

Safety Data Sheet

according to Regulation (EC) No 1907/2006

LuciPac A3 Water/Surface

Revision date: 23.02.2023

Product code:

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145224-94-8	2-(4-Morpholino)ethanesulfonic acid (P1: Product 1)	< 0,5 %
	224-632-3	
	Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3; H302 H315 H319 H335	
27565-41-9	1,4-dimercaptobutane-2,3-diol (P1: Product 1)	< 0,1 %
	248-531-9	
	Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1; H302 H315 H318	
6381-92-6	Disodium edetate dihydrate (P1-2: Product 1-2)	< 0,1 %
	205-358-3	
	Skin Irrit. 2, Eye Irrit. 2, STOT SE 3; H315 H319 H335	
68391-01-5	Alkyldimethylbenzylammoniumchloride (P2: Product 2)	< 0,1 %
	269-919-4	
	Acute Tox. 4, Acute Tox. 4, Skin Corr. 1A, Aquatic Acute 1; H312 H302 H314 H400	
7320-34-5	Potassium pyrophosphate (P1: Product 1)	< 0,1 %
	230-785-7	
	Eye Irrit. 2; H319	

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
145224-94-8	224-632-3	2-(4-Morpholino)ethanesulfonic acid (P1: Product 1)	< 0,5 %
		oral: LD50 = 316 mg/kg	
27565-41-9	248-531-9	1,4-dimercaptobutane-2,3-diol (P1: Product 1)	< 0,1 %
		oral: LD50 = 400 mg/kg	
6381-92-6	205-358-3	Disodium edetate dihydrate (P1-2: Product 1-2)	< 0,1 %
		oral: LD50 = 2050 mg/kg	
68391-01-5	269-919-4	Alkyldimethylbenzylammoniumchloride (P2: Product 2)	< 0,1 %
		dermal: LD50 = 1420 mg/kg; oral: LD50 = 240 mg/kg	
7320-34-5	230-785-7	Potassium pyrophosphate (P1: Product 1)	< 0,1 %
		dermal: LD50 = 4640 mg/kg; oral: LD50 = > 2000 mg/kg	

Further Information

Product does not contain listed SVHC substances > 0,1 % according to Regulation (EC) No. 1907/2006 Article 59 (REACH)

SECTION 4: First aid measures
4.1. Description of first aid measures
General information

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

After inhalation

In case of accident by inhalation: remove casualty to fresh air and keep at rest. In case of respiratory tract irritation, consult a physician.

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.

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After ingestion

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

4.2. Most important symptoms and effects, both acute and delayed

No information available.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**

The product itself does not burn. Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

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

5.3. Advice for firefighters

In case of fire and/or explosion do not breathe fumes. In case of fire: Wear self-contained breathing apparatus.

Additional information

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

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures****General advice**

Safe handling: see section 7

For non-emergency personnel

Wear personal protection equipment (refer to section 8).

For emergency responders

No special measures are necessary.

6.2. Environmental precautions

Discharge into the environment must be avoided.

6.3. Methods and material for containment and cleaning up**For containment**

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

Treat the recovered material as prescribed in the section on waste disposal.

For cleaning up

Clean contaminated objects and areas thoroughly observing environmental regulations.

Other information

liquid:

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

solid:

Take up mechanically.

Treat the recovered material as prescribed in the section on waste disposal.

Clear contaminated areas thoroughly.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

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SECTION 7: Handling and storage**7.1. Precautions for safe handling****Advice on safe handling**

Wear suitable protective clothing. (See section 8.)

Advice on protection against fire and explosion

Usual measures for fire prevention.

Advice on general occupational hygiene

Always close containers tightly after the removal of product. Do not eat, drink, smoke or sneeze at the workplace. Wash hands before breaks and after work.

Further information on handling

General protection and hygiene measures: See section 8.

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

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

Hints on joint storage

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. Cold. Humidity

Recommended storage temperature: 2-8°C

7.3. Specific end use(s)

See section 1.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Additional advice on limit values**

To date, no national critical limit values exist.

8.2. Exposure controls**Appropriate engineering controls**

refer to chapter 7. No further action is necessary.

Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500.

Individual protection measures, such as personal protective equipment**Eye/face protection**

Suitable eye protection: Tightly sealed safety glasses. EN 166

Hand protection

In case of prolonged or frequently repeated skin contact:

Wear suitable gloves.

Suitable material:

FKM (fluororubber). - Thickness of glove material: 0,4 mm

Breakthrough time \geq 8 h

Butyl rubber. - Thickness of glove material: 0,5 mm

Breakthrough time \geq 8 h

CR (polychloroprenes, Chloroprene rubber). - Thickness of glove material: 0,5 mm

Breakthrough time \geq 8 h

NBR (Nitrile rubber). - Thickness of glove material: 0,35 mm

Breakthrough time \geq 8 h

PVC (Polyvinyl chloride). - Thickness of glove material: 0,5 mm

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Breakthrough time \geq 8 h

The selected protective gloves have to satisfy the specifications of EU Directive EC/2016/425 and the standard EN 374 derived from it.

Before using check leak tightness / impermeability. In the case of wanting to use the gloves again, clean them before taking off and air them well.

Skin protection

Suitable protective clothing: Lab apron.

Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500 (D).

Respiratory protection

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

Thermal hazards

No special precautionary measures are necessary.

Environmental exposure controls

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

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	P1: solid; P2: liquid
Colour:	P1: whitish; P2: colourless
Odour:	odourless
Odour threshold:	not determined
Changes in the physical state	
Melting point/freezing point:	not determined
Boiling point or initial boiling point and boiling range:	not determined
Sublimation point:	not determined
Softening point:	not determined
Pour point:	not determined
Flash point:	not determined
Flammability	
Solid/liquid:	not determined not relevant
Explosive properties	
none	
Lower explosion limits:	not determined
Upper explosion limits:	not determined
Auto-ignition temperature:	not determined
Self-ignition temperature	
Solid:	not relevant
Gas:	not relevant
Decomposition temperature:	not determined
pH-Value:	(P1) = N/A; (P2) = 8,3
Viscosity / dynamic:	not determined
Viscosity / kinematic:	not determined
Flow time:	not determined
Water solubility:	easily soluble.

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Solubility in other solvents

not determined

Dissolution rate:

not relevant

Partition coefficient n-octanol/water:

SECTION 12: Ecological information

Dispersion stability:

not relevant

Vapour pressure:

not determined

Density:

not determined

Bulk density:

not determined

Relative vapour density:

not determined

Particle characteristics:

not relevant

9.2. Other information**Information with regard to physical hazard classes**

Sustaining combustion:

Not sustaining combustion

Oxidizing properties

none

Other safety characteristics

Solvent separation test:

not determined

Solvent content:

not determined

Solid content:

not determined

Evaporation rate:

not determined

Further Information

No information available.

SECTION 10: Stability and reactivity**10.1. Reactivity**

No information available.

10.2. Chemical stability

Stable under normal storage and handling conditions.

10.3. Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

Refer to chapter 10.5.

10.4. Conditions to avoid

Keep away from heat. May cause decomposition by long-term light influence.

10.5. Incompatible materials

Materials to avoid: Oxidizing agents, strong.

10.6. Hazardous decomposition productsCan be released in case of fire: Carbon monoxide Carbon dioxide (CO₂). Nitrogen oxides (NO_x).**SECTION 11: Toxicological information****11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008****Toxicokinetics, metabolism and distribution**

No data available.

Acute toxicity

Based on available data, the classification criteria are not met.

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

Irritation and corrosivity

Based on available data, the classification criteria are not met.

Irritant effect on the eye: Not an irritant.

Irritant effect on the skin: Not an irritant.

Sensitising effects

Based on available data, the classification criteria are not met.

Alkyldimethylbenzylammoniumchloride (P2: Product 2):

There is Evidence for: Respiratory or skin sensitisation

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

no danger of sensitization.

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

Alkyldimethylbenzylammoniumchloride (P2: Product 2):

There is Evidence for: In-vitro mutagenicity

Disodium edetate dihydrate (P2: Product 2):

No experimental indications of mutagenicity in-vitro exist.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

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]

Aspiration hazard

Based on available data, the classification criteria are not met.

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Specific effects in experiment on an animal

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

11.2. Information on other hazards

Endocrine disrupting properties

This product does not contain a substance (> 0,1 %) that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

Other information

No data available.

SECTION 12: Ecological information

12.1. Toxicity

The product has not been tested.

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

12.2. Persistence and degradability

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

55% (20 d) Guideline: PN-88/C-05561; Parameter: COD

12.3. 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

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

The aforementioned statement applies to substances contained in the product with a minimum content of 0.1%.

12.6. Endocrine disrupting properties

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This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

The aforementioned statement applies to substances contained in the product with a minimum content of 0.1%.

12.7. Other adverse effects

No data available.

Further information

Do not allow to enter into surface water or drains.

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Disposal recommendations**

Observe in addition any national regulations! Consult the local waste disposal expert about waste disposal.

Non-contaminated packages may be recycled.

According to (EWC) European Waste Catalogue, allocation of waste identity numbers/waste descriptions must be carried out in a specific way for every industry and process.

Control report for waste code/ waste marking according to (EWC) European Waste Catalogue:

List of Wastes Code - residues/unused products

160509 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08

List of Wastes Code - used product

160509 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08

List of Wastes Code - 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 hazardous substances; hazardous waste

Contaminated packaging

Non-contaminated packages may be recycled.

SECTION 14: Transport information**Land transport (ADR/RID)**

14.1. UN number or ID number:	Not restricted
14.2. UN proper shipping name:	Not restricted
14.3. Transport hazard class(es):	No dangerous good in sense of these transport regulations.
14.4. Packing group:	No dangerous good in sense of these transport regulations.

Inland waterways transport (ADN)

14.1. UN number or ID number:	Not restricted
14.2. UN proper shipping name:	Not restricted
14.3. Transport hazard class(es):	No dangerous good in sense of these transport regulations.
14.4. Packing group:	No dangerous good in sense of these transport regulations.

Marine transport (IMDG)

14.1. UN number or ID number:	Not restricted
14.2. UN proper shipping name:	Not restricted
14.3. Transport hazard class(es):	No dangerous good in sense of these transport regulations.

Other applicable information (marine transport)

Not restricted

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Air transport (ICAO-TI/IATA-DGR)**14.1. UN number or ID number:** No dangerous good in sense of these transport regulations.**14.2. UN proper shipping name:** No dangerous good in sense of these transport regulations.**14.3. Transport hazard class(es):** No dangerous good in sense of these transport regulations.**Other applicable information (air transport)**

Not restricted

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

refer to chapter 6 - 8

14.7. Maritime transport in bulk according to IMO instruments

not relevant

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

2010/75/EU (VOC): No information available.

2004/42/EC (VOC): No information available.

Information according to 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

Additional information

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (amended by Regulation (EU) No 2020/878)

This mixture is classified as not hazardous according to Regulation (EC) 1272/2008 [CLP].

REACH 1907/2006 Appendix XVII, No (mixture): not relevant

National regulatory information

Water hazard class (D): - - non-hazardous to water

15.2. Chemical safety assessment

For the following substances of this mixture a chemical safety assessment has been carried out:

SECTION 16: Other information**Changes**

16.01.2012 Rev.1.0

Rev. 2.0; Revision: 23.02.2023

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

AGW: Arbeitsplatzgrenzwert

CAS: Chemical Abstracts Service

CLP: Classification, Labelling and Packaging of substances and mixtures

DNEL: Derived No Effect Level

d: day(s)

EINECS: European INventory of Existing Commercial chemical Substances

ELINCS: European List of Notified Chemical Substances

ECHA: European Chemicals Agency

EWC: European Waste Catalogue

IARC: INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

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ICAO: International Civil Aviation Organization
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)
h: hour
LOAEL: Lowest observed adverse effect level
LOAEC: Lowest observed adverse effect concentration
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
NOAEL: No observed adverse effect level
NOAEC: No observed adverse effect concentration
NLP: No-Longer Polymers
N/A: not applicable
OECD: Organisation for Economic Co-operation and Development
PNEC: predicted no effect concentration
PBT: Persistent bioaccumulative toxic
RID: Reglement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
REACH: Registration, Evaluation, Authorisation of Chemicals
SVHC: substance of very high concern
TRGS: Technische Regeln für Gefahrstoffe
UN: United Nations
VOC: Volatile Organic Compounds

Relevant H and EUH statements (number and full text)

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.
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.)