

Safety Data Sheet

according to Regulation (EC) No. 1907/2006

LuciPac W

Print date: 23.02.2012

Product code: 1002666

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

LuciPac Pen/LuciPac W

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

The product is intended for research, analysis and scientific education.

Uses advised against

none/none

Details of the supplier of the safety data sheet

Company name:	HyServe GmbH & Co. KG	
Street:	Hechenrainer Straße 24	
Place:	D-82449 Uffing	
Telephone:	0049-8846-1344	Telefax: 0049-8846-1342
e-mail:	info@hyserve.com	
Contact person:	Dr. Stephan Speidel	
Internet:	www.hyserve.com	
Responsible Department:	Dr. Timo Gans-Eichler Chemieberatung Raesfeldstr. 22 48149 Münster	e-mail: tge-consult@t-online.de Tel.: +49 (0)251/924520-60 www.tge-consult.de

Emergency telephone: 0049-8846-1344 Mo-Fr (9:00-17:00)**SECTION 2: Hazards identification****Classification of the substance or mixture**

This mixture is not classified as dangerous according to Directive 1999/45/EC.

GHS classification

This mixture is not classified as dangerous according to Regulation (EC) No. 1272/2008.

Label elements**SECTION 3: Composition/information on ingredients****Mixtures****Chemical characterization**

Reagent mixture (Kit) , liquid and lyophilised powder.

product 1: Luminescent reagent: Lyophilised powder

product 2: Releasing reagent: liquid

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Hazardous components

EC No.	Chemical name	Quantity
CAS No.	Classification	
Index No.	GHS classification	
REACH No.		
224-632-3	2-(4-Morpholino)ethanesulfonic acid (P1: product 1)	< 0,5 %
145224-94-8	Xn, Xi R22-36/37/38	
	Acute Tox. 4, Eye Irrit. 2, STOT SE 3, Skin Irrit. 2; H302 H319 H335 H315	
248-531-9	1,4-dimercaptobutane-2,3-diol (P1: product 1)	< 0,1 %
27565-41-9	Xn, Xi R22-38-41	
	Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1; H302 H315 H318	
205-358-3	Disodium edetate dihydrate (P1-2: product 1-2)	< 0,1 %
6381-92-6	Xi R36/37/38	
	Eye Irrit. 2, STOT SE 3, Skin Irrit. 2; H319 H335 H315	
269-919-4	Alkyldimethylbenzylammoniumchloride (P2: product 2)	< 0,1 %
68391-01-5	C, Xn, N R21/22-34-50	
	Acute Tox. 4, Acute Tox. 4, Skin Corr. 1A, Aquatic Acute 1; H302 H312 H314 H400	
230-785-7	Potassium pyrophosphate (P1: product 1)	< 0,1 %
7320-34-5	Xi R36	
	Eye Irrit. 2; H319	

Full text of R- and H-phrases: see section 16.

Further Information

Full text of R- and H-phrases: see section 16.

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

In case of accident or if you feel unwell, seek medical advice immediately (show safety data sheet if possible).

After inhalation

No special measures are necessary.

After contact with skin

After contact with skin, wash immediately with: Water and soap. In case of skin irritation, seek medical treatment.

After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water. In case of troubles or persistent symptoms, consult an ophthalmologist.

After ingestion

Rinse mouth thoroughly with water. Let water be swallowed in little sips (dilution effect). In all cases of doubt, or when symptoms persist, seek medical advice.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures**Extinguishing media**

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Suitable extinguishing media

The product itself is not combustible. Extinguishing materials should be selected according to the surrounding area.

Extinguishing media which must not be used for safety reasons

none/none

Special hazards arising from the substance or mixture

Can be released in case of fire: Carbon monoxide. Carbon dioxide (CO₂). Nitrogen oxides (NO_x).

Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Wear a self-contained breathing apparatus and chemical resistant suit.

Additional information

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

SECTION 6: Accidental release measures**Personal precautions, protective equipment and emergency procedures**

Wear personal protection equipment. (Refer to chapter 8.)

Environmental precautions

Dumping into the environment must be prevented.

Methods and material for containment and cleaning up

liquid:

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).

solid:

Collect mechanically.

Treat the assimilated material according to the section on waste disposal.

Clear contaminated area thoroughly.

Reference to other sections

See protective measures under point 7 and 8.

SECTION 7: Handling and storage**Precautions for safe handling****Advice on safe handling**

Wear suitable protective clothing. (Refer to chapter 8.)

Advice on protection against fire and explosion

No special fire protection measures are necessary.

Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Keep container tightly closed and in a well-ventilated place.

Advice on storage compatibility

Do not store together with: Explosives. Oxidizing solids. Oxidizing liquids. Radioactive substances. Infectious substances.

Further information on storage conditions

Keep/Store only in original container. Protect against: UV-radiation/sunlight. heat. cooling. moisture.

Recommended storage temperature: 2-8°C

SECTION 8: Exposure controls/personal protection**Control parameters****Additional advice on limit values**

To date, no national limit values exist.

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Exposure controls**Occupational exposure controls**

refer to chapter 7. No further action is necessary.

Protective and hygiene measures

Always close containers tightly after the removal of product.

Respiratory protection

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

Hand protection

Hand protection: Single-use gloves.

Eye protection

Suitable eye protection: Tightly sealed safety glasses. DIN EN 166

Skin protection

Suitable protection of the body: Lab apron.

Environmental exposure controls

This material and its container must be disposed of in a safe way.

SECTION 9: Physical and chemical properties**Information on basic physical and chemical properties**

Physical state:	P1: solid; P2: liquid
Colour:	P1: off-white; P2: colourless
Odour:	odourless

pH-Value: (P1) = N/A; (P2) = 8,3

Changes in the physical state

Melting point:	not determined
Boiling point:	not determined
Flash point:	not determined

Explosive properties

none/none

Lower explosion limits:	not determined
Upper explosion limits:	not determined
Ignition temperature:	not determined

Oxidizing properties

none/none

Vapour pressure:	not determined
Density:	not determined
Water solubility:	easily soluble.
Viscosity / dynamic:	not determined

Test method**SECTION 10: Stability and reactivity****Chemical stability**

Stable under normal storage and handling conditions.

Possibility of hazardous reactions

No information available.

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Conditions to avoid

Keep away from heat. Decomposition possible after prolonged exposure to light.

Incompatible materials

Materials to avoid: Oxidizing agents, strong.

Hazardous decomposition productsCan be released in case of fire: Carbon monoxide. Carbon dioxide (CO₂). Nitrogen oxides (NO_x).**SECTION 11: Toxicological information****Information on toxicological effects****Acute toxicity**

CAS No.	Chemical name					
	Exposure routes	Method	Dose	Species	h	Source
145224-94-8	2-(4-Morpholino)ethanesulfonic acid (P1: product 1)					
	Acute oral toxicity	LD50	316 mg/kg	Bird		
27565-41-9	1,4-dimercaptobutane-2,3-diol (P1: product 1)					
	Acute oral toxicity	LD50	400 mg/kg	Rat.		Merck
6381-92-6	Disodium edetate dihydrate (P1-2: product 1-2)					
	Acute oral toxicity	LD50	2050 mg/kg	Mouse.		JJP (1956) p126
68391-01-5	Alkyldimethylbenzylammoniumchloride (P2: product 2)					
	Acute oral toxicity	LD50	240 mg/kg	Rat.		GESTIS
	Acute dermal toxicity	LD50	1420 mg/kg	Rat.		CHEMID
7320-34-5	Potassium pyrophosphate (P1: product 1)					
	Acute oral toxicity	LD50	> 2000 mg/kg	Mouse.		
	Acute dermal toxicity	LD50	4640 mg/kg	Rabbit.		ChemID

Specific effects in experiment on an animal

There are no data available on the preparation/mixture itself.

Irritation and corrosivity

Irritant effect on the eye: Not an irritant.

Irritant effect on the skin: Not an irritant.

Sensitizing effects

Alkyldimethylbenzylammoniumchloride (P2: product 2):

There is Evidence for: Sensitization

Disodium edetate dihydrate (P1-2: product 1-2):

no danger of sensitization.

Severe effects after repeated or prolonged exposure

Alkyldimethylbenzylammoniumchloride (P2: product 2):

Developmental toxicity/teratogenicity/Reproductive toxicity:

NOAEL (Rat.oral.) = 50 mg/ kg [J Am Coll Toxicol 8 (4): 589-625 (1989)]

NOAEL (Rat.dermal.) = 10 mg/kg (90d) [BIBRA Information Department]

Disodium edetate dihydrate (P1-2: product 1-2):

Subchronic oral toxicity (90d): NOAEL = 500 mg/kg (Rat.) [ECHA]

Potassium pyrophosphate (P1: product 1):

Chronic oral toxicity (Rat.): NOAEL = 50mg/kg (365d) [Hazardous Substances Data Bank]

Carcinogenic/mutagenic/toxic effects for reproduction

Alkyldimethylbenzylammoniumchloride (P2: product 2):

There is Evidence for: In-vitro mutagenicity

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Disodium edetate dihydrate (P2: product 2):
No experimental indications of mutagenicity in-vitro exist.

SECTION 12: Ecological information**Toxicity**

CAS No.	Chemical name	Method	Dose	Species	h	Source
27565-41-9	1,4-dimercaptobutane-2,3-diol (P1: product 1)					
	Acute crustacea toxicity	EC50	27 mg/l		48	Gestis
6381-92-6	Disodium edetate dihydrate (P1-2: product 1-2)					
	Acute fish toxicity	LC50	41-532 mg/l	Lepomis macrochirus	96	ECHA (64-02-8)
	Acute crustacea toxicity	EC50	113 mg/l	Daphnia magna	48	Gestis (64-02-8)
68391-01-5	Alkyldimethylbenzylammoniumchloride (P2: product 2)					
	Acute fish toxicity	LC50	0,31 - 1,25		96	GESTIS
	Acute algae toxicity	ErC50	0,05 - 0,54		72	GESTIS
	Acute crustacea toxicity	EC50	0,01 - 0,16		48	GESTIS
7320-34-5	Potassium pyrophosphate (P1: product 1)					
	Acute crustacea toxicity	EC50	> 100 mg/l	Daphnia magna	48	ECHA dossier

Persistence and degradability

Disodium edetate dihydrate (P1-2: product 1-2):
55% (20 d) Guideline: PN-88/C-05561; Parameter: COD

Bioaccumulative potential

No data available

Partition coefficient n-octanol/water

CAS No.	Chemical name	Log Pow
6381-92-6	Disodium edetate dihydrate (P1-2: product 1-2)	3,86

Mobility in soil

No data available

Results of PBT and vPvB assessment

No data available

SECTION 13: Disposal considerations**Waste treatment methods****Advice on disposal**

Waste disposal according to official state regulations. Consult the local waste disposal expert about waste disposal.

Waste disposal number of waste from residues/unused products

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals
Classified as hazardous waste.

Waste disposal number of used product

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals
Classified as hazardous waste.

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Waste disposal number of contaminated packaging

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

Contaminated packaging

Cleaned containers may be recycled.

SECTION 14: Transport information**Land transport (ADR/RID)****UN number:** Not restricted**UN proper shipping name:** Not restricted**Inland waterways transport****UN number:** Not restricted**UN proper shipping name:** Not restricted**Marine transport****UN number:** Not restricted**UN proper shipping name:** Not restricted**Other applicable information (marine transport)**

Not restricted

Air transport**Other applicable information (air transport)**

Not restricted

SECTION 15: Regulatory information**Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulatory information**

Water contaminating class (D): 1 - slightly water contaminating

SECTION 16: Other information**Changes**

16.01.2012 Rev.1.0

Full text of R-phrases referred to under sections 2 and 3

21/22 Harmful in contact with skin and if swallowed.
22 Harmful if swallowed.
34 Causes burns.
36 Irritating to eyes.
36/37/38 Irritating to eyes, respiratory system and skin.
38 Irritating to skin.
41 Risk of serious damage to eyes.
50 Very toxic to aquatic organisms.

Full text of H-Statements referred to under sections 2 and 3

H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H318 Causes serious eye damage.

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- H319 Causes serious eye irritation.
- H335 May cause respiratory irritation.
- H400 Very toxic to aquatic life.

Further Information

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

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