



## **SAFETY DATA SHEET**

QuickGene DNA whole blood kit L

**MSDS\_EDB01\_01EU**

**MSDS\_LDB03\_01EU**

**MSDS\_WDB01\_01EU**

**MSDS\_CDB02\_01EU**

**KURABO INDUSTRIES LTD.**

**Bio-Medical Department**

<b>Address</b>	Neyagawa Techno Center 3F 14-5 Shimokida-Cho, Neyagawa, Osaka 572-0823, Japan
<b>Telephone Number</b>	+81-72-820-3079
<b>FAX Number</b>	+81-72-820-3095



## SAFETY DATA SHEET

### 1. Identification of Product/mixture and the company/undertaking

Use : Nucleic acid Isolation Kit

Product name: Protease EDB-01

Product usage QuickGene DNA whole blood kit : Protease

Manufacturer / Supplier :

KURABO INDUSTRIES LTD.

Bio-Medical Department

Neyagawa Techno Center 3F 14-5 Shimokida-Cho, Neyagawa, Osaka 572-0823, Japan

Telephone Number +81-72-820-3079

FAX Number

+81-72-820-3095

Information department:

Bio-Medical Department

Telephone Number +81-72-820-3079

Email: bio@ad.kurabo.co.jp

Emergency information:

Telephone Number +81-72-820-3079 9:00AM - 6:00PM

Reference file name MSDS\_EDB01\_01EU

### 2. Hazards identification

Information pertaining to particular dangers for man and environment

Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

Labelling(REGULATION(EC) No 1272/2008)

Hazard pictograms



Signal word Warning

Hazard statement	H315	Causes skin irritation. (Category 2)
	H319	Causes serious eye irritation. (Category 2)

Precautionary statements

Prevention	P280	Wear eye/face protection. Wear protective gloves.
	P264	Wash thoroughly after handling.
Response	P302+P352	IF ON SKIN: Wash with plenty of soap and water.
	P332+P313	If skin irritation occurs: Get medical advice/attention.
	P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes.
		Remove contact lenses, if present and easy to do. Continue rinsing.
	P337+P313	If eye irritation persists: Get medical advice/attention.
	P362	Take off contaminated clothing and wash before reuse.

### 3. Composition/information on ingredients

Chemical characterization

Substance or Mixture

Mixture

Description: Mixture of substances listed below with nonhazardous additions.

**Dangerous components:**

	<b>Components</b>	<b>Concentration (%)</b>
CAS :76774-43-1 EINECS: 278-547-1	protease	80 – 100
CAS :10035-04-8 EINECS: 233-140-8	Calcium Chloride, Dihydrate	0.5 – 1.5
CAS :1185-53-1	2-amino-2 (hydroxymethyl)propan-1,3-diol	0.5 – 1.5

**Additional information**

For the wording of the listed risk phrases refer to section 16.

**4. First aid measures**

<b>General information</b>	Never make an unconscious person vomit or drink fluids.
<b>After inhalation:</b>	Supply fresh air and to be sure call for a doctor.
<b>After skin contact</b>	Immediately wash with soap and water and rinse thoroughly.
<b>After eye contact</b>	Rinse open eye for several minutes under running water. Then consult a doctor.
<b>After swallowing</b>	Call for a doctor immediately.

**5. Fire-fighting measures**

<b>Suitable extinguish agents:</b>	CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
<b>For safety reasons unsuitable extinguishing agents</b>	Water with full jet.
<b>Extinguishing media</b>	Dry chemical, foam, carbon dioxide, water fog.
<b>Additional information</b>	Cool endangered containers with water spray. Collect contaminated fire fighting water separately. It must not enter the sewage system.

**6. Accidental release measures**

<b>Person-related safety precautions:</b>	Refer to the protective measures stated in Sections 7 and 8. Keep unprotected personnel away. Wear adequate personal protective equipment, see Section 8 (Exposure Controls/Personal Protection)
<b>Measures for environmental protection:</b>	Do not allow product to reach sewage system or any water course. Inform respective authorities if seepage into water course or sewage system occurs.
<b>Measures for cleaning/collecting:</b>	Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose of contaminated material as waste according to section 13.

**7. Handling and storage**

<b>Handling</b>	
<b>Information for safe handling:</b>	Store in cool, dry place in tightly sealed containers. Keep away from heat and direct sunlight. Ensure good ventilation and extraction at the workplace.
<b>Storage:</b>	Store in accordance with current national regulations.
<b>Requirements to be met by storerooms and receptacles:</b>	Store between 5 – 30°C.
<b>Further information about storage conditions:</b>	Keep receptacle tightly sealed.

**8. Exposure controls/personal protection****Additional information about design of technical facilities:**

Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates or solvent vapour below the occupational exposure limit stated, then suitable respiratory protection must be worn as a temporary measure and is specified below.

**Components with limit values that require monitoring at the workplace:**

No components with limit values.

<b>Additional information:</b>	The instructions and information provided by the manufacturer of the personal protective equipment on use, storage, maintenance and replacement must always be followed.
<b>General protective and hygienic measures:</b>	Immediately remove all soiled and contaminated clothing Wash hands before breaks and at the end of work. Store protective clothing separately. Avoid contact with the eyes and skin. Keep away from foodstuffs, beverages and feed.
<b>Breathing equipment:</b>	Not necessary if room is well-ventilated.
<b>Protection of hands:</b>	Protective gloves.
<b>Material of gloves</b>	The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
<b>Eye protection:</b>	Safety glasses. Use face shield in case of splash risk.
<b>Body protection:</b>	Protective work clothing; disposable overalls are preferable.

## 9. Physical and chemical properties

### General Information

<b>Form:</b>	Solid.
<b>Colour:</b>	Light yellow
<b>Odour:</b>	Characteristic

### Change in condition

<b>Melting point/Melting range:</b>	>100°C.
<b>Boiling point/Boiling range:</b>	undetermined
<b>Flash point:</b>	Not applicable
<b>Self-igniting:</b>	Product is not self-igniting.
<b>Density</b>	Not determined
<b>Solubility in / Miscibility with water:</b>	Soluble
<b>Solvent content:</b>	
<b>Organic solvents:</b>	0.0%
<b>pH</b>	Not Applicable

## 10. Stability and reactivity

<b>Thermal decomposition / conditions to be avoided:</b>	No decomposition if used according to specifications.
<b>Dangerous reaction</b>	No dangerous reactions known.

## 11. Toxicological information

### Acute toxicity:

### LD/LC50 values that are relevant for classification:

<b>10035-04-8 Calcium Chloride, Dihydrate</b>	Dermal	LD50 Rat:	1000 mg/kg
---	--------	-----------	------------

<b>Additional toxicological information:</b>	No further data
--	-----------------

## 12. Ecological information

### Ecotoxicological effects:

<b>Aquatic toxicity:</b>	<b>10035-04-8 Calcium Chloride, Dihydrate</b>	<b>LC50</b>	<b>10650 (Lepomis macrochirus).</b>
--------------------------	---	-------------	-------------------------------------

<b>General notes:</b>	There are no data on the preparation itself. The preparation has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and is not classified as dangerous for the environment. Do not allow product to reach ground water, water course or sewage system.
-----------------------	---

### 13. Disposal considerations

**Product:****Recommendation**

Must not be disposed together with household garbage.

Do not allow product to reach sewage system.

**European waste catalogue**

18 01 03 wastes whose collection and disposal is subject to special requirements in order to prevent infection

### 14. Transport information

**Land transport ADR/RID (cross-border)**

ADR/RID class: -

**Maritime transport IMO:**

IMOG Class: -

Marine pollutant: No

Air transport ICAO-TI and IATA-DGR

ICAO/IATA Class: -

**Transport /Additional information:**

Not dangerous according to the above specifications.

### 15. Regulatory information

**Markings according to EU guidelines:**

The product has been classified and marked in accordance with EU Directives on Hazardous Materials

### 16. Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**Relevant R-phrases**

36 Irritating to eyes.

**Recommended restriction of use**

The product should not be used for any purpose other than that specified in Section 1.



## SAFETY DATA SHEET

### 1. Identification of Product/mixture and the company/undertaking

Use : Nucleic acid Isolation Kit

Product name Lysis Buffer LDB-03

Product usage QuickGene DNA whole blood kit : Lysis Buffer

Manufacturer / Supplier :

KURABO INDUSTRIES LTD.

Bio-Medical Department

Neyagawa Techno Center 3F 14-5 Shimokida-Cho, Neyagawa, Osaka 572-0823, Japan

Telephone Number +81-72-820-3079

FAX Number

+81-72-820-3095

Information department:

Bio-Medical Department

Telephone Number +81-72-820-3079

Email: bio@ad.kurabo.co.jp

Emergency information:

Telephone Number +81-72-820-3079 9:00AM - 6:00PM

Reference file name MSDS\_LDB03\_01EU

### 2. Hazards identification

Information pertaining to particular dangers for human and environment

Xn harmful

Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

Classification(REGULATION(EC) No 1272/2008

Skin irritation, Category 2, H315

Eye irritation, Category 2, H319

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

Xn R: 22-36/38

Labelling (REGULATION(EC) No 1272/2008)

Hazard pictograms



Signal word Warning

Hazard statement	H302	Harmful if swallowed. (Category 4)
	H315	Causes skin irritation. (Category 2)
	H319	Causes serious eye irritation. (Category 2)

Precautionary statements

Prevention	P280	Wear eye/face protection. Wear protective gloves.
	P270	Do not eat, drink or smoke when using this product.
	P264	Wash thoroughly after handling.
Response	P312	Call a doctor/physician if you feel unwell.
	P330	Rinse mouth.
	P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
	P332 + P313	If skin irritation occurs: Get medical advice/attention.
	P 305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313

If eye irritation persists: Get medical advice/attention.

P362

Take off contaminated clothing and wash before reuse.

**Labelling (67/548/EEC or 1999/45/EC)**

Symbol(s)

Xn



R-phrases(s)

22-36/38

**3. Composition/information on ingredients****Chemical characterization**

Substance or Mixture

Mixture

**Description** Mixture of substances listed below with nonhazardous additions.**Dangerous components:**

	<b>Components</b>	<b>Concentration (%)</b>
CAS: 50-01-1	guanidine hydrochloride	40 – 60
EINECS : 200-002-3	<b>R 22-36/38 S 26-37</b>	
CAS: ---	polyoxyethylene sorbitan fatty acid ester	5 – 10
EINECS :		
CAS: ---	hydrochloride salts of aminoalcohol	1 – 5
EINECS :		
<b>Chemical formula</b>	CH5N3.ClH (50-01-1)	

(\*) Generally chemical substances greater than 1% of the total are listed.

**4. First aid measures****After inhalation:**

Supply fresh air and to be sure call for a doctor.

**After skin contact:**

Remove contaminated clothing. Wash off with soap and plenty of water. If skin irritation occurs: Get medical advice/attention.

**After eye contact:**

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

**After swallowing:**

Call for a doctor immediately.

**5. Fire-fighting measures****Suitable extinguish agents:**

CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

**Protective equipment:**

Do not inhale explosion gases or combustion gases.

**6. Accidental release measures****Person-related safety precautions:**

Ensure adequate ventilation

Wear adequate personal protective equipment, see Section 8 (Exposure Controls/Personal Protection)

**Measures for environmental protection:**

Do not allow to enter sewers/ surface or ground water.

**Measures for cleaning/collecting:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

**7. Handling and storage****Handling****Information for safe handling:**Keep receptacles tightly sealed. Avoid contact with skin, eyes and clothing.  
Wash hands after handling.**Information about fire - and explosion protection:**

No special measures required.

**Storage****Requirements to be met by storerooms and receptacles:**

No special requirement

**Further information about storage conditions:**

Keep receptacle tightly sealed.

**8. Exposure controls/personal protection****Additional information about design of technical facilities:** No further data**Personal protective equipment:****General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

**Protection of hands:**

Protective gloves.

**Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

**Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Eye protection:**

Tightly sealed goggles.

## 9. Physical and chemical properties

**General Information****Form:**

Clear liquid

**Colour:**

Colourless to light yellow

**Odour:**

Practically odourless

**Change in condition****Melting point/Melting range:**

Undetermined.

**Boiling point/Boiling range:**

No data available.

**Flash point:**

Not flammable

**Self-igniting:**

Product is not self-igniting.

**Danger of explosion:**

Product does not present an explosion hazard.

**Flammability limit - lower (%)**

No data available.

**Flammability limit - upper (%)**

No data available.

**Vapor pressure at 20°C**

No data available.

**Density**

No data available.

**Solubility in / Miscibility with water:**

Completely soluble

**pH-value:**

pH. 6.0

(n-octanol/water)

## 10. Stability and reactivity

**Thermal decomposition / conditions to be avoided:**

No decomposition if used according to specifications.

**Dangerous reaction**

None.

**Dangerous decomposition products:**

CO, CO<sub>2</sub> Nitrogen oxides (NO<sub>x</sub>).

## 11. Toxicological information

**Acute toxicity:**

Harmful if swallowed.

**Primary irritant effect:**

Acute Oral LD<sub>50</sub> Rat: > 500 mg/kg

**on the skin:**

moderate

**on the eye:**

weakly irritant effect

**Sensitization:**

No sensitizing effects known

**Additional toxicological information:**

No further data

## 12. Ecological information

**General notes:**

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

## 13. Disposal considerations

**Product:****Recommendation**

Must not be disposed together with household garbage.

Do not allow product to reach sewage system.



## 14. Transport information

### Land transport ADR/RID (cross-border)

ADR/RID class:

Maritime transport IMO:

IMO Class:

### Air transport ICAO-TI and IATA-DGR

ICAO/IATA Class: -

### Transport /Additional information:

Not dangerous according to the above specifications.

## 15. Regulatory information

### Labelling according to EU guidelines:

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

### Code letter and hazard designation of product:

Xn: harmful

### Risk phrases:

- 22 Harmful if swallowed
- 36/38 Irritating to eyes and skin.

### Safety phrases:

- 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- 37 Wear suitable gloves

## 16. Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.



## SAFETY DATA SHEET

### 1. Identification of Product/mixture and the company/undertaking

Use : Nucleic acid Isolation Kit

Product name Wash Buffer WDB-01

Product usage QuickGene DNA whole blood kit: Wash Buffer

Manufacturer / Supplier :

KURABO INDUSTRIES LTD.

Bio-Medical Department

Neyagawa Techno Center 3F 14-5 Shimokida-Cho, Neyagawa, Osaka 572-0823, Japan

Telephone Number +81-72-820-3079

FAX Number

+81-72-820-3095

Information department:

Bio-Medical Department

Telephone Number +81-72-820-3079

Email: bio@ad.kurabo.co.jp

Emergency information:

Telephone Number +81-72-820-3079 9:00AM - 6:00PM

Reference file name MSDS\_WDB01\_01EU

### 2. Hazards identification

Information pertaining to particular dangers for man and environment

No hazardous product as specified in Directive 67/548/EEC and 1999/45/EC.

Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

Health hazards	Acute toxicity (Oral)	Not classified
	Skin corrosion/irritation	Not classified
	Serious eye damage/eye irritation	Not classified

### 3. Composition/information on ingredients

Chemical characterization

Substance or Mixture

Mixture

Description Mixture of substances listed below with nonhazardous additions.

Components:

	Components	Concentration (%)
CAS: 7732-18-5	water	80 - 100
EINECS : 231-791-2		
CAS: 7647-14-5	sodium chloride	0.5 - 1.5
EINECS : 231-598-3		
Chemical formula	H <sub>2</sub> O (7732-18-5), NaCl (7647-14-5)	

(\*) Generally chemical substances greater than 1% of the total are listed.

### 4. First aid measures

After inhalation:	Supply fresh air.
After skin contact	Remove contaminated clothing. Wash off with soap and plenty of water.
After eye contact	Rinse out with water
After swallowing	Call for a doctor if feeling unwell.

### 5. Fire-fighting measures

Suitable extinguish agents: CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

**Protective equipment:** Do not inhale explosion gases or combustion gases.

**Special risks:** Non-combustible

## 6. Accidental release measures

**Person-related safety precautions:** Do not inhale vapours/aerosols.

**Measures for environmental protection:** Do not allow to enter sewers/ surface or ground water.

**Measures for cleaning/collecting:** Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

## 7. Handling and storage

### Handling

**Information for safe handling:** Keep receptacles tightly sealed. Avoid contact with skin, eyes and clothing.  
Wash hands after handling.

**Information about fire - and explosion protection:** No special measures required.

### Storage:

**Requirements to be met by storerooms and receptacles:** No special requirement

**Further information about storage conditions:** Keep receptacle tightly sealed.

## 8. Exposure controls/personal protection

**Additional information about design of technical facilities:**

**Personal protective equipment:**

**General protective and hygienic measures:** Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes and skin.

**Protection of hands:** Protective gloves.

**Material of gloves** The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

**Penetration time of glove material** The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Eye protection:** Tightly sealed goggles.

## 9. Physical and chemical properties

### General Information

**Form:** Clear liquid

**Colour:** Transparent colourless

**Odour:** Odourless

### Change in condition

**Melting point/Melting range:** Undetermined.

**Boiling point/Boiling range:** No data available.

**Flash point:** Not flammable

**Self-igniting:** Product is not self-igniting.

**Danger of explosion:** Product does not present an explosion hazard.

**Flammability limit - lower (%)** No data available.

**Flammability limit - upper (%)** No data available.

**Vapor pressure at 20°C** No data available.

**Density** No data available.

**Solubility in / Miscibility with water:** Completely soluble

**pH-value:** pH. 7.5  
(n-octanol/water)

## 10. Stability and reactivity

<b>Thermal decomposition / conditions to be avoided:</b>	No decomposition if used according to specifications.
<b>Dangerous reaction</b>	None.
<b>Dangerous decomposition products:</b>	CO,CO2 Nitrogen oxides (NOx).

## 11. Toxicological information

<b>Acute toxicity:</b>	No toxicity
<b>Primary irritant effect:</b>	Acute Oral LD50 Rat: > 2000 mg/kg
<b>on the skin:</b>	No irritation
<b>on the eye:</b>	No irritation
<b>Sensitization:</b>	No sensitizing effects known
<b>Additional toxicological information:</b>	No further data

## 12. Ecological information

<b>General notes:</b>	Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
-----------------------	--

## 13. Disposal considerations

<b>Product:</b>	
<b>Recommendation</b>	Must not be disposed together with household garbage. Do not allow product to reach sewage system.

## 14. Transport information

<b>Land transport ADR/RID (cross-border)</b>	
<b>ADR/RID class:</b>	
<b>Maritime transport IMO:</b>	
<b>IMO Class:</b>	
<b>Air transport ICAO-TI and IATA-DGR</b>	
<b>ICAO/IATA Class:</b>	-
<b>Transport /Additional information:</b>	Not dangerous according to the above specifications.

## 15. Regulatory information

<b>Lavelling according to EU guidelines:</b>	The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.
<b>Code letter and hazard designation of product:</b>	Not regulated.
<b>Risk phrases:</b>	
<b>Safety phrases:</b>	

## 16. Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.



## SAFETY DATA SHEET

### 1. Identification of Product/mixture and the company/undertaking

Use : Nucleic acid Isolation Kit

Product name Elution Buffer CDB-02

Product usage QuickGene DNA whole blood kit: Elution Buffer

Manufacturer / Supplier :

KURABO INDUSTRIES LTD.

Bio-Medical Department

Neyagawa Techno Center 3F 14-5 Shimokida-Cho, Neyagawa, Osaka 572-0823, Japan

Telephone Number +81-72-820-3079

FAX Number

+81-72-820-3095

Information department:

Bio-Medical Department

Telephone Number +81-72-820-3079

Email: bio@ad.kurabo.co.jp

Emergency information:

Telephone Number +81-72-820-3079 9:00AM - 6:00PM

Reference file name MSDS\_CDB02\_01EU

### 2. Hazards identification

Information pertaining to particular dangers for human and environment

No hazardous product as specified in Directive 67/548/EEC and 1999/45/EC.

Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data. GHS-classification

Health hazards	Acute toxicity (Oral)	Not classified
	Skin corrosion/irritation	Not classified
	Serious eye damage/eye irritation	Not classified

### 3. Composition/information on ingredients

Chemical characterization

Substance or Mixture Mixture

Description Mixture of substances listed below with nonhazardous additions.

Components:

	Components	Concentration (%)
CAS : 7732-18-5	water	80 – 100
EINECS: 231-791-2		
Chemical formula	H <sub>2</sub> O (7732-18-5)	

(\*) Generally chemical substances greater than 1% of the total are listed.

### 4. First aid measures

After inhalation: Supply fresh air and to be sure call for a doctor.

After skin contact: Remove contaminated clothing. Wash off with soap and plenty of water. If skin irritation occurs: Get medical advice/attention.

After eye contact: Rinse opened eye for several minutes under running water. Get medical attention if irritation develops and persists.

After swallowing: Call for a doctor immediately.

### 5. Fire-fighting measures

Suitable extinguish agents: CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

**Protective equipment:**

Do not inhale explosion gases or combustion gases.

**6. Accidental release measures****Person-related safety precautions:**

Ensure adequate ventilation

Wear adequate personal protective equipment, see Section 8 (Exposure Controls/Personal Protection)

**Measures for environmental protection:**

Do not allow to enter sewers/ surface or ground water.

**Measures for cleaning/collecting:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

**7. Handling and storage****Handling****Information for safe handling:**

Keep receptacles tightly sealed. Avoid contact with skin, eyes and clothing.

Wash hands after handling.

**Information about fire - and explosion protection:**

No special measures required.

**Storage:****Requirements to be met by storerooms and receptacles:** No special requirement**Further information about storage conditions:**

Keep receptacle tightly sealed.

**8. Exposure controls/personal protection****Additional information about design of technical facilities:****Personal protective equipment:****General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

**Protection of hands:**

Protective gloves.

**Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

**Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Eye protection:**

Tightly sealed goggles.

**9. Physical and chemical properties****General Information****Form:**

Aqueous solution

**Colour:**

Transparent colourless

**Odour:**

Odourless

**Change in condition****Melting point/Melting range:**

Undetermined.

**Boiling point/Boiling range:**

No data available.

**Flash point:**

Not flammable

**Self-igniting:**

Product is not self-igniting.

**Danger of explosion:**

Product does not present an explosion hazard.

**Flammability limit - lower (%)**

No data available.

**Flammability limit - upper (%)**

No data available.

**Vapor pressure at 20°C**

No data available.

**Density**

No data available.

**Solubility in / Miscibility with water:**

Completely soluble

**pH-value:**

pH 9.

**(n-octanol/water)**

## 10. Stability and reactivity

<b>Thermal decomposition / conditions to be avoided:</b>	No decomposition if used according to specifications.
<b>Dangerous reaction</b>	None.
<b>Dangerous decomposition products:</b>	CO,CO2 Nitrogen oxides (NOx).

## 11. Toxicological information

<b>Acute toxicity:</b>	No toxicity
<b>Primary irritant effect:</b>	Acute Oral LD50 Rat: > 2000 mg/kg
<b>on the skin:</b>	No irritation
<b>on the eye:</b>	No irritation
<b>Sensitization:</b>	No sensitizing effects known
<b>Additional toxicological information:</b>	No further data

## 12. Ecological information

<b>General notes:</b>	Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
-----------------------	--

## 13. Disposal considerations

<b>Product:</b>	
<b>Recommendation</b>	Must not be disposed together with household garbage. Do not allow product to reach sewage system.

## 14. Transport information

<b>Land transport ADR/RID (cross-border)</b>	
<b>ADR/RID class:</b>	
<b>Maritime transport IMO:</b>	
<b>IMO Class:</b>	
<b>Air transport ICAO-TI and IATA-DGR</b>	
<b>ICAO/IATA Class:</b>	-
<b>Transport /Additional information:</b>	Not dangerous according to the above specifications

## 15. Regulatory information

<b>Labelling according to EU guidelines:</b>	The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.
<b>Code letter and hazard designation of product:</b>	Not regulated.

## 16. Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.