

MPLC DNA Isol. Kit I

Version 4.1	Revision Date: 12.08.2019	Date of last issue: 19.06.2019 Date of first issue: 14.11.2012
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name : MPLC DNA Isol. Kit I
Product code : 03003990001

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

Recommended restrictions on use : For professional users only.

1.3 Details of the supplier of the safety data sheet

Company : Roche Diagnostics Deutschland GmbH
-
Sandhoferstrasse 116
68305 Mannheim
Deutschland

Telephone : +496217590
Telefax : +496217592890
Responsible Department : +49(0)621-759-2012, +49(0)621-759-4848
+49(0)8856-60-2629
E-mail address : mannheim.umweltschutz@roche.com

1.4 Emergency telephone number

In case of emergencies: : Central Works Security +49(0)621-759-2203
Roche Diagnostics GmbH

Centre for detoxification: : Mainz +49(0)6131-19240
Munich +49(0)89-19240

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

The product is a kit consisting of individual ingredients. The classification of the ingredients can be obtained from section 3. Section Label elements contains the resulting labelling for the kit.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :    

Signal word : Danger

Hazard statements : H225 Highly flammable liquid and vapour.

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H302 + H332 Harmful if swallowed or if inhaled.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H412 Harmful to aquatic life with long lasting effects.

Supplemental Hazard Statements : EUH032 Contact with acids liberates very toxic gas.

Precautionary statements : **Prevention:**
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.
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.
P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

2.3 Other hazards

See SECTION 3

SECTION 3: Composition/information on ingredients

Wash Buffer I (WB I)

Classification (REGULATION (EC) No 1272/2008)

Flammable liquids, Category 3	H226: Flammable liquid and vapour.
Acute toxicity, Category 4	H302: Harmful if swallowed.
Skin irritation, Category 2	H315: Causes skin irritation.
Eye irritation, Category 2	H319: Causes serious eye irritation.

Components

Chemical name	CAS-No.	Classification	Concentration
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	EC-No. Index-No. Registration number		(% w/w)
guanidinium chloride	50-01-1 200-002-3 607-148-00-0	Acute Tox. 4; H302 Acute Tox. 4; H332 Skin Irrit. 2; H315 Eye Irrit. 2; H319	>= 30,0 - < 50,0
ethanol	64-17-5 200-578-6 603-002-00-5	Flam. Liq. 2; H225 Eye Irrit. 2; H319	>= 20,0 - < 30,0

For explanation of abbreviations see section 16.

Wash Buffer II (WB II)

Classification (REGULATION (EC) No 1272/2008)

Flammable liquids, Category 3

H226: Flammable liquid and vapour.

Eye irritation, Category 2

H319: Causes serious eye irritation.

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
ethanol	64-17-5 200-578-6 603-002-00-5	Flam. Liq. 2; H225 Eye Irrit. 2; H319	>= 30,0 - < 50,0

For explanation of abbreviations see section 16.

Lysis/Binding Buffer

Classification (REGULATION (EC) No 1272/2008)

Acute toxicity, Category 4

H302: Harmful if swallowed.

Acute toxicity, Category 4

H332: Harmful if inhaled.

Skin corrosion, Sub-category 1B

H314: Causes severe skin burns and eye damage.

Serious eye damage, Category 1

H318: Causes serious eye damage.

Long-term (chronic) aquatic hazard, Category 3

H412: Harmful to aquatic life with long lasting effects.

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
guanidinium thiocyanate	593-84-0	Acute Tox. 4; H302	>= 30,0 - <

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	209-812-1 615-004-00-3 01-2120735072-65-0004	Acute Tox. 4; H332 Acute Tox. 4; H312 Skin Corr. 1B; H314 Eye Dam. 1; H318 Aquatic Chronic 3; H412	50,0
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

For explanation of abbreviations see section 16.

Proteinase K

Classification (REGULATION (EC) No 1272/2008)

Skin irritation, Category 2

H315: Causes skin irritation.

Eye irritation, Category 2

H319: Causes serious eye irritation.

Respiratory sensitisation, Category 1

H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Skin sensitisation, Category 1

H317: May cause an allergic skin reaction.

Specific target organ toxicity - single exposure, Category 3, Respiratory system

H335: May cause respiratory irritation.

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Proteinase, Tritirachium album serine	39450-01-6 254-457-8 647-014-00-9	Skin Irrit. 2; H315 Eye Irrit. 2; H319 Resp. Sens. 1; H334 Skin Sens. 1; H317 STOT SE 3; H335	>= 70,0 - < 90,0

For explanation of abbreviations see section 16.

Magnetic Glass Particles (MGPs) Suspension

Classification (REGULATION (EC) No 1272/2008)

Flammable liquids, Category 2

H225: Highly flammable liquid and vapour.

Eye irritation, Category 2

H319: Causes serious eye irritation.

Specific target organ toxicity - single exposure, Category 3, Central nervous system

H336: May cause drowsiness or dizziness.

Components

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Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
propan-2-ol	67-63-0 200-661-7 603-117-00-0	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336	>= 90,0 - <= 100,0

For explanation of abbreviations see section 16.

Elution Buffer

Classification (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

Components

Remarks : No hazardous ingredients

For explanation of abbreviations see section 16.

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 : Call a physician or poison control centre immediately.
Move to fresh air.
If unconscious, place in recovery position and seek medical advice.
- 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.

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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

Symptoms : No information available.

4.3 Indication of any immediate medical attention and special treatment needed

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

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Alcohol-resistant foam
Carbon dioxide (CO₂)
Dry chemical

Unsuitable extinguishing media : High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : Do not allow run-off from fire fighting 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 (NO_x)
Sulphur oxides
Hydrogen cyanide (hydrocyanic acid)

5.3 Advice for firefighters

Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

Further information : 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.
For safety reasons in case of fire, cans should be stored separately in closed containments.
Use a water spray to cool fully closed containers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.
Ensure adequate ventilation.
Remove all sources of ignition.
Evacuate personnel to safe areas.

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Refer to protective measures listed in sections 7 and 8.
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

6.2 Environmental precautions

Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

6.4 Reference to other sections

Treat recovered material as described in the section "Disposal considerations".

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Avoid formation of aerosol.
Do not breathe vapours/dust.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Take precautionary measures against static discharges.
Provide sufficient air exchange and/or exhaust in work rooms.
Open drum carefully as content may be under pressure.
Dispose of rinse water in accordance with local and national regulations.
Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
To prevent leaks or spillages from spreading, provide a suitable liquid retention system.

Advice on protection against fire and explosion : Do not spray on a naked flame or any incandescent material.
Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Use only explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition.

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, including any incompatibilities

Requirements for storage areas and containers : No smoking. 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

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installations / working materials must comply with the technological safety standards.

Further information on storage conditions : See label, package insert or internal guidelines

Storage class (TRGS 510) : 3, Flammable liquids

Further information on storage stability : No decomposition if stored and applied as directed.

7.3 Specific end use(s)

Specific use(s) : Laboratory chemicals

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Wash Buffer I (WB I)

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
ethanol	64-17-5	AGW	200 ppm 380 mg/m ³	DE TRGS 900
Peak-limit: excursion factor (category)	4;(II)			
Further information	Senate commission for the review of compounds at the work place dangerous for the health (MAK-commission)., When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child			

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
ethanol	Workers	Inhalation	Acute local effects	1900 mg/m ³
	Workers	Dermal	Chronic effects	343 mg/kg
	Workers	Inhalation	Chronic effects	950 mg/m ³

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
ethanol	Fresh water	0,96 mg/l
	Marine water	0,79 mg/l
	Fresh water sediment	3,6 mg/kg
	Soil	0,63 mg/kg

Wash Buffer II (WB II)

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
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ethanol	64-17-5	AGW	200 ppm 380 mg/m ³	DE TRGS 900
Peak-limit: excursion factor (category)	4;(II)			
Further information	Senate commission for the review of compounds at the work place dangerous for the health (MAK-commission)., When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child			

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
ethanol	Workers	Inhalation	Acute local effects	1900 mg/m ³
	Workers	Dermal	Chronic effects	343 mg/kg
	Workers	Inhalation	Chronic effects	950 mg/m ³

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
ethanol	Fresh water	0,96 mg/l
	Marine water	0,79 mg/l
	Fresh water sediment	3,6 mg/kg
	Soil	0,63 mg/kg

Lysis/Binding Buffer

Contains no substances with occupational exposure limit values.

Proteinase K

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Proteinase, Tritirachium album serine	39450-01-6	IOEL	0,00006 mg/m ³	Roche Industrial Hygiene Committee (RIHC)

Magnetic Glass Particles (MGPs) Suspension

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
propan-2-ol	67-63-0	AGW	200 ppm 500 mg/m ³	DE TRGS 900
Peak-limit: excursion factor (category)	2;(II)			
Further information	Senate commission for the review of compounds at the work place dangerous for the health (MAK-commission)., When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child			

Biological occupational exposure limits

Substance name	CAS-No.	Control parameters	Sampling time	Basis
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propan-2-ol	67-63-0	Acetone: 25 mg/l (Blood)	Immediately after exposure or after working hours	TRGS 903
		Acetone: 25 mg/l (Urine)	Immediately after exposure or after working hours	TRGS 903

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
propan-2-ol	Workers	Dermal	Long-term systemic effects	888 mg/kg
	Workers	Inhalation	Long-term systemic effects	500 mg/m3

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
propan-2-ol	Fresh water	140,9 mg/l
	Marine water	140,9 mg/l
	Fresh water sediment	552 mg/kg
	Marine sediment	552 mg/kg
	Soil	28 mg/kg

Elution Buffer

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Engineering measures

No data available

Personal protective equipment

Eye protection : Eye wash bottle with pure water
Tightly fitting safety goggles
Wear face-shield and protective suit for abnormal processing problems.

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. 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. The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Skin and body protection : Impervious clothing

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

Respiratory protection : In the case of vapour formation use a respirator with an approved filter.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Wash Buffer I (WB I)

Appearance : liquid

Colour : colourless

Odour : characteristic

Odour Threshold : No data available

pH : 6,6 (25 °C)

Melting point/range : No data available

Boiling point/boiling range : No data available

Flash point : 29 °C

Evaporation rate : No data available

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Vapour pressure : 43 hPa

Relative vapour density : No data available

Relative density : No data available

Density : 1,057 g/cm³

Solubility(ies)

Water solubility : completely miscible

Solubility in other solvents : No data available

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

Auto-ignition temperature : No data available

Decomposition temperature : No data available

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Viscosity
 Viscosity, dynamic : No data available

 Viscosity, kinematic : No data available

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Wash Buffer II (WB II)

Appearance : liquid

Colour : colourless

Odour : characteristic

Odour Threshold : No data available

pH : 7,4

Melting point/range : No data available

Boiling point/boiling range : No data available

Flash point : 25 °C

Evaporation rate : No data available

Upper explosion limit / Upper
flammability limit : No data available

Lower explosion limit / Lower
flammability limit : No data available

Vapour pressure : 43 hPa

Relative vapour density : No data available

Relative density : No data available

Density : 0,93 g/cm³

Solubility(ies)
 Water solubility : completely miscible

 Solubility in other solvents : No data available

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

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Viscosity
 Viscosity, dynamic : No data available

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Viscosity, kinematic : No data available
Oxidizing properties : The substance or mixture is not classified as oxidizing.

Lysis/Binding Buffer

Appearance : liquid
Colour : colourless
Odour : none
Odour Threshold : No data available
pH : 6,0 - 7,0
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., Does not sustain combustion.
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 : completely miscible
 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

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Viscosity, kinematic : No data available

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Proteinase K

Appearance : solid, (lyophilised)

Colour : white

Odour : very faint

Odour Threshold : Not applicable

pH : 6,5
(as aqueous solution)

Melting point/range : No data available

Boiling point/boiling range : No data available

Flash point : does not flash

Evaporation rate : No data available

Flammability (solid, gas) : Sustains combustion

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 : Not applicable

Relative density : No data available

Bulk density : ca. 35 kg/m³

Solubility(ies)

 Water solubility : soluble

 Solubility in other solvents : No data available

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

Auto-ignition temperature : No data available

Decomposition temperature : Decomposes on heating.

Viscosity

 Viscosity, dynamic : Not applicable

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Viscosity, kinematic : Not applicable
Oxidizing properties : The substance or mixture is not classified as oxidizing.

Magnetic Glass Particles (MGPs) Suspension

Appearance : suspension
Colour : black
Odour : strong
Odour Threshold : No data available
pH : No data available
Melting point/range : -89 °C
Boiling point/boiling range : 82 °C
Flash point : 12 °C
Evaporation rate : No data available
Upper explosion limit / Upper flammability limit : 12 %(V)
Lower explosion limit / Lower flammability limit : 2 %(V)
Vapour pressure : 42 hPa (20 °C)
Relative vapour density : No data available
Relative density : No data available
Density : 0,78 g/cm³
Solubility(ies)
 Water solubility : partly miscible
 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

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Viscosity, kinematic : No data available
Oxidizing properties : The substance or mixture is not classified as oxidizing.

Elution Buffer

Appearance : liquid
Colour : colourless
Odour : none
Odour Threshold : No data available
pH : 8,0
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., Does not sustain combustion.
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 : completely miscible
 Solubility in other solvents : No data available
Partition coefficient: n-octanol/water : No data available
Auto-ignition temperature : No data available
Decomposition temperature : No data available
Viscosity
 Viscosity, dynamic : No data available
 Viscosity, kinematic : No data available

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Oxidizing properties : The substance or mixture is not classified as oxidizing.

9.2 Other information

Wash Buffer I (WB I)

Self-ignition : 425 °C

Wash Buffer II (WB II)

Self-ignition : 425 °C

Lysis/Binding Buffer

Flammability (liquids) : Does not sustain combustion.

Self-ignition : No data available

Proteinase K

Flammability (liquids) : Sustains combustion

Self-ignition : No data available

Magnetic Glass Particles (MGPs) Suspension

Self-ignition : 485 °C

Elution Buffer

Flammability (liquids) : Does not sustain combustion.

Self-ignition : No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : Toxic gases may be released if in contact with the following:
Acids

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Oxidizing agents
sodium hypochlorite
Contact with acids liberates very toxic gas.
Alkali metals
Alkaline earth metals
Peroxides
Nitric acid
Amines
Aldehydes
Aluminium
Iron
Reacts violently with peroxides.

No decomposition if stored and applied as directed.

Vapours may form explosive mixture with air.

10.4 Conditions to avoid

Conditions to avoid : Exposure to light.
Exposure to moisture

Heat, flames and sparks.

10.5 Incompatible materials

Materials to avoid : Strong acids
Strong oxidizing agents
Cyanides
Peroxides
Aluminium
Alkali metals
Alkaline earth metals
Iron
Amines
Aldehydes
Nitric acid
sodium hypochlorite

10.6 Hazardous decomposition products

Thermal decomposition can lead to release of irritating gases and vapours.
In case of fire hazardous decomposition products may be produced such as:
Carbon oxides
Nitrogen oxides (NO_x)
Sulphur oxides
Hydrogen cyanide (hydrocyanic acid)

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Wash Buffer I (WB I)

Acute toxicity

Harmful if swallowed.

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Components:

guanidinium chloride:

- Acute oral toxicity : LD50 Oral (Rat): 475 mg/kg
LD50 Oral (Mouse): 571 mg/kg
LD50 Oral (Rat): 1.120 mg/kg
- Acute inhalation toxicity : LC50 (Rat, female): 3,2 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
LC50 (Rat, male and female): 5,3 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
LC50 (Rat, male): 7,7 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
- Acute dermal toxicity : LD50 Dermal (Rabbit): > 2.000 mg/kg

ethanol:

- Acute oral toxicity : LD50 Oral (Rat): 7.060 mg/kg
LD50 Oral (Mouse): 3.450 mg/kg
LD50 Oral (Rat): 10.470 mg/kg
Method: OECD Test Guideline 401
- Acute inhalation toxicity : LC50 (Rat): 20000 ppm
Exposure time: 10 h
Test atmosphere: vapour
LC50 (Mouse): 39 g/m³
Exposure time: 4 h
Test atmosphere: vapour
LC50 (Rat): 124,7 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: OECD Test Guideline 403

Skin corrosion/irritation

Causes skin irritation.

Components:

guanidinium chloride:

- Species : Rabbit
Result : Irritating to skin.

ethanol:

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Species : Rabbit
Method : OECD Test Guideline 404
Result : No skin irritation

Serious eye damage/eye irritation

Causes serious eye irritation.

Components:

guanidinium chloride:

Species : Rabbit
Result : Irritating to eyes.

ethanol:

Species : Rabbit
Method : OECD Test Guideline 405
Result : Irritating to eyes.

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Components:

guanidinium chloride:

Assessment : Did not cause sensitisation on laboratory animals.

ethanol:

Species : Guinea pig
Method : OECD Test Guideline 406
Result : Did not cause sensitisation on laboratory animals.

Germ cell mutagenicity

Not classified based on available information.

Components:

guanidinium chloride:

Germ cell mutagenicity- Assessment : Not mutagenic in Ames Test

ethanol:

Genotoxicity in vitro : Test Type: Ames test
Method: OECD Test Guideline 471
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: negative

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Test Type: Chromosome aberration test in vitro
Result: Conflicting results have been seen in different studies.

Carcinogenicity

Not classified based on available information.

Reproductive toxicity

Not classified based on available information.

Components:

ethanol:

Effects on foetal development : Developmental Toxicity: NOAEL: 5.200 mg/kg body weight

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Repeated dose toxicity

Components:

ethanol:

Species : Rat, male
LOAEL : 3156 mg/kg
Application Route : Oral
Exposure time : 90
Method : OECD Test Guideline 408

Aspiration toxicity

Not classified based on available information.

Further information

Product:

Remarks : Solvents may degrease the skin.

Wash Buffer II (WB II)

Acute toxicity

Not classified based on available information.

Components:

ethanol:

Acute oral toxicity : LD50 Oral (Rat): 7.060 mg/kg
LD50 Oral (Mouse): 3.450 mg/kg
LD50 Oral (Rat): 10.470 mg/kg
Method: OECD Test Guideline 401

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Acute inhalation toxicity : LC50 (Rat): 20000 ppm
Exposure time: 10 h
Test atmosphere: vapour

LC50 (Mouse): 39 g/m³
Exposure time: 4 h
Test atmosphere: vapour

LC50 (Rat): 124,7 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: OECD Test Guideline 403

Skin corrosion/irritation

Not classified based on available information.

Components:

ethanol:

Species : Rabbit
Method : OECD Test Guideline 404
Result : No skin irritation

Serious eye damage/eye irritation

Causes serious eye irritation.

Components:

ethanol:

Species : Rabbit
Method : OECD Test Guideline 405
Result : Irritating to eyes.

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Components:

ethanol:

Species : Guinea pig
Method : OECD Test Guideline 406
Result : Did not cause sensitisation on laboratory animals.

Germ cell mutagenicity

Not classified based on available information.

Components:

ethanol:

Genotoxicity in vitro : Test Type: Ames test

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Method: OECD Test Guideline 471
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: negative

Test Type: Chromosome aberration test in vitro
Result: Conflicting results have been seen in different studies.

Carcinogenicity

Not classified based on available information.

Reproductive toxicity

Not classified based on available information.

Components:

ethanol:

Effects on foetal development : Developmental Toxicity: NOAEL: 5.200 mg/kg body weight

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Repeated dose toxicity

Components:

ethanol:

Species : Rat, male
LOAEL : 3156 mg/kg
Application Route : Oral
Exposure time : 90
Method : OECD Test Guideline 408

Aspiration toxicity

Not classified based on available information.

Further information

Product:

Remarks : Solvents may degrease the skin.

Lysis/Binding Buffer

Acute toxicity

Harmful if swallowed or if inhaled.

Components:

guanidinium thiocyanate:

Acute oral toxicity : LD50 Oral (Rat): 593 mg/kg

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Symptoms: Vomiting

Acute inhalation toxicity : Acute toxicity estimate: 1,5 mg/l
Test atmosphere: dust/mist
Method: Expert judgement

Acute dermal toxicity : Acute toxicity estimate: 1.100 mg/kg
Method: Expert judgement

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

Acute oral toxicity : LD50 Oral (Rat): 1.900 - 5.000 mg/kg

Acute toxicity estimate: 500 mg/kg
Method: Expert judgement

Acute dermal toxicity : LD50 Dermal (Rabbit): > 3.000 mg/kg

Skin corrosion/irritation

Causes severe burns.

Components:

guanidinium thiocyanate:

Result : Causes burns.

Serious eye damage/eye irritation

Causes serious 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.

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

Components:

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.

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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.

Proteinase K

Acute toxicity

Not classified based on available information.

Skin corrosion/irritation

Causes skin irritation.

Components:

Proteinase, Tritirachium album serine:

Result : Irritating to skin.
Remarks : May cause skin irritation and/or dermatitis.

Serious eye damage/eye irritation

Causes serious eye irritation.

Components:

Proteinase, Tritirachium album serine:

Result : Irritating to eyes.
Remarks : May cause irreversible eye damage.

Respiratory or skin sensitisation

Skin sensitisation

May cause an allergic skin reaction.

Respiratory sensitisation

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Components:

Proteinase, Tritirachium album serine:

Assessment : May cause sensitisation by skin contact.
Remarks : Causes sensitisation.

Assessment : May cause sensitisation by inhalation.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

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Reproductive toxicity

Not classified based on available information.

STOT - single exposure

May cause respiratory irritation.

Components:

Proteinase, Tritirachium album serine:

Assessment : May cause respiratory irritation.

STOT - repeated exposure

Not classified based on available information.

Components:

Proteinase, Tritirachium album serine:

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration toxicity

Not classified based on available information.

Components:

Proteinase, Tritirachium album serine:

No data available

Magnetic Glass Particles (MGPs) Suspension

Acute toxicity

Not classified based on available information.

Components:

propan-2-ol:

Acute oral toxicity : LD50 Oral (Rat): 4.570 mg/kg
LD50 Oral (Mouse): 3.600 mg/kg
LD50 Oral (Rabbit): 6.410 mg/kg

Acute inhalation toxicity : LC50 (Rat): 30 mg/l, 16000 ppm
Exposure time: 4 h
Test atmosphere: vapour
LC50 (Mouse): 53 mg/l
Test atmosphere: vapour

Acute dermal toxicity : LD50 Dermal (Rabbit): 13.400 mg/kg

Skin corrosion/irritation

Not classified based on available information.

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Components:

propan-2-ol:

Remarks : May cause skin irritation in susceptible persons.

Serious eye damage/eye irritation

Causes serious eye irritation.

Components:

propan-2-ol:

Result : Irritating to eyes.
Remarks : May cause irreversible eye damage.

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

May cause drowsiness or dizziness.

Components:

propan-2-ol:

Assessment : May cause drowsiness or dizziness.

STOT - repeated exposure

Not classified based on available information.

Components:

propan-2-ol:

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration toxicity

Not classified based on available information.

Further information

Product:

Remarks : Symptoms of overexposure may be headache, dizziness,

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tiredness, nausea and vomiting.
Concentrations substantially above the TLV value may cause narcotic effects.
Solvents may degrease the skin.

Elution Buffer

Acute toxicity

Not classified based on available information.

Skin corrosion/irritation

Not classified based on available information.

Serious eye damage/eye irritation

Not classified based on available information.

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

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

Wash Buffer I (WB I)

Components:

guanidinium chloride:

Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): 1.759 mg/l
Exposure time: 48 h

Toxicity to microorganisms : EC50 (Pseudomonas putida): 89 mg/l
Exposure time: 18 h

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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

ethanol:

Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): 8.100 mg/l
Exposure time: 48 h

LC50 (Oncorhynchus mykiss (rainbow trout)): 7.100 mg/l
Method: OECD Test Guideline 203
GLP: no

LC50 (Pimephales promelas (fathead minnow)): 14.200 mg/l
Exposure time: 96 h

NOEC (Danio rerio (zebra fish)): 250 mg/l
Method: OECD Test Guideline 212

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 5.400 mg/l
Exposure time: 48 h
GLP: no

LC50 (Ceriodaphnia dubia (water flea)): 5.012 mg/l
Exposure time: 48 h

NOEC (Ceriodaphnia dubia (water flea)): 9,6 mg/l
Exposure time: 240 h

Toxicity to algae/aquatic plants : EC0 (Scenedesmus quadricauda (Green algae)): 5.000 mg/l
Exposure time: 7 d

EC50 (Chlorella vulgaris (Fresh water algae)): 275 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 201

EC50 (Chlorella vulgaris (Fresh water algae)): 675 mg/l
Exposure time: 4 h
Method: OECD Test Guideline 201

Toxicity to microorganisms : EC0 (Pseudomonas putida): 6.500 mg/l
Exposure time: 16 h

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 9,6 mg/l
Exposure time: 9 d
Species: Daphnia magna (Water flea)

Ecotoxicology Assessment

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

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Other organisms relevant to the environment : No data available

Wash Buffer II (WB II)

Components:

ethanol:

- Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): 8.100 mg/l
Exposure time: 48 h
- LC50 (Oncorhynchus mykiss (rainbow trout)): 7.100 mg/l
Method: OECD Test Guideline 203
GLP: no
- LC50 (Pimephales promelas (fathead minnow)): 14.200 mg/l
Exposure time: 96 h
- NOEC (Danio rerio (zebra fish)): 250 mg/l
Method: OECD Test Guideline 212
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 5.400 mg/l
Exposure time: 48 h
GLP: no
- LC50 (Ceriodaphnia dubia (water flea)): 5.012 mg/l
Exposure time: 48 h
- NOEC (Ceriodaphnia dubia (water flea)): 9,6 mg/l
Exposure time: 240 h
- Toxicity to algae/aquatic plants : EC0 (Scenedesmus quadricauda (Green algae)): 5.000 mg/l
Exposure time: 7 d
- EC50 (Chlorella vulgaris (Fresh water algae)): 275 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 201
- EC50 (Chlorella vulgaris (Fresh water algae)): 675 mg/l
Exposure time: 4 h
Method: OECD Test Guideline 201
- Toxicity to microorganisms : EC0 (Pseudomonas putida): 6.500 mg/l
Exposure time: 16 h
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 9,6 mg/l
Exposure time: 9 d
Species: Daphnia magna (Water flea)

Ecotoxicology Assessment

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

Other organisms relevant to the environment : No data available

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Lysis/Binding Buffer

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 h

Toxicity to daphnia and other : EC50 (Daphnia (water flea)): 42,4 mg/l
aquatic invertebrates 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 : No data available
the environment

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 : EC50 (Daphnia magna (Water flea)): 18 - 26 mg/l
aquatic invertebrates 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 : No data available
the environment

Proteinase K

Components:

Proteinase, Tritirachium album serine:

Ecotoxicology Assessment

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

Other organisms relevant to : No data available
the environment

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Magnetic Glass Particles (MGPs) Suspension

Components:

propan-2-ol:

- Toxicity to fish : LC0 (Oncorhynchus mykiss (rainbow trout)): 10.000 mg/l
Method: OECD Test Guideline 203
- LC50 (Oncorhynchus mykiss (rainbow trout)): 12.250 mg/l
Method: OECD Test Guideline 203
- LC100 (Oncorhynchus mykiss (rainbow trout)): 15.000 mg/l
Method: OECD Test Guideline 203
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 9.500 mg/l
Exposure time: 24 h
- Toxicity to algae/aquatic plants : EC0 (Scenedesmus quadricauda (Green algae)): 1.800 mg/l
Exposure time: 168 h
Method: OECD Test Guideline 201
- Toxicity to microorganisms : EC0 (Pseudomonas putida): 1.050 mg/l
Exposure time: 16 h

Ecotoxicology Assessment

- Toxicity Data on Soil : Not expected to adsorb on soil.
- Other organisms relevant to the environment : No data available

Elution Buffer

No data available

12.2 Persistence and degradability

Wash Buffer I (WB I)

Components:

guanidinium chloride:

- Biodegradability : Biodegradation: < 70 %
Remarks: According to the results of tests of biodegradability this product is not readily biodegradable.
- Impact on Sewage Treatment : Do not discharge product into the aquatic environment without pretreatment (biological treatment plant).

ethanol:

- Biodegradability : Biodegradation: 97 %
Exposure time: 28 d
Method: OECD Test Guideline 301D
Remarks: Readily biodegradable, according to appropriate OECD test.

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Wash Buffer II (WB II)

Components:

ethanol:

Biodegradability : Biodegradation: 97 %
Exposure time: 28 d
Method: OECD Test Guideline 301D
Remarks: Readily biodegradable, according to appropriate OECD test.

Lysis/Binding Buffer

Components:

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

Biodegradability : Biodegradation: > 60 %
Exposure time: 28 d
Method: OECD Test Guideline 301B
Remarks: According to the results of tests of biodegradability this product is not readily biodegradable.

Proteinase K

No data available

Magnetic Glass Particles (MGPs) Suspension

Components:

propan-2-ol:

Biodegradability : Biodegradation: 99 %
Exposure time: 11 d
Method: OECD Test Guideline 302

Biodegradation: 57 %
Exposure time: 5 d
Method: OECD Test Guideline 302

Elution Buffer

No data available

12.3 Bioaccumulative potential

Wash Buffer I (WB I)

Components:

guanidinium chloride:

Partition coefficient: n-octanol/water : log Pow: ca. -1,7 (20 °C)

ethanol:

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

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Wash Buffer II (WB II)

Components:

ethanol:

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

Lysis/Binding Buffer

Components:

guanidinium thiocyanate:

Partition coefficient: n- : log Pow: -1,38
octanol/water

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- : Remarks: No data available
octanol/water

Proteinase K

Components:

Proteinase, Tritirachium album serine:

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

Magnetic Glass Particles (MGPs) Suspension

Components:

propan-2-ol:

Partition coefficient: n- : log Pow: 0,05
octanol/water

Elution Buffer

No data available

12.4 Mobility in soil

Wash Buffer I (WB I)

No data available

Wash Buffer II (WB II)

No data available

Lysis/Binding Buffer

No data available

Proteinase K

No data available

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Magnetic Glass Particles (MGPs) Suspension

No data available

Elution Buffer

No data available

12.5 Results of PBT and vPvB assessment

Wash Buffer I (WB I)

Not relevant

Wash Buffer II (WB II)

Not relevant

Lysis/Binding Buffer

Not relevant

Proteinase K

Not relevant

Magnetic Glass Particles (MGPs) Suspension

Not relevant

Elution Buffer

Not relevant

12.6 Other adverse effects

Wash Buffer I (WB I)

No data available

Wash Buffer II (WB II)

No data available

Lysis/Binding Buffer

No data available

Proteinase K

No data available

Magnetic Glass Particles (MGPs) Suspension

No data available

Elution Buffer

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : 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.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.
Do not burn, or use a cutting torch on, the empty drum.

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SECTION 14: Transport information

14.1 UN number

ADR : UN 3316
RID : UN 3316
IMDG : UN 3316
IATA : UN 3316

14.2 UN proper shipping name

ADR : CHEMICAL KIT
RID : CHEMICAL KIT
IMDG : CHEMICAL KIT
IATA : Chemical kit

14.3 Transport hazard class(es)

ADR : 9
RID : 9
IMDG : 9
IATA : 9

14.4 Packing group

ADR
Packing group : II
Classification Code : M11
Labels : 9
Tunnel restriction code : (E)

RID
Packing group : II
Classification Code : M11
Hazard Identification Number : 90
Labels : 9

IMDG
Packing group : II
Labels : 9
EmS Code : F-A, S-P

IATA (Cargo)

Packing instruction (cargo aircraft) : 960
Packing instruction (LQ) : Y960
Packing group : II
Labels : Miscellaneous Dangerous Goods

IATA (Passenger)

Packing instruction (passenger aircraft) : 960
Packing instruction (LQ) : Y960

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Packing group : II
Labels : Miscellaneous Dangerous Goods

14.5 Environmental hazards

ADR
Environmentally hazardous : no

RID
Environmentally hazardous : no

IMDG
Marine pollutant : no

14.6 Special precautions for user

Remarks : No data available

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

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

Remarks : Not applicable

SECTION 15: Regulatory information

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

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

P5c FLAMMABLE LIQUIDS

Water contaminating class : WGK 2 obviously hazardous to water
(Germany)

Wash Buffer I (WB I)

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59) : Not applicable

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable

Regulation (EC) No 850/2004 on persistent organic pollutants : Not applicable

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : Not applicable

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, : Conditions of restriction for the following entries should be considered:

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preparations and articles (Annex XVII)

Number on list 3

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	:	On the inventory, or in compliance with the inventory
ISHL	:	Not in compliance with the inventory
KECI	:	On the inventory, or 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
Volatile organic compounds	:	Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control) Volatile organic compounds (VOC) content: 27,27 %

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal word : Warning

Hazard statements : H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.

Precautionary statements :

Prevention:

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

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Hazardous components which must be listed on the label:

50-01-1 guanidinium chloride

Wash Buffer II (WB II)

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59) : Not applicable

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable

Regulation (EC) No 850/2004 on persistent organic pollutants : Not applicable

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : Not applicable

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) : Conditions of restriction for the following entries should be considered: Number on list 3

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 : On the inventory, or in compliance with the inventory

ISHL : Not in compliance with the inventory

KECI : On the inventory, or 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

Volatile organic compounds : Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control)
Volatile organic compounds (VOC) content: 37,92 %

Labelling (REGULATION (EC) No 1272/2008)

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- Hazard pictograms :  
- Signal word : Warning
- Hazard statements : H226 Flammable liquid and vapour.
H319 Causes serious eye irritation.
- Precautionary statements : **Prevention:**
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.
Response:
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
Storage:
P403 + P235 Store in a well-ventilated place. Keep cool.

Lysis/Binding Buffer

- REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59) : alpha-(4-(1,1,3,3-Tetramethylbutyl)phenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)
- REACH - List of substances subject to authorisation (Annex XIV) : alpha-(4-(1,1,3,3-Tetramethylbutyl)phenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)
- Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable
- Regulation (EC) No 850/2004 on persistent organic pollutants : Not applicable
- Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : Not applicable
- REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) : Conditions of restriction for the following entries should be considered:
Number on list 3

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


- DSL : All components of this product are on the Canadian DSL

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- AICS : On the inventory, or in compliance with the inventory
- NZIoC : On the inventory, or in compliance with the inventory
- ENCS : On the inventory, or 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
- Volatile organic compounds : Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control)
Remarks: Not applicable

Labelling (REGULATION (EC) No 1272/2008)

- Hazard pictograms : 
- Signal word : Danger
- Hazard statements : H302 + H332 Harmful if swallowed or if inhaled.
H314 Causes severe skin burns and eye damage.
H412 Harmful to aquatic life with long lasting effects.
- Supplemental Hazard Statements : EUH032 Contact with acids liberates very toxic gas.
- Precautionary statements : **Prevention:**
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.
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.

Hazardous components which must be listed on the label:

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593-84-0
9002-93-1

guanidinium thiocyanate
alpha-(4-(1,1,3,3-Tetramethylbutyl)phenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)

Proteinase K

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59) : Not applicable

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable

Regulation (EC) No 850/2004 on persistent organic pollutants : Not applicable

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : Not applicable

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) : Not applicable

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

DSL : This product contains the following components that are not on the Canadian DSL nor NDSL.

Proteinase K

AICS : Not 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 : Not 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 : Substance(s) not listed on TSCA inventory

Volatile organic compounds : Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control)
Remarks: Not applicable

Labelling (REGULATION (EC) No 1272/2008)

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- Hazard pictograms : 
- Signal word : Danger
- Hazard statements : H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.
- Precautionary statements : **Prevention:**
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/ eye protection/ face protection.
P284 Wear respiratory protection.
Response:
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

Hazardous components which must be listed on the label:
39450-01-6 Proteinase, Tritirachium album serine

Magnetic Glass Particles (MGPs) Suspension

- REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59) : Not applicable
- REACH - List of substances subject to authorisation (Annex XIV) : Not applicable
- Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable
- Regulation (EC) No 850/2004 on persistent organic pollutants : Not applicable
- Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : Not applicable
- REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) : Conditions of restriction for the following entries should be considered: Number on list 3

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

- DSL : This product contains the following components that are not on the Canadian DSL nor NDSL.

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Magnetic glass particles (MGP)

- AICS : Not 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 : Not in compliance with the inventory
- IECSC : Not in compliance with the inventory
- TCSI : Not in compliance with the inventory
- TSCA : Substance(s) not listed on TSCA inventory
- Volatile organic compounds : Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control)
Volatile organic compounds (VOC) content: 93 %

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal word : Danger

Hazard statements : H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

Precautionary statements :

Prevention:

- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233 Keep container tightly closed.
- P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

- P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
- P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Hazardous components which must be listed on the label:

67-63-0

propan-2-ol

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Elution Buffer

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : Not applicable

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable

Regulation (EC) No 850/2004 on persistent organic pollutants : Not applicable

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : Not applicable

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) : Not applicable

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 : On the inventory, or in compliance with the inventory

ISHL : Not in compliance with the inventory

KECI : On the inventory, or 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

Volatile organic compounds : Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control)
Remarks: Not applicable

Labelling (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

15.2 Chemical safety assessment

A Chemical Safety Assessment is not required for this substance when it is used in the specified applications.

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SECTION 16: Other information

Full text of H-Statements

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.
H318	: Causes serious eye damage.
H319	: Causes serious eye irritation.
H332	: Harmful if inhaled.
H334	: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	: May cause respiratory irritation.
H336	: May cause drowsiness or dizziness.
H411	: Toxic to aquatic life with long lasting effects.
H412	: Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox.	: Acute toxicity
Aquatic Chronic	: Long-term (chronic) aquatic hazard
Eye Dam.	: Serious eye damage
Eye Irrit.	: Eye irritation
Flam. Liq.	: Flammable liquids
Resp. Sens.	: Respiratory sensitisation
Skin Corr.	: Skin corrosion
Skin Irrit.	: Skin irritation
Skin Sens.	: Skin sensitisation
STOT SE	: Specific target organ toxicity - single exposure

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; 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; IC50 - 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; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; 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

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es; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

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.

DE / EN / 1810