guinea French Americas 224 660 71 03 00
 Hong Kong Toll Free Asia 800-968-793
 Hungary Hungarian Local (City) Budapest Europe 36-18088425
 Iceland Icelandic Local (City) Reykjavik Europe 354 539 0655
 India Hindi, Bengali, English Asia 000-800-100-7141
 Indonesia Indonesian Toll Free Asia 001-803-017-9114
 Ireland English Local (City) Dublin Europe 353-19014670
 Israel Hebrew Local (City) Tel Aviv Asia 972-37630639
 Italy Italian Local (City) Milan Europe 39-0245557031 800-789-767
 Japan Japanese Local (City) Tokyo Asia 81-345209637
 Latvia Latvian Lettish Local (City) Riga Europe 371-66165504
 Lithuania Lithuanian Local (City) Vilnius Europe 370-52140238
 Luxembourg French and German Europe 352-20202416
 Macedonia Macedonian Local (City) Skopje Europe 389 2 551 7456
 Malaysia Malay Local (City) Kuala Lumpur Asia 60-39212579 41-800-815-308
 Mexico Spanish Americas 01-800-681-9531
 Netherlands Dutch Europe 31-858880596
 New Zealand English Local (City) Auckland Oceania 64-98010034
 Nigeria Hausa Local (City) Lagos Europe 234 1 227 8883
 Panama Spanish Local (National) Americas 507-8322475
 Peru Spanish Local (City) Lima Americas 51-17071295
 Philippines Tagalog Local (City) Manila Asia 1-800-1-116-1020

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Poland Polish Local (City) Warsaw Europe 48-223988029
Portugal Portuguese Local (National) Europe 351-308801773
Romania Romanian Local (National) Europe 40-37-6300026
Russia Russian Toll Free Mobile-Enabled Asia 8-800-100-6346
Saudi Arabia Arabic and English CHEMTREC DID Only Asia 966-8111095861
Singapore English and Mandarin Asia 65-31581349 or 800-101-2201
Slovakia Slovak Local (City) Bratislava Europe 421-233057972
Slovenia Slovenian Local (City) Ljubljana Europe 38-618888016
South Africa English Toll Free Africa 0-800-983-611
South Korea Korean Toll Free Asia 003-0813-2549 and 080-822-1374
Spain Spanish Local (City) Barcelona Europe 34-931768545 and 900-868538
Sweden Swedish Local (City) Stockholm Europe 46-852503403
Switzerland German and French and Italian Zurich Europe 41-435082011
Taiwan Mandarin Local (City) Taipei Asia 886-2-7741-4207 and 00801-14-8954
Thailand Thai Toll Free Asia 01-800-13-203-9987
Trinidad and Tobago English Local (National) Americas 1-868-224-5716
Turkey Turkish Local (City) Istanbul Europe 90-212-7055340
Ukraine Ukrainian Europe 380-947101374
United Kingdom English Local (City) London Europe 44-870-8200418 and 44-2038073798

Abbreviations and acronyms:

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

* **Data compared to the previous version altered.**

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