

**Buffer RLT**Version  
3.0Revision Date:  
08/12/2021Date of last issue: 07/21/2021  
Date of first issue: 08/02/2018**SECTION 1. IDENTIFICATION**

Product name : Buffer RLT

**Manufacturer or supplier's details**Company : QIAGEN GmbH  
QIAGEN Str. 1  
D-40724 Hilden

Telephone : +49-(0)2103-29-0

Responsible Department : QIAGEN Inc.  
19300 Germantown Road  
Germantown, MD 20874, USA  
Tel.: 800-426-8157  
<http://support.qiagen.com>E-mail : [cpc@qiagen.com](mailto:cpc@qiagen.com)  
addressResponsible/issuing  
personEmergency telephone : CHEMTREC  
USA & Canada 1-800-424-9300**Recommended use of the chemical and restrictions on use**

Recommended use : Laboratory chemicals

**SECTION 2. HAZARDS IDENTIFICATION****GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)**

Acute toxicity (Oral) : Category 4

Serious eye damage : Category 1

**GHS label elements**

Hazard pictograms :



Signal Word : Danger

Hazard Statements : H302 Harmful if swallowed.  
H318 Causes serious eye damage.Precautionary Statements : **Prevention:**

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

**Response:**

P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.

**Disposal:**

P501 Dispose of contents/ container to an approved waste disposal plant.

**Other hazards**

None known.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

**Components**

Chemical name	CAS-No.	Concentration (% w/w)
guanidinium thiocyanate	593-84-0	>= 30 - < 50

Actual concentration is withheld as a trade secret

**SECTION 4. FIRST AID MEASURES**

- General advice : Move out of dangerous area.  
Show this material safety data sheet to the doctor in attendance.
- If inhaled : If unconscious, place in recovery position and seek medical advice.  
If symptoms persist, call a physician.
- In case of skin contact : Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.  
If symptoms persist, call a physician.
- In case of eye contact : Small amounts splashed into eyes can cause irreversible tissue damage and blindness.  
In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
Remove contact lenses.  
Protect unharmed eye.
- If swallowed : If accidentally swallowed obtain immediate medical attention.  
Rinse mouth with water.  
Never give anything by mouth to an unconscious person.
- Most important symptoms and effects, both acute and delayed : No information available.  
Harmful if swallowed.  
Causes serious eye damage.

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Notes to physician : No information available.

**SECTION 5. FIRE-FIGHTING MEASURES**

- Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
- Specific hazards during fire fighting : Do not allow run-off from fire fighting to enter drains or water courses.  
Exposure to decomposition products may be a hazard to health.
- Hazardous combustion products : Carbon oxides  
Sulfur oxides
- Further information : In the event of fire and/or explosion do not breathe fumes.
- Special protective equipment for fire-fighters : Wear self-contained breathing apparatus for firefighting if necessary.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.  
Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
- Environmental precautions : Prevent product from entering drains.  
Prevent further leakage or spillage if safe to do so.
- Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).  
Keep in suitable, closed containers for disposal.  
Unsuitable cleaning agents  
sodium hypochlorite

**SECTION 7. HANDLING AND STORAGE**

- Advice on protection against fire and explosion : Normal measures for preventive fire protection.
- Advice on safe handling : Do not breathe vapors/dust.  
Avoid contact with skin and eyes.  
For personal protection see section 8.  
Smoking, eating and drinking should be prohibited in the application area.  
Dispose of rinse water in accordance with local and national regulations.
- Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.
- Further information on storage stability : No decomposition if stored and applied as directed.

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| Contains no substances with occupational exposure limit values.

**Personal protective equipment**

## Hand protection

	Material	:	Protective gloves
	Remarks	:	The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).
	Eye protection	:	Tightly fitting safety goggles Wear face-shield and protective suit for abnormal processing problems. Do not wear contact lenses. Ensure that eyewash stations and safety showers are close to the workstation location.
	Skin and body protection	:	Choose body protection according to the amount and concentration of the dangerous substance at the work place. acid-resistant protective clothing Footwear protecting against chemicals
	Hygiene measures	:	Keep away from food and drink. Wash hands before breaks and at the end of workday. Ensure adequate ventilation, especially in confined areas. Avoid contact with the skin and the eyes. When using do not eat, drink or smoke.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

	Appearance	:	liquid
	Color	:	colorless
	Odor	:	No data available
	Odor Threshold	:	No data available
	pH	:	ca. 7
	Melting point/range	:	No data available
	Boiling point/boiling range	:	No data available

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Flash point	:	No data available
Evaporation rate	:	No data available
Burning rate	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapor pressure	:	No data available
Relative vapor density	:	No data available
Relative density	:	No data available
Density	:	ca. 1.09 g/cm <sup>3</sup> (ca. 77 °F / 25 °C)
Solubility(ies)		
Water solubility	:	soluble
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available

**SECTION 10. STABILITY AND REACTIVITY**

Reactivity	:	No decomposition if stored and applied as directed.
Chemical stability	:	No decomposition if stored and applied as directed.
Possibility of hazardous reactions	:	Stable under recommended storage conditions. Hazardous decomposition products formed under fire conditions. Keep away from oxidizing agents, and acidic or alkaline products.
Conditions to avoid	:	No data available

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Incompatible materials : No data available

Hazardous decomposition products : No decomposition if stored and applied as directed.

**SECTION 11. TOXICOLOGICAL INFORMATION****Acute toxicity**

Harmful if swallowed.

**Product:**

Acute oral toxicity : Remarks: No data available

Acute inhalation toxicity : Remarks: No data available

Acute dermal toxicity : Remarks: No data available

**Components:****guanidinium thiocyanate:**

Acute oral toxicity : LD50 Oral (Rat, female): 593 mg/kg  
Method: OECD Test Guideline 401

Acute toxicity (other routes of administration) : LD50 (Mouse): 300 mg/kg

**Skin corrosion/irritation**

Not classified based on available information.

**Product:**

Assessment : No skin irritation

Method : Bridging principles

Remarks : May cause skin irritation in susceptible persons.

**Serious eye damage/eye irritation**

Causes serious eye damage.

**Product:**

Remarks : May cause irreversible eye damage.

**Respiratory or skin sensitization****Skin sensitization**

Not classified based on available information.

**Respiratory sensitization**

Not classified based on available information.

**Product:**

Remarks : No data available

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| Not classified based on available information.

**Carcinogenicity**

| Not classified based on available information.

**IARC** No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.**OSHA** No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.**NTP** No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.**Reproductive toxicity**

| Not classified based on available information.

**STOT-single exposure**

| Not classified based on available information.

**STOT-repeated exposure**

| Not classified based on available information.

**Aspiration toxicity**

| Not classified based on available information.

**Further information****Product:**

| Remarks : No data available

**SECTION 12. ECOLOGICAL INFORMATION****Ecotoxicity****Product:**

| Toxicity to fish : Remarks: No data available

| Toxicity to algae/aquatic plants : Remarks: No data available

| Toxicity to microorganisms : Remarks: No data available

**Components:****guanidinium thiocyanate:**| Toxicity to fish : LC50 (Poecilia reticulata (guppy)): 89.1 mg/l  
Exposure time: 96 h| Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia): 42.4 mg/l  
Exposure time: 48 h

| Toxicity to fish (Chronic) : NOEC (Poecilia reticulata (guppy)): 25 mg/l

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toxicity) Exposure time: 96 d

**Persistence and degradability**

No data available

**Bioaccumulative potential****Product:**

Bioaccumulation : Remarks: No data available

**Mobility in soil**

No data available

**Other adverse effects****Product:**

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82  
Protection of Stratospheric Ozone - CAA Section 602 Class I  
Substances  
Remarks: This product neither contains, nor was  
manufactured with a Class I or Class II ODS as defined by the  
U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A +  
B).

Additional ecological information : **An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life with long lasting effects.**

**SECTION 13. DISPOSAL CONSIDERATIONS****Disposal methods**

Waste from residues : The product should not be allowed to enter drains, water  
courses or the soil.  
Send to a licensed waste management company.  
Dispose of as hazardous waste in compliance with local and  
national regulations.

Contaminated packaging : Dispose of as unused product.  
Do not re-use empty containers.

**SECTION 14. TRANSPORT INFORMATION****International Regulations****UNRTDG**

Not regulated as a dangerous good

**IATA-DGR**

Not regulated as a dangerous good

**IMDG-Code**

Not regulated as a dangerous good



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Not applicable for product as supplied.

**Domestic regulation****49 CFR**

Not regulated as a dangerous good

**SECTION 15. REGULATORY INFORMATION****CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

**SARA 304 Extremely Hazardous Substances Reportable Quantity**

This material does not contain any components with a section 304 EHS RQ.

**SARA 302 Extremely Hazardous Substances Threshold Planning Quantity**

This material does not contain any components with a section 302 EHS TPQ.

**SARA 311/312 Hazards** : Acute toxicity (any route of exposure)  
Serious eye damage or eye irritation**SARA 313** : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.**Clean Air Act**

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM Intermediate or Final VOC's (40 CFR 60.489).

**Clean Water Act**

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

This product does not contain any priority pollutants related to the U.S. Clean Water Act

**Maine Chemicals of High Concern**

This product does not contain any chemicals that are listed as Maine Chemicals of High Concern.

**Maine Chemicals of High Concern**

Product does not contain any listed chemicals

**TSCA list**

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

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AICS - Australian Inventory of Chemical Substances; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); EC<sub>x</sub> - Concentration associated with x% response; EHS - Extremely Hazardous Substance; EL<sub>x</sub> - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErC<sub>x</sub> - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC<sub>50</sub> - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC<sub>50</sub> - Lethal Concentration to 50 % of a test population; LD<sub>50</sub> - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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