

SAFETY DATA SHEET

RNA/DNA Positive Control



Version 1.3
Revision Date: 25.10.2020

Date of first Issue: 09.02.2019
Date of last Issue: 23.10.2020

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

- 1.1 Product identification**
Positive Control in Guanidine thiocyanate, alpha-(4-(1,1,3,3-Tetramethylbutyl)phenyl)-omega-hydroxypoly (oxy1,2-ethanediyl) and 1,4-Dithiothreitol (DTT)
Other means of identification:
DNA Positive Control, RNA Positive Control, DNA IPC Target, RNA IPC Target;
Components of the Products:
ViroReal®, BactoReal®, FetoGnost, SeptiReal, PanReal, MycoReal or ParoReal
- 1.2 Relevant identified uses of the substance or mixture and uses advised against**
Product use:
for analytical purposes.
- 1.3 Details of the supplier of the safety data sheet**
- Company:** Ingenetix GmbH
Address: Arsenalstraße 11, 1030 Vienna, Austria
Phone: +43(0)1 36 1980 198
Fax: +43(0)1 36 1980 199
E-mail: office@ingenetix.com
Web Site: www.ingenetix.com

SECTION 2: HAZARD(S) IDENTIFICATION

- 2.1 GHS Classification**
- | | | |
|---|--------------------|---|
| Acute toxicity(Oral) | Category 4 | H302 Harmful if swallowed |
| Acute toxicity (Inhalation) | Category 4 | H332 Harmful if inhaled |
| Acute toxicity (Dermal) | Category 4 | H312 Harmful in contact with skin |
| Skin corrosion/irritation | Category 1B | H314 Causes severe skin burns and eye damage |
| Serious eye damage/eye irritation | Category 1 | H318 Causes serious eye damage |
| Hazardous to the aquatic environment | Category 3 | H412 Harmful to aquatic life with long lasting effect |
- 2.2 GHS label elements**
Hazard pictograms:
- 

- Signal word:** Danger
- Supplemental Hazard**
- Statements:** AUH032 Contact with acids liberates very toxic gas
- Precautionary statements:**
- Prevention:**
- P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

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Response:

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

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

P304 + P340 + P310 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Immediately call a POISON CENTER or doctor/ physician.

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 or doctor/ physician.

P363 Wash contaminated clothing before reuse.

Storage:

P405 Store locked up.

Disposal:

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

Hazardous component (s)	CAS Number
Guanidinium thiocyanate	593-84-0
alpha-(4-(1,1,3,3-Tetramethylbutyl)phenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	9002-93-1
1,4-Dithiothreitol (DTT)	3483-12-3

2.3. Other hazards which do not result in classification

This substance / mixture does not contain any components in concentrations of 0.1% or higher that are either classified as persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB).

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Chemical Name	CAS/ EC/ INDEX number	Classification (Regulation (EC) No. 1272/2008 (CLP))	Conc. (% w/w)
Guanidinium thiocyanate	593-84-0 209-812-1 615-004-00-3	Acute Tox. 4; H302 Acute Tox. 4; H332 Acute Tox. 4; H312 Skin Corr. 1B; H314 Eye Dam. 1; H318 Aquatic Chronic 3; H412	>= 50,0 - < 70,0
alpha-(4-(1,1,3,3-Tetramethylbutyl)phenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	9002-93-1	Acute Tox. 4; H302 Eye Dam. 1; H318 Aquatic Chronic 2; H411	>= 20,0 - < 25,0
1,4-Dithiothreitol (DTT)	3483-12-3 222-468-7	Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Irrit. 2; H319	>= 1,0 - < 10,0

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SECTION 4: FIRST-AID MEASURES**4.1 Description of first aid measures****General advice**

Move out of dangerous area. Consult a physician.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

If inhaled:

Move to fresh air. If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.
In case of skin contact:

Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty. If on skin, rinse well with water. If on clothes, remove clothes.

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. Continue rinsing eyes during transport to hospital.
Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.

If swallowed:

Keep respiratory tract clear. Do NOT induce vomiting. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.

4.2 Most important symptoms and effects, both acute and delayed

Harmful if swallowed, in contact with skin or if inhaled. Causes serious eye damage. Causes severe burns.

4.3 Notes to physician:

The first aid procedure should be established in consultation with the doctor responsible for industrial medicine.

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- 5.1 Extinguishing media**
Suitable extinguishing media:
 Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media:
 High volume water jet
- 5.2 Specific hazards during fire-fighting:**
 Do not allow run-off from firefighting to enter drains or water courses.
- Hazardous combustion products:**
 In case of fire hazardous decomposition products may be produced such as:
 Carbon oxides
 Nitrogen oxides (NOx)
 Sulphur oxides
 Hydrogen cyanide (hydrocyanic acid)
- Specific extinguishing methods:**
 Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
 Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
- 5.3 Special protective equipment for firefighters**
 Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6: ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions, protective equipment and emergency procedures:**
 Use personal protective equipment. Refer to protective measures listed in sections 7 and 8.
- 6.2 Environmental precautions:**
 Prevent product from entering drains. Prevent further leakage or spillage if safe to do so.
- 6.3 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.

SECTION 7: HANDLING AND STORAGE

- 7.1 Precautions for safe handling**
Advice on protection against fire and explosion:
 Normal measures for preventive fire protection.
Advice on safe handling:
 Do not breathe vapours/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.
 To prevent leaks or spillages from spreading, provide a suitable liquid retention system.
Hygiene measures:
 When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.
- 7.2 Conditions for safe storage**
 Keep container tightly closed in a dry and well-ventilated place.
 Containers which are opened must be carefully resealed and kept upright to prevent leakage.
 Electrical installations / working materials must comply with the technological safety standards.

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- 7.3 Further information on storage conditions:**
See label, package insert or internal guidelines
- 7.4 Further information on storage stability:**
No decomposition if stored and applied as directed.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Components with workplace control parameters

Chemical Name	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Guanidinium thiocyanate	593-84-0	IOEL	100 microgram per cubic meter	OEL = 100 µg/m ³

8.2. Limitation and monitoring of exposure

Engineering measures:
No data available

Personal protective equipment:

Hand protection:

Material: Protective gloves

Remarks: The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it. This recommendation is only valid for the product mentioned in the safety data sheet and provided by us and for the application specified by us. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. The suitability for a specific workplace should also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. be discussed with the producers of the protective gloves.

Eye protection: Eye wash bottle with pure water.

Tightly fitting safety goggles. Wear face-shield and protective suit for abnormal processing problems.

Skin and body protection: Impervious clothing Choose body protection according to the amount and concentration of the dangerous substance at the work place.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance:	liquid
Colour:	light yellow
Odour:	characteristic
Odour Threshold:	No data available
pH:	ca. 6.0
Melting point/range:	No data available
Boiling point/boiling range:	No data available
Flash point:	No data available
Evaporation rate:	No data available
Flammability (solid, gas):	The product is not flammable
Flammability (liquids):	Does not sustain combustion
Self-ignition:	No data available

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Upper explosion limit / Upper flammability limit:	No data available
Lower explosion limit / Lower flammability limit:	No data available
Vapour pressure:	No data available
Relative vapour density:	No data available
Relative density:	No data available
Solubility(ies)	
Water solubility:	No data available
Solubility in other solvents:	No data available
Partition coefficient: n-octanol/water:	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	Hazardous decomposition products formed under fire conditions
Viscosity	
Viscosity, dynamic:	No data available
Viscosity, kinematic:	No data available
Oxidizing properties:	The substance or mixture is not classified as oxidizing

SECTION 10: STABILITY AND REACTIVITY

- 10.1. Reactivity**
Reacts with acids
- 10.2. Chemical stability**
Stable under recommended storage conditions
- 10.3. Possibility of hazardous reactions**
Contact with acids liberates very toxic gases
- 10.4. Conditions to avoid**
Avoid contact with acids
- 10.5. Incompatible materials**
Strong acids, strong oxidizing agents, cyanides
- 10.6. Hazardous decomposition products**
Thermal decomposition can lead to release of irritating gases and vapours. Carbon oxides. Sulphur oxides. Nitrogen oxides. Cyanides.

SECTION 11: TOXICOLOGICAL INFORMATION

- 11.1. Information on Toxicological Effects**
- Acute toxicity**
Harmful if swallowed, in contact with skin or if inhaled.
- Product:**
- | | | |
|----------------------------|--------------------------|--------------------|
| Acute oral toxicity: | Acute toxicity estimate: | 703.42 mg/kg |
| | Method: | Calculation method |
| Acute inhalation toxicity: | Acute toxicity estimate: | 2.54 mg/l |
| | Exposure time: | 4 h |
| | Test atmosphere: | dust/mist |
| | Method: | Calculation method |

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Acute dermal toxicity :	Acute toxicity estimate: Method:	1,862 mg/kg Calculation method
Components:		
Guanidinium thiocyanate:		
Acute oral toxicity:	LD50 Oral (Rat): Symptoms:	593 mg/kg Vomiting
Acute inhalation toxicity:	Acute toxicity estimate: Test atmosphere: Method:	1.5 mg/l dust/mist Expert judgement
Acute dermal toxicity:	Acute toxicity estimate: Method:	1,100 mg/kg Expert judgement
alpha-(4-(1,1,3,3-Tetramethylbutyl)phenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl):		
LD50 Oral (Rat):	1,900 - 5,000 mg/kg	Acute oral toxicity:
	Acute toxicity estimate: Method:	500 mg/kg Expert judgement
Acute dermal toxicity:	LD50 Dermal (Rabbit):	> 3,000 mg/kg
1,4-Dithiothreitol (DTT):		
Acute oral toxicity:	LD50 Oral (Rat):	400 mg/kg
Acute toxicity (other routes of administration):	Symptoms:	May cause cardiac arrhythmia, Convulsions, Vomiting
Skin corrosion/irritation		Causes severe burns.
Product:		
Remarks:	Extremely corrosive and destructive to tissue	
Components:		
Guanidinium thiocyanate:		
Result:	Causes burns	
1,4-Dithiothreitol (DTT):		
Result:	Irritating to skin.	
Serious eye damage/eye irritation		
Causes serious eye damage.		
Product:		
Remarks:	May cause irreversible eye damage.	
Components:		
alpha-(4-(1,1,3,3-Tetramethylbutyl)phenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl):		
Result:	Risk of serious damage to eyes.	
Remarks:	May cause irreversible eye damage.	
1,4-Dithiothreitol (DTT):		
Result:	Irritating to eyes.	
Respiratory or skin sensitization		
Skin sensitization	Not classified based on available information.	
Respiratory sensitization	Not classified based on available information.	

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Carcinogenicity Not classified based on available information**Guanidinium thiocyanate:****Remarks:**

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

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.**SECTION 12: ECOLOGICAL INFORMATION****12.1 Toxicity**

Ecotoxicity

Product:

Ecotoxicology Assessment

Toxicity Data on Soil: Not expected to adsorb on soil.

Other organisms relevant to the environment: No data available

Components:**Guanidinium thiocyanate:**Toxicity to fish: LC50 (Poecilia reticulata (guppy)): 89.1 mg/l
Exposure time: 96 h
NOEC (Poecilia reticulata (guppy)): 25 mg/l
Exposure time: 96 hToxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia (water flea)): 42.4 mg/l
Exposure time: 48 h
NOEC (Daphnia magna (Water flea)): 6.25 mg/l
Exposure time: 48 h

Ecotoxicology Assessment

Chronic aquatic toxicity: Harmful to aquatic life with long lasting effects.

Toxicity Data on Soil: Not expected to adsorb on soil.

Other organisms relevant to the environment: No data available

alpha-(4-(1,1,3,3-Tetramethylbutyl)phenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl):Toxicity to fish: LC50 (Pimephales promelas (fathead minnow)): 4 - 8.9 mg/l
Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia magna (Water flea)): 18 - 26 mg/l
Exposure time: 48 h

Ecotoxicology Assessment

Chronic aquatic toxicity: Toxic to aquatic life with long lasting effects.

Toxicity Data on Soil: Not expected to adsorb on soil.

Other organisms relevant to the environment: No data available

1,4-Dithiothreitol (DTT):

Ecotoxicology Assessment

Acute aquatic toxicity: This product has no known ecotoxicological effects.

Chronic aquatic toxicity: This product has no known ecotoxicological effects.

Toxicity Data on Soil: Not expected to adsorb on soil.

Other organisms relevant to the environment: No data available

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Exposure time: 28 d

Method: OECD Test Guideline 301B

Remarks: According to the results of tests of biodegradability this product is not readily biodegradable.

Bioaccumulative potential**Components:****Guanidinium thiocyanate:**

Partition coefficient: n-octanol/water: log Pow: -1.38

alpha-(4-(1,1,3,3-Tetramethylbutyl)phenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl):**Bioaccumulation:**

Remarks: No bioaccumulation is to be expected (log Pow <= 4).

Partition coefficient: n-octanol/water: Remarks: No data available

1,4-Dithiothreitol (DTT):

Partition coefficient: n-octanol/water: log Pow: ca. -0.48

Mobility in soil: No data available

Other adverse effects**Product:**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.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company. Can be disposed as waste water, when in compliance with local regulations.
Contaminated packaging: Empty remaining contents. Dispose of as unused product.
Empty containers should be taken to an approved waste handling site for recycling or disposal.
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
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable**National Regulations**

ADG Not regulated as a dangerous good

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SECTION 15: REGULATORY INFORMATION

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

Standard for the Uniform Scheduling of Medicines and Poisons:

No poison schedule number allocated

Prohibition/Licensing Requirements: There is no applicable prohibition or notification/licensing requirements, including for carcinogens under Commonwealth, State or Territory legislation.

The components of this product are reported in the following inventories:

DSL:	All components of this product are on the Canadian DSL
AICS:	On the inventory, or in compliance with the inventory
NZIoC:	On the inventory, or in compliance with the inventory
ENCS:	Not in compliance with the inventory
ISHL:	Not in compliance with the inventory
KECI:	Not in compliance with the inventory
PICCS:	On the inventory, or in compliance with the inventory
IECSC:	On the inventory, or in compliance with the inventory
TCSI:	On the inventory, or in compliance with the inventory
TSCA:	All substances listed as active on the TSCA inventory

SECTION 16: OTHER INFORMATION

Full text of R-Phrases

R20/21/22	Harmful by inhalation, in contact with skin and if swallowed.
R22	Harmful if swallowed.
R32	Contact with acids liberates very toxic gas.
R41	Risk of serious damage to eyes.
R52	Harmful to aquatic organisms.
R53	May cause long-term adverse effects in the aquatic environment.

Full text of H-Statements

H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
H412	Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox.	Acute toxicity
Aquatic Chronic	Chronic aquatic toxicity
Eye Dam.	Serious eye damage

Recommended restrictions of application

The application of this product is recommended for trained professionals only.

Further information

The information, data and recommendations contained herein are based upon information believed by Ingenetix GmbH after reasonable investigation and research, to be accurate. All materials and mixtures may present unknown hazards and should be used with caution. 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.