

**Safety Data Sheet**

according to UK REACH Regulation

Revision date: 29.09.2021

**Poly-A-RNA Buffer**

Product code: OE0034CE

Page 1 of 10

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

Poly-A-RNA Buffer

**Further trade names**

Article No. (user):

OE00340001CE

OE00340005CE

OE00340020CE

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

specific analysis.

Scientific research and development

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

Company name: MolGen B.V.

Street: Kazemat 23

Place: NL-3905NR Veenendaal

Telephone: +31 (0) 85 - 200 7431

Telefax: +31 (0) 85 - 200 6901

e-mail: info@molgen.com

Internet: http://www.molgen.com

**1.4. Emergency telephone number:**

+31 (0) 85 - 200 7431

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****GB CLP Regulation**

Hazard categories:

Acute toxicity: Acute Tox. 4

Acute toxicity: Acute Tox. 4

Skin corrosion/irritation: Skin Corr. 1B

Serious eye damage/eye irritation: Eye Dam. 1

Hazardous to the aquatic environment: Aquatic Chronic 3

Hazard Statements:

Harmful if swallowed.

Harmful if inhaled.

Causes severe skin burns and eye damage.

Causes serious eye damage.

Harmful to aquatic life with long lasting effects.

**2.2. Label elements****GB CLP Regulation****Hazard components for labelling**

Guanidine thiocyanate

**Signal word:** Danger**Pictograms:****Hazard statements**

H302+H332

Harmful if swallowed or if inhaled.

## Safety Data Sheet

according to UK REACH Regulation

### Poly-A-RNA Buffer

Revision date: 29.09.2021

Product code: OE0034CE

Page 2 of 10

H314 Causes severe skin burns and eye damage.  
H412 Harmful to aquatic life with long lasting effects.

#### Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
P264 Wash hands thoroughly after handling.  
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.  
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.

#### Special labelling of certain mixtures

EUH032 Contact with acids liberates very toxic gas.

#### 2.3. Other hazards

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

##### Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
593-84-0	guanidine thiocyanate			30 - < 35 %
	209-812-1	615-004-00-3		
	Acute Tox. 4, Acute Tox. 4, Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1, Aquatic Chronic 3; H332 H312 H302 H314 H318 H412 EUH032			

Full text of H and EUH statements: see section 16.

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

##### General information

First aider: Pay attention to self-protection! Remove affected person from the danger area and lay down. When in doubt or if symptoms are observed, get medical advice.

##### After inhalation

Provide fresh air. If experiencing respiratory symptoms: Get medical advice/attention.  
If breathing is irregular or stopped, administer artificial respiration.

##### After contact with skin

After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. Get medical advice/attention.

##### After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Remove contact lenses, if present and easy to do. Continue rinsing.

##### After ingestion

Observe risk of aspiration if vomiting occurs. Rinse mouth immediately and drink 1 glass of water. Do NOT induce vomiting. Adverse human health effects and symptoms: Gastric perforation. Call a physician immediately. Do not allow a neutralisation agent to be drunk. Get medical advice/attention.

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

No information available.

**Safety Data Sheet**

according to UK REACH Regulation

Revision date: 29.09.2021

**Poly-A-RNA Buffer**

Product code: OE0034CE

Page 3 of 10

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

Treat symptomatically.

**SECTION 5: Firefighting measures****5.1. Extinguishing media****Suitable extinguishing media**

Water spray jet, alcohol resistant foam, Dry extinguishing powder, Carbon dioxide (CO<sub>2</sub>)  
Co-ordinate fire-fighting measures to the fire surroundings.

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

Non-flammable. In case of fire may be liberated: Gases/vapours, irritant, Gases/vapours, toxic

**5.3. Advice for firefighters**

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

**Additional information**

Move undamaged containers from immediate hazard area if it can be done safely. Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

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

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment. Evacuate area.

**6.2. Environmental precautions**

Do not allow to enter into surface water or drains.

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

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

To clean the floor and all objects contaminated by this material, use plenty of water.

**6.4. Reference to other sections**

Safe handling: see section 7  
Personal protection equipment: see section 8  
Disposal: see section 13

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

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

**Advice on protection against fire and explosion**

Usual measures for fire prevention.

**7.2. Conditions for safe storage, including any incompatibilities****Requirements for storage rooms and vessels**

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaust at critical locations.

**Hints on joint storage**

Do not store together with: Oxidising agent, Acid

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

specific analysis.

# Safety Data Sheet

according to UK REACH Regulation

## Poly-A-RNA Buffer

Revision date: 29.09.2021

Product code: OE0034CE

Page 4 of 10

Scientific research and development

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### DNEL/DMEL values

CAS No	Substance			
DNEL type	Exposure route	Effect	Value	
593-84-0	guanidine thiocyanate			
Worker DNEL, long-term	inhalation	systemic	1,092 mg/m <sup>3</sup>	
Worker DNEL, acute	inhalation	systemic	3,28 mg/m <sup>3</sup>	
Worker DNEL, long-term	dermal	systemic	0,31 mg/kg bw/day	

#### PNEC values

CAS No	Substance		
Environmental compartment	Value		
593-84-0	guanidine thiocyanate		
Freshwater	0,0424 mg/l		
Marine water	0,00424 mg/l		
Freshwater sediment	0,165 mg/kg		
Marine sediment	0,0165 mg/kg		
Micro-organisms in sewage treatment plants (STP)	20 mg/l		
Soil	0,00803 mg/kg		

#### Additional advice on limit values

To date, no national critical limit values exist.

### 8.2. Exposure controls



#### Appropriate engineering controls

Provide adequate ventilation as well as local exhaustion at critical locations.

#### Protective and hygiene measures

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat, drink, smoke, sniff. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes.

#### Eye/face protection

Wear eye/face protection.

#### Hand protection

Wear suitable gloves.

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

#### Skin protection

Use of protective clothing. (EN 149)

**Safety Data Sheet**

according to UK REACH Regulation

**Poly-A-RNA Buffer**

Revision date: 29.09.2021

Product code: OE0034CE

Page 5 of 10

**Respiratory protection**

In case of inadequate ventilation wear respiratory protection.

**Environmental exposure controls**

Do not allow to enter into surface water or drains.

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

Physical state:	Liquid
Colour:	transparent; light yellow
Odour:	odourless
pH-Value:	5,3

**Changes in the physical state**

Melting point/freezing point:	not determined
Boiling point or initial boiling point and boiling range:	100 °C
Flash point:	not determined

**Flammability**

Solid:	not applicable
Gas:	not applicable

**Explosive properties**

The product is not: Explosive.

Lower explosion limits:	not determined
Upper explosion limits:	not determined
Auto-ignition temperature:	not determined

**Self-ignition temperature**

Solid:	not applicable
Gas:	not applicable

Decomposition temperature:	not determined
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**Oxidizing properties**

Not oxidising.

Vapour pressure:	not determined
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Density:	1,08 g/cm <sup>3</sup>
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Water solubility:	miscible
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**Solubility in other solvents**

not determined

Partition coefficient n-octanol/water:	not determined
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Viscosity / dynamic:	not determined
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Viscosity / kinematic:	not determined
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Relative vapour density:	not determined
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Evaporation rate:	not determined
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**9.2. Other information**

No information available.

**SECTION 10: Stability and reactivity**

## Safety Data Sheet

according to UK REACH Regulation

### Poly-A-RNA Buffer

Revision date: 29.09.2021

Product code: OE0034CE

Page 6 of 10

#### 10.1. Reactivity

No hazardous reaction when handled and stored according to provisions.

#### 10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

#### 10.3. Possibility of hazardous reactions

Violent reaction with: Oxidising agent  
Contact with acids liberates toxic gas.

#### 10.4. Conditions to avoid

No information available.

#### 10.5. Incompatible materials

Oxidising agent, Acid

#### 10.6. Hazardous decomposition products

In case of fire may be liberated: Gases/vapours, irritant, Gases/vapours, toxic

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

##### Acute toxicity

Harmful if swallowed.  
Harmful if inhaled.

##### ATEmix calculated

ATE (oral) 1976,7 mg/kg; ATE (inhalation aerosol) 5,000 mg/l

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
593-84-0	guanidine thiocyanate				
	oral	LD50 593 mg/kg	Rat	Manufacturer	
	dermal	ATE 1100 mg/kg			
	inhalation vapour	ATE 11 mg/l			
	inhalation aerosol	ATE 1,5 mg/l			

##### Irritation and corrosivity

Causes severe skin burns and eye damage.  
Causes serious eye damage.

##### Sensitising effects

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

##### Carcinogenic/mutagenic/toxic effects for reproduction

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

Harmful to aquatic life with long lasting effects.

# Safety Data Sheet

according to UK REACH Regulation

## Poly-A-RNA Buffer

Revision date: 29.09.2021

Product code: OE0034CE

Page 7 of 10

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
593-84-0	guanidine thiocyanate					
	Acute fish toxicity	LC50 mg/l	89,1	96 h	Piscis	Manufacturer
	Acute algae toxicity	ErC50	130 mg/l	72 h	algae	Manufacturer
	Acute crustacea toxicity	EC50 mg/l	42.4	48 h	aquatic invertebrate	Manufacturer
						ECHA
						ECHA

### 12.2. Persistence and degradability

The product has not been tested.

### 12.3. Bioaccumulative potential

The product has not been tested.

### Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
593-84-0	guanidine thiocyanate	-1,11

### 12.4. Mobility in soil

The product has not been tested.

### 12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

### 12.6. Other adverse effects

No information available.

### Further information

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

#### Disposal recommendations

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation.

#### Contaminated packaging

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

## SECTION 14: Transport information

### Land transport (ADR/RID)

#### 14.1. UN number:

UN 1760

#### 14.2. UN proper shipping name:

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

#### 14.3. Transport hazard class(es):

8

#### 14.4. Packing group:

II

Hazard label:

8



Classification code:

C9

Special Provisions:

274

Limited quantity:

1 L

# Safety Data Sheet

according to UK REACH Regulation

## Poly-A-RNA Buffer

Revision date: 29.09.2021

Product code: OE0034CE

Page 8 of 10

Excepted quantity: E2  
 Transport category: 2  
 Hazard No: 80  
 Tunnel restriction code: E

### Inland waterways transport (ADN)

**14.1. UN number:** UN 1760  
**14.2. UN proper shipping name:** CORROSIVE LIQUID, N.O.S. (Guanidine thiocyanate)  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** II  
 Hazard label: 8



Classification code: C9  
 Special Provisions: 274  
 Limited quantity: 1 L  
 Excepted quantity: E2

### Marine transport (IMDG)

**14.1. UN number:** UN 1760  
**14.2. UN proper shipping name:** CORROSIVE LIQUID, N.O.S. (Guanidine thiocyanate)  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** II  
 Hazard label: 8



Special Provisions: 274  
 Limited quantity: 1 L  
 Excepted quantity: E2  
 EmS: F-A, S-B

### Air transport (ICAO-TI/IATA-DGR)

**14.1. UN number:** UN 1760  
**14.2. UN proper shipping name:** CORROSIVE LIQUID, N.O.S. (Guanidine thiocyanate)  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** II  
 Hazard label: 8



Special Provisions: A3 A803  
 Limited quantity Passenger: 0.5 L  
 Passenger LQ: Y840  
 Excepted quantity: E2  
 IATA-packing instructions - Passenger: 851  
 IATA-max. quantity - Passenger: 1 L  
 IATA-packing instructions - Cargo: 855  
 IATA-max. quantity - Cargo: 30 L

### 14.5. Environmental hazards



**Safety Data Sheet**

according to UK REACH Regulation

Revision date: 29.09.2021

**Poly-A-RNA Buffer**

Product code: OE0034CE

Page 9 of 10

ENVIRONMENTALLY HAZARDOUS: No

**14.6. Special precautions for user**

Warning: strongly corrosive.

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

not applicable

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

Restrictions on use (REACH, annex XVII):

Entry 3

2010/75/EU (VOC): &lt; 11 %

Information according to 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

**National regulatory information**

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

Water hazard class (D): 2 - obviously hazardous to water

**15.2. Chemical safety assessment**

Chemical safety assessments for substances in this mixture were not carried out.

**SECTION 16: Other information****Abbreviations and acronyms**

CLP: Classification, labelling and Packaging

REACH: Registration, Evaluation and Authorization of Chemicals

GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals

UN: United Nations

CAS: Chemical Abstracts Service

DNEL: Derived No Effect Level

DMEL: Derived Minimal Effect Level

PNEC: Predicted No Effect Concentration

ATE: Acute toxicity estimate

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

LL50: Lethal loading, 50%

EL50: Effect loading, 50%

EC50: Effective Concentration 50%

ErC50: Effective Concentration 50%, growth rate

NOEC: No Observed Effect Concentration

BCF: Bio-concentration factor

PBT: persistent, bioaccumulative, toxic

vPvB: very persistent, very bioaccumulative

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Regulations concerning the international carriage of dangerous goods by rail

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures)

IMDG: International Maritime Code for Dangerous Goods

EmS: Emergency Schedules

MFAG: Medical First Aid Guide

**Safety Data Sheet**

according to UK REACH Regulation

**Poly-A-RNA Buffer**

Revision date: 29.09.2021

Product code: OE0034CE

Page 10 of 10

ATA: International Air Transport Association  
ICAO: International Civil Aviation Organization  
MARPOL: International Convention for the Prevention of Marine Pollution from Ships  
IBC: Intermediate Bulk Container  
VOC: Volatile Organic Compounds  
SVHC: Substance of Very High Concern  
For abbreviations and acronyms, see table at <http://abbrev.esdscom.eu>

**Classification for mixtures and used evaluation method according to GB CLP Regulation**

Classification	Classification procedure
Acute Tox. 4; H302	Calculation method
Acute Tox. 4; H332	Calculation method
Skin Corr. 1B; H314	Calculation method
Eye Dam. 1; H318	Calculation method
Aquatic Chronic 3; H412	Calculation method

**Relevant H and EUH statements (number and full text)**

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

**Further Information**

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

*(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*