

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**VA Reagent**

Revision date: 24.11.2022

Product code:

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

VA Reagent

**Further trade names**

Article No.: 1894718

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

Scientific research and development, in vitro diagnostic medical devices

**Uses advised against**

Any non-intended use.

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

Company name: Hain Lifescience GmbH

Street: Hardwiesenstrasse 1

Place: D-72147 Nehren

Telephone: +49 (0) 74 73- 94 51- 0

Telefax: +49 (0) 74 73- 94 51- 31

Responsible Department: msds.mdx.de@bruker.com

**1.4. Emergency telephone**

Poison Information Center Mainz, Germany, Tel: +49(0)6131/19240

**number:****Further Information**

The product falls under the regulation (EU) 2017/746 on in-vitro diagnostics.

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Regulation (EC) No 1272/2008**

Acute Tox. 4; H302

Acute Tox. 4; H332

Skin Irrit. 2; H315

Eye Irrit. 2; H319

Full text of hazard statements: see SECTION 16.

**2.2. Label elements****Regulation (EC) No 1272/2008****Hazard components for labelling**

guanidinium chloride; guanadine hydrochloride

**Signal word:** Warning**Pictograms:****Hazard statements**

H302+H332 Harmful if swallowed or if inhaled.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

**Precautionary statements**

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P264 Wash hands thoroughly after handling.

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

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P302+P352 IF ON SKIN: Wash with plenty of water.  
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**Additional advice on labelling**

Labelling according to national medical devices regulations.

**2.3. Other hazards**

The substances in the mixture (>0,1%) do not meet the PBT/vPvB criteria according to REACH, annex XIII.  
This product does not contain a substance (> 0,1 %) that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

**SECTION 3: Composition/information on ingredients****3.2. Mixtures****Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
50-01-1	guanidinium chloride; guanadine hydrochloride			40 - < 45 %
	200-002-3	607-148-00-0	01-2119977063-35	
	Acute Tox. 4, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2; H332 H302 H315 H319			

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

**Specific Conc. Limits, M-factors and ATE**

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
50-01-1	200-002-3	guanidinium chloride; guanadine hydrochloride	40 - < 45 %
	inhalation: ATE = 11 mg/l (vapours); inhalation: LC50 = 5,32 mg/l (dusts or mists); dermal: LD50 = >2000 mg/kg; oral: LD50 = 773,6 mg/kg		

**Further Information**

Product does not contain listed SVHC substances > 0,1 % according to Regulation (EC) No. 1907/2006 Article 59 (REACH)

**SECTION 4: First aid measures****4.1. Description of first aid measures****General information**

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

**After inhalation**

In case of accident by inhalation: remove casualty to fresh air and keep at rest. In case of respiratory tract irritation, consult a physician.

**After contact with skin**

Gently wash with plenty of soap and water. In case of skin irritation, seek medical treatment.

**After contact with eyes**

Rinse cautiously with water for several minutes. In case of troubles or persistent symptoms, consult an ophthalmologist.

**After ingestion**

Rinse mouth thoroughly with water. Let water be drunken in little sips (dilution effect). Do NOT induce vomiting. In all cases of doubt, or when symptoms persist, seek medical advice.

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

No information available.

**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**Carbon dioxide (CO<sub>2</sub>). Dry extinguishing powder. alcohol resistant foam. Atomized water.**Unsuitable extinguishing media**

High power water jet.

**5.2. Special hazards arising from the substance or mixture**Can be released in case of fire: Carbon monoxide. Carbon dioxide (CO<sub>2</sub>).**5.3. Advice for firefighters**

In case of fire: Wear self-contained breathing apparatus.

**Additional information**

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

Co-ordinate fire-fighting measures to the fire surroundings.

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

Safe handling: see section 7

**For non-emergency personnel**

Wear personal protection equipment (refer to section 8).

**For emergency responders**

No special measures are necessary.

**6.2. Environmental precautions**

Discharge into the environment must be avoided.

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

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.

**For cleaning up**

Clean contaminated objects and areas thoroughly observing environmental regulations.

**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**

Wear suitable protective clothing. See section 8.

**Advice on protection against fire and explosion**

Usual measures for fire prevention.

**Advice on general occupational hygiene**

Always close containers tightly after the removal of product. Do not eat, drink, smoke or sneeze at the

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workplace. Wash hands before breaks and after work.

#### Further information on handling

General protection and hygiene measures: See section 8.

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

##### Requirements for storage rooms and vessels

Keep container tightly closed in a cool, well-ventilated place.

##### Hints on joint storage

Do not store together with: Explosives. Oxidizing solids. Oxidizing liquids. Radioactive substances. Infectious substances. Food and animal feedingstuff.

##### Further information on storage conditions

Keep the packing dry and well sealed to prevent contamination and absorption of humidity.

Recommended storage temperature: 20°C

Protect against: frost. UV-radiation/sunlight. heat. Humidity

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

See section 1.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### PNEC values

CAS No	Substance	
	Environmental compartment	Value
50-01-1	guanidinium chloride; guanadine hydrochloride	
Freshwater		0,29 mg/l
Marine water		0,029 mg/l
Freshwater sediment		1,08 mg/kg
Marine sediment		0,108 mg/kg
Micro-organisms in sewage treatment plants (STP)		7125 mg/l
Soil		4,35 mg/kg

##### Additional advice on limit values

To date, no national critical limit values exist.

#### 8.2. Exposure controls



##### Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment.

Provide adequate ventilation.

##### Individual protection measures, such as personal protective equipment

##### Eye/face protection

Wear safety glasses; chemical goggles (if splashing is possible). EN 166

##### Hand protection

Wear suitable gloves.

Suitable material:

FKM (fluororubber). - Thickness of glove material: 0,4 mm

Breakthrough time  $\geq$  8 h

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Butyl rubber. - Thickness of glove material: 0,5 mm

Breakthrough time  $\geq$  8 h

CR (polychloroprenes, Chloroprene rubber). - Thickness of glove material: 0,5 mm

Breakthrough time  $\geq$  8 h

NBR (Nitrile rubber). - Thickness of glove material: 0,35 mm

Breakthrough time  $\geq$  8 h

PVC (Polyvinyl chloride). - Thickness of glove material: 0,5 mm

Breakthrough time  $\geq$  8 h

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.

The selected protective gloves have to satisfy the specifications of EU Directive EC/2016/425 and the standard EN 374 derived from it.

Check leak tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well.

### Skin protection

Suitable protective clothing: Lab apron.

Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500 (D).

### Respiratory protection

With correct and proper use, and under normal conditions, breathing protection is not required.

Respiratory protection necessary at:

-Exceeding exposure limit values

-Insufficient ventilation and aerosol or mist formation

Suitable respiratory protective equipment: particulates filter device (DIN EN 143). type: P1-3

The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used.

### Environmental exposure controls

Do not allow uncontrolled discharge of product into the environment.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state:	liquid
Colour:	colourless
Odour:	characteristic
Odour threshold:	not determined

#### Changes in the physical state

Melting point/freezing point:	not determined
Boiling point or initial boiling point and boiling range:	not determined
Sublimation point:	not determined
Softening point:	not determined
Pour point:	not determined
Flash point:	not determined

#### Flammability

Solid/liquid:	not determined
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#### Explosive properties

none

Lower explosion limits:	not determined
Upper explosion limits:	not determined

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Auto-ignition temperature: not determined

**Self-ignition temperature**

Solid: not relevant

Gas: not relevant

Decomposition temperature: not determined

pH-Value: not determined

Viscosity / dynamic: not determined

Viscosity / kinematic: not determined

Flow time: not determined

Water solubility: not determined

**Solubility in other solvents**

not determined

Dissolution rate: not relevant

Partition coefficient n-octanol/water: SECTION 12: Ecological information

Dispersion stability: not relevant

Vapour pressure: not determined

Density: not determined

Bulk density: not determined

Relative vapour density: not determined

Particle characteristics: not relevant

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

Sustaining combustion: Not sustaining combustion

Oxidizing properties

none

**Other safety characteristics**

Solvent separation test: not determined

Solvent content: not determined

Solid content: not determined

Evaporation rate: not determined

**Further Information**

No information available.

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

No information available.

**10.2. Chemical stability**

The product is chemically stable under recommended conditions of storage, use and temperature.

**10.3. Possibility of hazardous reactions**

Refer to chapter 10.5.

**10.4. Conditions to avoid**

Protect against: UV-radiation/sunlight. heat.

**10.5. Incompatible materials**

Materials to avoid: Oxidizing agents, strong. Reducing agents, strong.

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**10.6. Hazardous decomposition products**

Does not decompose when used for intended uses.

**SECTION 11: Toxicological information****11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008****Toxicokinetics, metabolism and distribution**

No data available.

**Acute toxicity**

Harmful if swallowed.

Harmful if inhaled.

**ATEmix calculated**

ATE (oral) 1934,0 mg/kg; ATE (inhalation dust/mist) 3,750 mg/l

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
50-01-1	guanidinium chloride; guanadine hydrochloride				
	oral	LD50 773,6 mg/kg	Rat, female.	ECHA Dossier	EPA TS-792 A
	dermal	LD50 >2000 mg/kg	Rabbit	ECHA Dossier	
	inhalation vapour	ATE 11 mg/l			
	inhalation (4 h) dust/mist	LC50 5,32 mg/l	Rat	ECHA Dossier	

**Irritation and corrosivity**

Causes skin irritation.

Causes serious eye irritation.

**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.

**Specific effects in experiment on an animal**

No data available.

**11.2. Information on other hazards****Endocrine disrupting properties**

This product does not contain a substance (&gt; 0,1 %) that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

**Other information**

No data available.

**SECTION 12: Ecological information****12.1. Toxicity**

The product has not been tested.

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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
50-01-1	guanidinium chloride; guanadine hydrochloride					
	Acute fish toxicity	LC50 mg/l	1758	96 h	Leuciscus idus	ECHA Dossier

**12.2. Persistence and degradability**

The product has not been tested.

The product has not been tested.				
CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
50-01-1	guanidinium chloride; guanadine hydrochloride			
	OECD 301C / ISO 9408 / EEC 92/69 annex V, C.4-F	0	56	ECHA Dossier
	Not easily bio-degradable (according to OECD-criteria).			

**12.3. Bioaccumulative potential**

No indication of bioaccumulation potential.

**Partition coefficient n-octanol/water**

CAS No	Chemical name	Log Pow
50-01-1	guanidinium chloride; guanadine hydrochloride	-1,7

**12.4. Mobility in soil**

No data available.

**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.

The aforementioned statement applies to substances contained in the product with a minimum content of 0.1%.

**12.6. Endocrine disrupting properties**

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

The aforementioned statement applies to substances contained in the product with a minimum content of 0.1%.

**12.7. Other adverse effects**

No data available.

**Further information**

Do not allow to enter into surface water or drains.

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

Observe in addition any national regulations! Consult the local waste disposal expert about waste disposal.

Non-contaminated packages may be recycled.

According to (EWC) European Waste Catalogue, allocation of waste identity numbers/waste descriptions must be carried out in a specific way for every industry and process.

Control report for waste code/ waste marking according to (EWC) European Waste Catalogue:

**List of Wastes Code - residues/unused products**

160305 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; off-specification batches and unused products; organic wastes containing hazardous substances; hazardous waste

**List of Wastes Code - used product**



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160305 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; off-specification batches and unused products; organic wastes containing hazardous substances; hazardous waste

### List of Wastes Code - contaminated packaging

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances; hazardous waste

### Contaminated packaging

Handle contaminated packages in the same way as the substance itself.

## SECTION 14: Transport information

### Land transport (ADR/RID)

**14.1. UN number or ID number:** No dangerous good in sense of this transport regulation.  
**14.2. UN proper shipping name:** No dangerous good in sense of this transport regulation.  
**14.3. Transport hazard class(es):** No dangerous good in sense of this transport regulation.  
**14.4. Packing group:** No dangerous good in sense of this transport regulation.

### Inland waterways transport (ADN)

**14.1. UN number or ID number:** No dangerous good in sense of this transport regulation.  
**14.2. UN proper shipping name:** No dangerous good in sense of this transport regulation.  
**14.3. Transport hazard class(es):** No dangerous good in sense of this transport regulation.  
**14.4. Packing group:** No dangerous good in sense of this transport regulation.

### Marine transport (IMDG)

**14.1. UN number or ID number:** No dangerous good in sense of this transport regulation.  
**14.2. UN proper shipping name:** No dangerous good in sense of this transport regulation.  
**14.3. Transport hazard class(es):** No dangerous good in sense of this transport regulation.  
**14.4. Packing group:** No dangerous good in sense of this transport regulation.

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

**14.1. UN number or ID number:** No dangerous good in sense of this transport regulation.  
**14.2. UN proper shipping name:** No dangerous good in sense of this transport regulation.  
**14.3. Transport hazard class(es):** No dangerous good in sense of this transport regulation.  
**14.4. Packing group:** No dangerous good in sense of this transport regulation.

### 14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

### 14.6. Special precautions for user

refer to chapter 6 - 8

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

not relevant

## 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, Entry 75

2010/75/EU (VOC): No information available.

2004/42/EC (VOC): No information available.

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Information according to 2012/18/EU  
(SEVESO III):

Not subject to 2012/18/EU (SEVESO III)

**Additional information**

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (amended by Regulation (EU) No 2020/878)

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

REACH 1907/2006 Appendix XVII, No (mixture): 3

**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):

1 - slightly hazardous to water

**15.2. Chemical safety assessment**

For the following substances of this mixture a chemical safety assessment has been carried out:

**SECTION 16: Other information****Changes**

Rev. 1.0; Initial release: 24.01.2022

Rev. 2.0; Revision: 24.11.2022

**Abbreviations and acronyms**

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

AGW: Arbeitsplatzgrenzwert

CAS: Chemical Abstracts Service

CLP: Classification, Labelling and Packaging of substances and mixtures

DNEL: Derived No Effect Level

d: day(s)

EINECS: European INventory of Existing Commercial chemical Substances

ELINCS: European List of Notified Chemical Substances

ECHA: European Chemicals Agency

EWC: European Waste Catalogue

IARC: INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)

h: hour

LOAEL: Lowest observed adverse effect level

LOAEC: Lowest observed adverse effect concentration

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

NOAEL: No observed adverse effect level

NOAEC: No observed adverse effect concentration

NLP: No-Longer Polymers

N/A: not applicable

OECD: Organisation for Economic Co-operation and Development

PNEC: predicted no effect concentration

PBT: Persistent bioaccumulative toxic

RID: Regulation Concerning the International Transport of Dangerous Goods by Rail

REACH: Registration, Evaluation, Authorisation of Chemicals

SVHC: substance of very high concern

TRGS: Technische Regeln für Gefahrstoffe

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UN: United Nations

VOC: Volatile Organic Compounds

**Classification for mixtures and used evaluation method according to Regulation (EC) No 1272/2008 [CLP]**

Classification	Classification procedure
Acute Tox. 4; H302	Calculation method
Acute Tox. 4; H332	Calculation method
Skin Irrit. 2; H315	Calculation method
Eye Irrit. 2; H319	Calculation method

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

H302	Harmful if swallowed.
H302+H332	Harmful if swallowed or if inhaled.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.

**Further Information**

Classification according to Regulation (EC) No 1272/2008 [CLP] - Classification procedure:

Health hazards: Calculation method.

Environmental hazards: Calculation method.

Physical hazards: On basis of test data and / or calculated and / or estimated.

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

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