SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Commercial Product Name : MagNA Pure 96 DNA and Viral NA SV Kit
Mat.-No./ Genisys-No. : 06543588001

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
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 Roche Diagnostics GmbH	+49(0)621-759-2203
Centre for detoxification:	:	Mainz Munich	+49(0)6131-19240 +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.
H302 + H332 Harmful if swallowed or if inhaled
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H334 May cause allergy or asthma symptoms or breathing

difficulties if inhaled.
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/ 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.
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) / Inhib.Removal Buffer

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.

Classification (67/548/EEC, 1999/45/EC)

Flammable	R10: Flammable.
Harmful	R22: Harmful if swallowed.
Irritant	R36/38: Irritating to eyes and skin.

Hazardous components

Chemical name	CAS-No. EC-No.	Classification	Concentration (% w/w)

	Index-No. Registration number		
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 - < 50
ethanol	64-17-5 200-578-6 603-002-00-5	Flam. Liq. 2; H225	>= 20 - < 30

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.
Serious eye damage, Category 1	H318: Causes serious eye damage.
Chronic aquatic toxicity, Category 3	H412: Harmful to aquatic life with long lasting effects.

Classification (67/548/EEC, 1999/45/EC)

Harmful	R20/21/22: Harmful by inhalation, in contact with skin and if swallowed.
Irritant	R41: Risk of serious damage to eyes.
	R32: Contact with acids liberates very toxic gas.
Dangerous for the environment	R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Hazardous components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
guanidinium thiocyanate	593-84-0 209-812-1 615-004-00-3	Acute Tox. 4; H302 Acute Tox. 4; H332 Acute Tox. 4; H312 Aquatic Chronic 3; H412	>= 30 - < 50
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	>= 20 - < 30

For explanation of abbreviations see section 16.

Proteinase K (PK)

Classification (REGULATION (EC) No 1272/2008)

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.

Classification (67/548/EEC, 1999/45/EC)

Sensitising	R42/43: May cause sensitisation by inhalation and skin contact.

Hazardous 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	>= 1 - < 10

For explanation of abbreviations see section 16.

Elution Buffer

Classification (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

Classification (67/548/EEC, 1999/45/EC)

Not a hazardous substance or mixture.

Hazardous components

Remarks : No hazardous ingredients

For explanation of abbreviations see section 16.

Wash Buffer III

Classification (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

Classification (67/548/EEC, 1999/45/EC)

Not a hazardous substance or mixture.

Hazardous components

Remarks : No hazardous ingredients

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.

Classification (67/548/EEC, 1999/45/EC)

Highly flammable	R11: Highly flammable.
Irritant	R36: Irritating to eyes.
	R67: Vapours may cause drowsiness and dizziness.

Hazardous components

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 - <= 100

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 : If skin irritation persists, call a physician.
If on skin, rinse well with water.
If on clothes, remove clothes.

In case of eye contact : Small amounts splashed into eyes can cause irreversible tissue damage and blindness.
In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Continue rinsing eyes during transport to hospital.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

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

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 (NOx)
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.
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 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

Other data : 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) / Inhib.Removal Buffer

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
ethanol	64-17-5	AGW	500 ppm 960 mg/m3	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			

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/m3
	Workers	Dermal	Chronic effects	343 mg/kg
	Workers	Inhalation	Chronic effects	950 mg/m3

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 (PK)

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/m3	Roche Industrial Hygiene Committee (RIHC)

Elution Buffer

Contains no substances with occupational exposure limit values.

Wash Buffer III

Contains no substances with occupational exposure limit values.

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/m3	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
Isopropanol	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
Isopropanol	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
Isopropanol	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

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 EU Directive 89/686/EEC 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
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) / Inhib.Removal Buffer

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

Proteinase K (PK)

Appearance	:	liquid
Colour	:	clear, colourless
Odour	:	very faint
Odour Threshold	:	No data available
pH	:	7,5
Melting point/range	:	No data available
Boiling point/boiling range	:	No data available
Flash point		No data available
Evaporation rate	:	No data available
Upper explosion limit	:	No data available

Lower explosion limit	:	No data available
Vapour pressure	:	No data available
Relative vapour density	:	No data available
Relative density	:	No data available
Density	:	1,126 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
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	:	5 - 9
Melting point/range	:	No data available
Boiling point/boiling range	:	No data available
Flash point		No data available
Evaporation rate	:	No data available
Upper explosion limit	:	No data available
Lower explosion 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
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.

Wash Buffer III

Appearance	:	liquid
Colour	:	colourless
Odour	:	none
Odour Threshold	:	No data available
pH	:	4,0
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	:	No data available
Lower explosion 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
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	:	12 %(V)
Lower explosion 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-	:	No data available

octanol/water

Auto-ignition temperature : No data available

Decomposition temperature : Hazardous decomposition products formed under fire conditions.

Viscosity
Viscosity, dynamic : No data available

Viscosity, kinematic : No data available

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

9.2 Other information

Wash Buffer I (WB I) / Inhib.Removal Buffer

Self-ignition : 425 °C

Lysis/Binding Buffer

Self-ignition : No data available

Proteinase K (PK)

Self-ignition : No data available

Elution Buffer

Self-ignition : No data available

Wash Buffer III

Self-ignition : No data available

Magnetic Glass Particles (MGPs) Suspension

Self-ignition : 485 °C

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 : Reacts with the following substances:
Alkali metals
Alkaline earth metals
Oxidizing agents
Amines
Nitric acid
Aldehydes
Iron
Aluminium
Hydrogen halides
Toxic gases may be released if in contact with the following:
sodium hypochlorite
Acids

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 : Heat, flames and sparks.

10.5 Incompatible materials

Materials to avoid : Aluminium
Oxidizing agents
Alkali metals
Alkaline earth metals
Iron
Amines
Peroxides
Acids
sodium hypochlorite
Cyanides

10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions.
Heating can release hazardous gases.
In case of fire hazardous decomposition products may be produced such as:
Carbon oxides
Nitrogen oxides (NOx)
Sulphur oxides
Hydrogen cyanide (hydrocyanic acid)

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Wash Buffer I (WB I) / Inhib.Removal Buffer

Acute toxicity

Harmful if swallowed.

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): > 2.001 mg/kg

ethanol:

Acute oral toxicity	:	LD50 Oral (Rat): 7.060 mg/kg LD50 Oral (Mouse): 3.450 mg/kg
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

Skin corrosion/irritation

Causes skin irritation.

Components:

guanidinium chloride:

Species: Rabbit
Result: Irritating to skin.

Serious eye damage/eye irritation

Causes serious eye irritation.

Components:

guanidinium chloride:

Species: Rabbit
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.

Germ cell mutagenicity
Not classified based on available information.

Components:

guanidinium chloride:
Germ cell mutagenicity- Assessment : Not mutagenic in Ames Test

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.

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 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

Not classified based on available information.

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.

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 (PK)

Acute toxicity

Not classified based on available information.

Skin corrosion/irritation

Not classified based on available information.

Components:

Proteinase, Tritirachium album serine:

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

Serious eye damage/eye irritation

Not classified based on available information.

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.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

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

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.

Wash Buffer III

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.

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.

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

SECTION 12: Ecological information

12.1 Toxicity

Wash Buffer I (WB I) / Inhib.Removal Buffer

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

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
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 5.400 mg/l Exposure time: 48 h GLP: no
Toxicity to algae	:	EC0 (Scenedesmus quadricauda (Green algae)): 5.000 mg/l Exposure time: 7 d
Toxicity to microorganisms	:	EC0 (Pseudomonas putida): 6.500 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

Lysis/Binding Buffer

Components:

guanidinium thiocyanate:

Toxicity to fish	:	LC50 (Poecilia reticulata (guppy)): 89,1 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia (water flea)): 42,4 mg/l Exposure time: 48 h

Ecotoxicology Assessment

Chronic aquatic toxicity	:	Harmful to aquatic life with long lasting effects.
Toxicity Data on Soil	:	Not expected to adsorb on soil.
Other organisms relevant to the environment	:	No data available

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

Toxicity to fish	:	LC50 (Pimephales promelas (fathead minnow)): 4 - 8,9 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 18 - 26 mg/l Exposure time: 48 h

Ecotoxicology Assessment

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

Proteinase K (PK)

Components:

Proteinase, Tritirachium album serine:

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

Wash Buffer III

No data available

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	:	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

12.2 Persistence and degradability

Wash Buffer I (WB I) / Inhib.Removal Buffer

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

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

Proteinase K (PK)

No data available

Elution Buffer

No data available

Wash Buffer III

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

12.3 Bioaccumulative potential

Wash Buffer I (WB I) / Inhib.Removal Buffer

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

Lysis/Binding Buffer

Components:

guanidinium thiocyanate:

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

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

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

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

Proteinase K (PK)

Components:

Proteinase, Tritirachium album serine:

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

Elution Buffer

No data available

Wash Buffer III

No data available

Magnetic Glass Particles (MGPs) Suspension

Components:

propan-2-ol:

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

12.4 Mobility in soil

Wash Buffer I (WB I) / Inhib.Removal Buffer

No data available

Lysis/Binding Buffer

No data available

Proteinase K (PK)

No data available

Elution Buffer

No data available

Wash Buffer III

No data available

Magnetic Glass Particles (MGPs) Suspension

No data available

12.5 Results of PBT and vPvB assessment

Wash Buffer I (WB I) / Inhib.Removal Buffer

Not relevant

Lysis/Binding Buffer

Not relevant

Proteinase K (PK)

Not relevant

Elution Buffer

Not relevant

Wash Buffer III

Not relevant

Magnetic Glass Particles (MGPs) Suspension

Not relevant

12.6 Other adverse effects

Wash Buffer I (WB I) / Inhib.Removal Buffer

No data available

Lysis/Binding Buffer

No data available

Proteinase K (PK)

No data available

Elution Buffer

No data available

Wash Buffer III

No data available

Magnetic Glass Particles (MGPs) Suspension

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.

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
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

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 II - Directive 2003/105/EC amending Council Directive 96/82/EC on the control of major-accident hazards involving dangerous substances

		Quantity 1	Quantity 2
7b	Highly flammable	5.000 t	50.000 t

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	5.000 t	50.000 t

Water contaminating class (Germany) : WGK 2 significantly water endangering

Wash Buffer I (WB I) / Inhib.Removal Buffer

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

Response:

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

Hazardous components which must be listed on the label:
50-01-1 guanidinium chloride

Lysis/Binding Buffer

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal word : Danger

Hazard statements : H302 + H332 Harmful if swallowed or if inhaled
H318 Causes serious 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 eye protection/ face 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.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

Disposal:

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

Hazardous components which must be listed on the label:

593-84-0	guanidinium thiocyanate
9002-93-1	alpha-(4-(1,1,3,3-Tetramethylbutyl)phenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)

Proteinase K (PK)

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal word : Danger

Hazard statements : H317 May cause an allergic skin reaction.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Precautionary statements :

Prevention:

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P280 Wear protective gloves.
P284 Wear respiratory protection.

Response:

P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
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

Elution Buffer

Labelling (REGULATION (EC) No 1272/2008)
Not a hazardous substance or mixture.

Wash Buffer III

Labelling (REGULATION (EC) No 1272/2008)
Not a hazardous substance or mixture.

Magnetic Glass Particles (MGPs) Suspension

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/ eye protection/ face protection.

Response:

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

15.2 Chemical safety assessment

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

SECTION 16: Other information

Full text of H-Statements

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

Full text of other abbreviations

Acute Tox.	:	Acute toxicity
Aquatic Chronic	:	Chronic aquatic toxicity
Eye Dam.	:	Serious eye damage
Eye Irrit.	:	Eye irritation
Flam. Liq.	:	Flammable liquids
Resp. Sens.	:	Respiratory sensitisation
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; (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; 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 / 1611