

SAFETY DATA SHEET

QuickGene SP kit DNA whole blood

MSDS_EDB01_01EU MSDS_LDB04_01EU MSDS_WDB02_01EU MSDS_CDB02_01EU

KURABO INDUSTRIES LTD.

Bio-Medical Department

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SAFETY DATA SHEET

Protease EDB-01

1. Identification	of Product/1	mixture and the	company/undertaki	ng	
Use :	Nucleic ac	Nucleic acid Isolation Kit			
Product name:	Protease F	CDB-01			
Product usage	QuickGene	e DNA whole blood k	tit : Protease		
Manufacturer / Su	ipplier :				
KURAE	O INDUSTRI	ES LTD.			
Bio-Mec	lical Departmen	nt			
Neyagav	va Techno Cent	er 3F 14-5 Shimoki	da-Cho, Neyagawa, Osaka	n 572-0823, Japan	
Telepho	ne Number	+81-72-820-3079	FAX Number	+81-72-820-3095	
Information depart	tment:				
Bio-Med	lical Departmen	nt			
Telephone Number +81-72-820-3079 Email: bio@ad.kurabo.co.jp					
Emergency information:					
Telepho	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

	$\mathbf{\nabla}$	
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+P33	38 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

Description: Mixture of substances listed below with nonhazardous additions.

Mixture

Dangerous components:

	Components	Concentration (%)
CAS :76774-43-1	protease	80 - 100
EINECS: 278-547-1		
CAS:10035-04-8	Calcium Chloride, Dihydrate	0.5-1.5
EINECS: 233-140-8		
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

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

5. Fire-fighting measures

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

6. Accidental release measures

Person-related safety precautions:	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)
Mesures for environmental protection:	Do not allow product to reach sewage system or any water course.
	Inform respective authorities if seepage into water course or sewage system occurs.
Measures for cleaning/collecting:	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

Handling

Handling			
Information for safe handling:	Store in cool, dry place in tightly sealed containers. Keep away from heat and direct sunlight.		
Storage:	Ensure good ventilation and extraction at the workplace. Store in accordance with current national regulations.		
Requirements to be met by storerooms and receptacles:		Store between $5 - 30^{\circ}$ C.	
Further information about storage conditions:		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 respirately 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.

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Protease EDB-01

Additional information:	The instructions and information provided by the manufacturer of the personal protective equipment on use,		
	storage, maintenance and replacement must always be followed.		
General protective and hygienic measures:			
	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.		
Breathing equipment:	Not necessary if room is well-ventilated.		
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.		
Eye protection:	Safety glasses. Use face shield in case of splash risk.		
Body protection:	Protective work clothing; disposable overalls are preferable.		

9. Physical and chemical properties

General Information			
Form:	Solid.		
Colour:	Light yellow		
Odour:	Characterristic		
Change in condition			
Melting point/Melting range:	>100°C.		
Boiling point/Boiling range:	undetermined		
Flash point:	Not applicable		
Self-igniting:	Product is not self-igniting.		
Density	Not determined		
Solubility in / Miscibility with water:	Soluble		
Solvent content:			
Organic solvents:	0.0%		
рН	Not Applicable		
10. Stability and reactivity			
Thermal decomposition / conditions to be av	voided: No decomposition if used according to specifications.		
Dangerous reaction	No dangerous reactions known.		
Dangerous reaction	No dangerous reactions known.		
11. Toxicological information			
Acute toxicity:			
LD/LC50 values that are relevant for classifi	fication:		
10035-04-8 Calcium Chloride, Dih	hydrate Dermal LD50 Rat: 1000 mg/kg		
Additional toxicological information:	No further data		
12. Ecological information			
Ecotoxical effects:			

Aquatic toxicity:10035-04-8Calcium Chloride, DihydrateLC5010650 (Lepomis macrochirus).General notes: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:	
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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 IMOG: 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 varid 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

			company/undertaki	ng
Use :	Nucleic acid Isolation Kit			
Product name	-	fer LDB-04		
Product usage	-	e DNA whole blood l	kit : Lysis Buffer	
Manufacturer / Suj	oplier :			
KURABO) INDUSTRI	ES LTD.		
Bio-Medi	cal Departme	nt		
Neyagawa	a Techno Cen	ter 3F 14-5 Shimok	ida-Cho, Neyagawa, Osaka	1 572-0823, Japan
Telephon	e Number	+81-72-820-3079	FAX Number	+81-72-820-3095
Information depart	ment:			
Bio-Medi	cal Departme	nt		
Telephon	e Number	+81-72-820-3079	Email: bio@ad.ku	irabo.co.jp
Emergency inform	ation:			
Telephon	e Number	+81-72-820-3079	9:00AM - 6:00PM	
Reference file name	e MSDS_LI	DB04_01EU		
2. Hazards identi	fication			
Information pertain	ning to partic	ular dangers for hur	man and environment	
Xn	harmful			
Classification system	n:			
The class	ification is ac	cording to the latest	editions of the EU-lists, an	d extended by company and literature data.
Classification(REG	ULATION()	EC) No 1272/2008		
Skin irrit	ation, Catego	ory 2, H315		
Eye irrita	tion, Catego	ry 2, H319		
Classification (67/54	48/EEC or 19	999/45/EC)		
Xn	R: 22-36/.	38		
Labelling (REGUL	ATION(EC) No 1272/2008)		
Hazard pictogra		^		
Signal word		Warning		

Signal woru	w arning	
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 + I	P338 IF IN EYES: Rinse cautiously with water for several minutes.
		Domove contect langes if present and easy to do Continue ring

Remove contact lenses, if present and easy to do. Continue rinsing.

Lysis Buffer LDB-04

P337 + P313
P362

If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

Labelling (67/548/EEC or 1999/45/EC)		
Symbol(s)	Xn	×

5	
R-phrase(s)	22-36/38

3. Composition/information on ingredients

Chemical characterization

Substance or Mixture	Mixture
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Description Mixture of substances listed below with nonhazardous additions.

Dangerous components:

	Components	Concentration (%)
CAS: 50-01-1	guanidine hyrochloride	40-60
EINECS: 200-002-3	R 22-36/38 S 26-37	
CAS:	polyoxyethylene sorbitan fatty acid ester	5 - 10
EINECS :		
CAS:	hydrochloride salts of aminoalcohol	1-5
EINECS :		
Chemical formula	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)	
Mesures 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: Storage	No special measures required.
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.

MSDS file name: MSDS_LDB04_01EU	Creation Date 2012/04/13	Lysis Buffer LDB-04	3/4
	Immediately remove all soiled and contaminated clothing		
	Wash hands before breaks and at the end of work.		
	Avoid contact with the eyes and skin	n.	
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 ma	nufacturer to manufacturer.	
Penetration time of glove material	The exact break trough time has to b	be found out by the manufacturer of the prote	ctive gloves
	and has to be observed.		
Eye protection:	Tightly sealed goggles.		

9. Physical and chemical properties

Thysical 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: Danger of explosion:	Product is not self-igniting. 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: (n-octanol/water)	рН. 6.0

10. Stability and reactivity

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

11. Toxicological information

Acute toxicity:	Harmful if swallowed.
Primary irritant effect:	Acute Oral LD50 Rat: > 500 mg/kg
on the skin: on the eye: Sensitization:	moderate weakly irritant effect No sensitizing effects known
Additional toxicological information:	No further data

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 IMOG:

IMOG 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.

MSDS file name: MSDS_WDB02_01EU



SAFETY DATA SHEET

1. Identification of	Product/r	nixture and the co	mpany/unde	rtaking	
Use :	Nucleic acid Isolation Kit				
Product name	Wash Buf	fer WDB-02			
Product usage	QuickGene	e DNA whole blood kit:	Wash Buffer		
Manufacturer / Sup	plier :				
KURABO	INDUSTRI	ES LTD.			
	al Departmen				
Neyagawa	Techno Cent	er 3F 14-5 Shimokida-	Cho, Neyagawa,	, Osaka 572-()823, Japan
Telephone	Number	+81-72-820-3079	FAX Numb	ber	+81-72-820-3095
Information departr	nent:				
Bio-Medic	al Departmen	t			
Telephone	Number	+81-72-820-3079	Email: bio@	ad.kurabo	.co.jp
Emergency informa	tion:				
Telephone		+81-72-820-3079 9:	00AM - 6:00PM	[
Reference file name	MSDS_WI	DB02_01EU			
-	ing to particu	ilar dangers for man a d in Directive 67/548/EF			
Classification system	•		2C and 1777/45/1	L.C.	
		to the latest editions of t	ho TII Kata and	ortondodb	y company and literature data.
Health hazards	_	Acute toxicity (Oral)	110 E.U-11818, anu	Not classifie	
nealui nazai us		Skin corrosion/irritatio	n	Not classifie	
		Serious eye damage/ey		Not classifie	
		Serious eye damagerey	ve initiation	1 tot classific	
3. Composition/inf	formation	on ingredients			
Chemical characteri		8			
Substance	or Mixture	Mixture			
Description Mixture	of substance	s listed below with non	hazardous addi	tions.	
Components:					
		Components		Concentrat	tion (%)
CAS: 7732	2-18-5	water		80 - 100	
EINECS :	231-791-2				
CAS: 7647	7-14-5	sodium chloride		0.5 - 1.5	
EINECS :	231-598-3				
Chemical	formula	H2O (7732-18-5), Na	Cl (7647-14-5)		
(*) General	lly chemical s	ubstances greater than 19		listed.	
	-	-			
4. First aid measur	res	a 1 a 1 ·			
After inhalation: After skin contact		Supply fresh air. Remove contaminated	clothing. Wash	off with soan	and plenty of water.
After eye contact		Rinse out with water			
After swallowing		Call for a doctor if feel	ing unwell.		
5 Fina fishting	OCUMOS				
5. Fire-fighting me	asures		T ' 1 / 1	c :4	

Suitable extinguish agents: CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

MSDS file name: MSDS_WDB02_01EU Creation Date 2012/04/13 Wash Buffer WDB-02

Protective equipment:	Do not inhale explosion gases or combustion gases.
Special risks:	Non-combustible

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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: Storage:	No special measures required.
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 trough 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: Danger of explosion: Flammability limit - lower (%)	Product is not self-igniting. Product does not present an explosion hazard. 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: (n-octanol/water)	рН. 7.5

10. Stability and reactivity	
Thermal decomposition / conditions to be avoi	ded: No decomposition if used according to specifications.
Dangerous reaction	None.
Dangerous decomposition products:	CO,CO2 Nitrogen oxides (NOx).
11. Toxicological information	
Acute toxicity:	No toxicity
Primary irritant effect:	Acute Oral LD50 Rat: > 2000 mg/kg
on the skin: on the eye:	No irritation No irritation

Sensitization:	
Additional toxicological information:	

No irritation No sensitizing effects known 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 IMOG:

IMOG Class:

Air transport ICAO-TI and IATA-DGR

ICAO/IATA Class:

Transport/Additional information:

Not dangerous according to the above specifications.

15. Regulatory information

Lavelling 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:

Not regulated.

Risk phrases:

Safety phrases:

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 varid contractual relationship.

MSDS file name: MSDS_CDB02_01EU



SAFETY DATA SHEET

Elution Buffer CDB-02

1 Identification of	f Product/mixture and the	omnanv/undertakin	α		
Use :	Nucleic acid Isolation Kit	t/mixture and the company/undertaking			
Product name	Elution Buffer CDB-02				
Product usage	QuickGene DNA whole blood	ene DNA whole blood kit: Elution Buffer			
Manufacturer / Sup					
) INDUSTRIES LTD.				
Bio-Medic	cal Department				
	Techno Center 3F 14-5 Shimol	cida-Cho, Neyagawa, Osaka 5	572-0823, Japan		
	e Number +81-72-820-3079		+81-72-820-3095		
Information depart					
_	cal Department				
Telephone	-	Email: bio@ad.kur	abo.co.jp		
Emergency informa					
		9:00AM - 6:00PM			
Reference file name	MSDS_CDB02_01EU				
2. Hazards identif	ication				
Information pertain	ing to particular dangers for hu	man and environment			
No hazard	ous product as specified in Directiv	ve 67/548/EEC and 1999/45/I	EC.		
Classification system	n:				
The classification	is according to the latest editions	s of the EU-lists, and extende	ed by company and literature data.GHS-classification		
Health ha	zards Acute toxicity (Or	ral)	Not classified		
	Skin corrosion/irri	tation	Not classified		
	Serious eye dama	ge/eye irritation	Not classified		
2 Composition/in	formation on ingradiants				
5. Composition/in Chemical character	formation on ingredients				
Substance or Mixtu		1100			
	e of substances listed below with				
-	e of substances listed below with	nonnazaruous audiuons.			
Components:	Components	Concor	ntration (%)		
CAS : 773	_	80-1			
EINECS:		00-1			
Chemical					
	· · · · · ·	on 10/ of the total are listed			
(*) Genera	lly chemical substances greater that	an 1% of the total are listed.			
4. First aid measu	res				
After inhalation:	Supply fresh air a	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 run	ning water. Get medical attention if irritation develops		
After swallowing	and persists. Call for a doctor in	and persists. 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.

MSDS file name: MSDS_CDB02_01EU Creation D		ate 2012/04/13	Elution Buffer CDB-02	2/3
Protectiv equipment: Do not inhal		le explosion gases or comb	oustion gases.	
6. Accidental release measures				
Person-related safety precautions: Ensure ade		quate ventilation		
	Wear adequ Protection)	ate personal protective equ	ipment, see Section 8 (Exposure Controls/Persona	ıl
Mesures for environmental protection: Do not allow		v to enter sewers/ surface o	r ground water.	
Measures for cleaning/collecting:	Absorb with	liquid-binding material (s	and, diatomite, acid binders, universal binders, sav	vdust).
7. Handling and storage				
Handling				
Information for safe handling:		Keep receptacles tightly sealed. Avoid contact with skin, eyes and clothing.		
		Wash hands after handlin	ıg.	
Information about fire - and explosion protection: Storage:		No special measures requ	ired.	
Requirements to be met by storerooms and receptacles:		No special requirement		
Further information about storage conditions:		Keep receptacle tightly se	ealed.	
8. Exposure controls/personal protection				
Additional information about design of techni	cal facilities:			

Personal protective equipment:		
r ersonar 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 trough 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: Danger of explosion:	Product is not self-igniting. 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: (n-octanol/water)	рН9.

10. Stability and reactivity	
Thermal decomposition / conditions to be avoided:	No decomposition if used according to specifications.
Dangerous reaction	None.
Dangerous decomposition products:	CO,CO2 Nitrogen oxides (NOx).

11. Toxicological information

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

IMOG 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:

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.