

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### Pufferlösung pH 5,4 (20 °C) zur Bestimmung des Gesamtcyanids - DIN 38405-13:1981, DEV D13.....

Revision date: 30.08.2022

Product code: 03208

Page 1 of 10

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

##### 1.1. Product identifier

Pufferlösung pH 5,4 (20 °C) zur Bestimmung des Gesamtcyanids - DIN 38405-13:1981, DEV D13.....

##### 1.2. Relevant identified uses of the substance or mixture and uses advised against

###### Use of the substance/mixture

Laboratory chemicals

Industrial uses: Uses of substances as such or in preparations at industrial sites

Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

###### Uses advised against

Do not use for private purposes (household).

##### 1.3. Details of the supplier of the safety data sheet

Company name:	Fa. Bernd Kraft GmbH	
Street:	Stempelstraße 6	
Place:	D-47167 Duisburg	
Telephone:	0203/5194-0	Telefax: 0203/5194-290
e-mail:	info@berndkraft.de	
Contact person:	Abteilung Produktsicherheit	Telephone: 0203/5194-107/117
e-mail:	produktsicherheit@berndkraft.de	
Internet:	www.berndkraft.de	
Responsible Department:	Abteilung Produktsicherheit	

##### 1.4. Emergency telephone number:

For Hazardous Materials [or Dangerous Goods] Incidents Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 Outside USA and Canada: +1 703-741-5970 (collect calls accepted)

##### Further Information

This product is a mixture. REACH Registration Number see section 3.

#### SECTION 2: Hazards identification

##### 2.1. Classification of the substance or mixture

###### Regulation (EC) No 1272/2008

Skin Irrit. 2; H315

Eye Irrit. 2; H319

Full text of hazard statements: see SECTION 16.

##### 2.2. Label elements

###### Regulation (EC) No 1272/2008

###### Hazard components for labelling

succinic acid

sodium hydroxide

Signal word: Warning

Pictograms:



###### Hazard statements

H315

Causes skin irritation.

**Pufferlösung pH 5,4 (20 °C) zur Bestimmung des Gesamtcyanids - DIN 38405-13:1981, DEV D13.....**

Revision date: 30.08.2022

Product code: 03208

Page 2 of 10

H319 Causes serious eye irritation.

**Precautionary statements**

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.  
P302+P352 IF ON SKIN: Wash with plenty of water.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P332+P313 If skin irritation occurs: Get medical advice/attention.  
P337+P313 If eye irritation persists: Get medical advice/attention.

**2.3. Other hazards**

No data available

**SECTION 3: Composition/information on ingredients**

**3.2. Mixtures**

**Chemical characterization**

Mixtures in aqueous solution

**Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
110-15-6	succinic acid			10 - < 15 %
	203-740-4		01-2119896114-34	
	Eye Dam. 1; H318			
1310-73-2	sodium hydroxide			5 - < 10 %
	215-185-5	011-002-00-6	01-2119457892-27	
	Met. Corr. 1, Skin Corr. 1A; H290 H314			

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		
1310-73-2	215-185-5	sodium hydroxide	5 - < 10 %
	Skin Corr. 1A; H314: >= 5 - 100 Skin Corr. 1B; H314: >= 2 - < 5 Skin Irrit. 2; H315: >= 0,5 - < 2 Eye Irrit. 2; H319: >= 0,5 - < 2		

**Further Information**

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of = 0.1 % (w/w).

**SECTION 4: First aid measures**

**4.1. Description of first aid measures**

**General information**

No data available

**After inhalation**

Provide fresh air.

**After contact with skin**

Wash immediately with: Water  
Take off immediately all contaminated clothing and wash it before reuse.  
In case of skin irritation, consult a physician.

**Pufferlösung pH 5,4 (20 °C) zur Bestimmung des Gesamtcyanids - DIN 38405-13:1981, DEV  
D13.....**

Revision date: 30.08.2022

Product code: 03208

Page 3 of 10

**After contact with eyes**

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.  
Remove contact lenses, if present and easy to do. Continue rinsing.

**After ingestion**

Rinse mouth immediately and drink plenty of water.  
Call a physician immediately.

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

Irritant

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

No data available

**SECTION 5: Firefighting measures**

**5.1. Extinguishing media**

**Suitable extinguishing media**

Co-ordinate fire-fighting measures to the fire surroundings.

**Unsuitable extinguishing media**

no restriction

**5.2. Special hazards arising from the substance or mixture**

Non-combustible liquids

**5.3. Advice for firefighters**

In case of fire: Wear self-contained breathing apparatus.

**Additional information**

Use water spray jet to protect personnel and to cool endangered containers.  
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**

**For non-emergency personnel**

Provide adequate ventilation.  
Use personal protection equipment.  
Avoid contact with skin, eyes and clothes.  
Remove persons to safety.  
Emergency procedures  
Do not breathe dust/fume/gas/mist/vapours/spray.

**For emergency responders**

Precautionary statements For emergency responders : Personal protection equipment: see section 8

**6.2. Environmental precautions**

Do not allow to enter into surface water or drains.

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

**For containment**

Cover drains.  
Prevent spread over a wide area (e.g. by containment or oil barriers).  
Collect in closed and suitable containers for disposal.  
Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

**For cleaning up**

Clean contaminated articles and floor according to the environmental legislation.

**Pufferlösung pH 5,4 (20 °C) zur Bestimmung des Gesamtcyanids - DIN 38405-13:1981, DEV  
D13.....**

Revision date: 30.08.2022

Product code: 03208

Page 4 of 10

**Other information**

Provide adequate ventilation.  
Do not breathe dust/fume/gas/mist/vapours/spray.  
Wear breathing apparatus if exposed to vapours/dusts/aerosols.

**6.4. Reference to other sections**

Safe handling: see section 7  
Personal protection equipment: see section 8  
Disposal: see section 13

**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

**Advice on safe handling**

Handle and open container with care.  
Keep container tightly closed.  
Do not breathe vapour/aerosol.  
Avoid contact with skin, eyes and clothes.

**Advice on protection against fire and explosion**

Usual measures for fire prevention.

**Advice on general occupational hygiene**

Wash contaminated clothing prior to re-use.  
Do not breathe vapour/aerosol.  
Avoid contact with skin, eyes and clothes.

**Further information on handling**

Wash contaminated clothing before reuse.  
Wash hands before breaks and after work.

**7.2. Conditions for safe storage, including any incompatibilities**

**Requirements for storage rooms and vessels**

Keep container tightly closed.

**Hints on joint storage**

No data available

**Further information on storage conditions**

Store in a dry place.

**7.3. Specific end use(s)**

Laboratory chemicals

**SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

**Occupational exposure limits**

CAS No	Substance	ppm	mg/m <sup>3</sup>	fib/cm <sup>3</sup>	Category	Origin
1310-73-2	Sodium hydroxide	-	2		STEL (15 min)	

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Pufferlösung pH 5,4 (20 °C) zur Bestimmung des Gesamtcyanids - DIN 38405-13:1981, DEV D13.....**

Revision date: 30.08.2022

Product code: 03208

Page 5 of 10

**DNEL/DMEL values**

CAS No	Substance	DNEL type	Exposure route	Effect	Value
110-15-6	succinic acid	Worker DNEL, long-term	inhalation	systemic	10 mg/m <sup>3</sup>
		Worker DNEL, acute	inhalation	systemic	10 mg/m <sup>3</sup>
		Worker DNEL, long-term	inhalation	local	10 mg/m <sup>3</sup>
		Worker DNEL, acute	inhalation	local	10 mg/m <sup>3</sup>
		Worker DNEL, long-term	dermal	systemic	71 mg/kg bw/day
		Worker DNEL, acute	dermal	systemic	67 mg/kg bw/day
		Consumer DNEL, long-term	inhalation	systemic	10 mg/m <sup>3</sup>
		Consumer DNEL, acute	inhalation	systemic	10 mg/m <sup>3</sup>
		Consumer DNEL, long-term	inhalation	local	10 mg/m <sup>3</sup>
		Consumer DNEL, acute	inhalation	local	10 mg/m <sup>3</sup>
		Consumer DNEL, long-term	dermal	systemic	43 mg/kg bw/day
		Consumer DNEL, acute	dermal	systemic	67 mg/kg bw/day
		Consumer DNEL, long-term	oral	systemic	43 mg/kg bw/day
		Consumer DNEL, acute	oral	systemic	67 mg/kg bw/day
1310-73-2	sodium hydroxide	Worker DNEL, long-term	inhalation	local	1 mg/m <sup>3</sup>
		Consumer DNEL, long-term	inhalation	local	1 mg/m <sup>3</sup>

**PNEC values**

CAS No	Substance	Environmental compartment	Value
110-15-6	succinic acid	Freshwater	0,1 mg/l
		Freshwater (intermittent releases)	1 mg/l
		Marine water	0,01 mg/l
		Freshwater sediment	0,079 mg/kg
		Marine sediment	0,008 mg/kg
		Micro-organisms in sewage treatment plants (STP)	3 mg/l
		Soil	0,018 mg/kg

**8.2. Exposure controls**

**Appropriate engineering controls**

Technical measures and the application of suitable work processes have priority over personal protection equipment.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection**

goggles

**Hand protection**

Protective gloves are recommended Company KCL GmbH, D-36124 Eichenzell, email: [vertrieb@kcl.de](mailto:vertrieb@kcl.de) With specification (test according to EN374):

**Pufferlösung pH 5,4 (20 °C) zur Bestimmung des Gesamtcyanids - DIN 38405-13:1981, DEV D13.....**

Revision date: 30.08.2022

Product code: 03208

Page 6 of 10

By long-term hand contact  
Recommended glove articles: KCL 741 Dermatril® L  
Recommended material: NBR (Nitrile rubber) 0,11mm  
Wearing time with permanent contact: >480min

By short-term hand contact  
Recommended glove articles: KCL 741 Dermatril® L  
Recommended material: NBR (Nitrile rubber) 0,11mm  
Wearing time with occasional contact (splashes): >480min

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

**Skin protection**

Wear suitable protective clothing.  
Wash hands before breaks and after work.

**Respiratory protection**

Respiratory protection necessary at: aerosol or mist formation

**Environmental exposure controls**

Do not allow to enter into surface water or drains.

**SECTION 9: Physical and chemical properties**

**9.1. Information on basic physical and chemical properties**

Physical state:	Liquid	
Colour:	beige	
Odour:	odourless	
Melting point/freezing point:		No data available
Boiling point or initial boiling point and boiling range:		No data available
Flammability		
Solid/liquid:		No data available
Gas:		No data available
Lower explosion limits:		No data available
Upper explosion limits:		No data available
Flash point:		No data available
Auto-ignition temperature:		No data available
Decomposition temperature:		No data available
pH-Value (at 20 °C):		5,4
Viscosity / kinematic:		No data available
Water solubility:		No data available
Solubility in other solvents		
No data available		
Partition coefficient n-octanol/water:		No data available
Vapour pressure:		No data available
Vapour pressure:		No data available
Density:		1,0879 g/cm <sup>3</sup>
Bulk density:		No data available
Relative vapour density:		No data available

**9.2. Other information**

**Pufferlösung pH 5,4 (20 °C) zur Bestimmung des Gesamtcyanids - DIN 38405-13:1981, DEV  
D13.....**

Revision date: 30.08.2022

Product code: 03208

Page 7 of 10

**Information with regard to physical hazard classes**

Explosive properties

No data available

Sustaining combustion:

No data available

Self-ignition temperature

Solid:

No data available

Gas:

No data available

Oxidizing properties

No data available

**Other safety characteristics**

Evaporation rate:

No data available

Solvent separation test:

No data available

Solvent content:

No data available

Solid content:

No data available

Sublimation point:

No data available

Softening point:

No data available

Pour point:

No data available

No data available:

Viscosity / dynamic:

No data available

Flow time:

No data available

**Further Information**

No data available

**SECTION 10: Stability and reactivity**

**10.1. Reactivity**

No data available

**10.2. Chemical stability**

No data available

**10.3. Possibility of hazardous reactions**

No data available

**10.4. Conditions to avoid**

No data available

**10.5. Incompatible materials**

No data available

**10.6. Hazardous decomposition products**

No data available

**Further information**

No data available

**SECTION 11: Toxicological information**

**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**

**Toxicokinetics, metabolism and distribution**

There are no data available on the mixture itself.

**Acute toxicity**

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

**Irritation and corrosivity**

**Pufferlösung pH 5,4 (20 °C) zur Bestimmung des Gesamtcyanids - DIN 38405-13:1981, DEV D13.....**

Revision date: 30.08.2022

Product code: 03208

Page 8 of 10

Causes skin irritation.  
Causes serious eye irritation.

**Sensitising effects**

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

**Carcinogenic/mutagenic/toxic effects for reproduction**

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

**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.

**Aspiration hazard**

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

**Specific effects in experiment on an animal**

There are no data available on the mixture itself.

**Additional information on tests**

There are no data available on the mixture itself.

**Practical experience**

There are no data available on the mixture itself.

**11.2. Information on other hazards**

**Other information**

There are no data available on the mixture itself.

**Further information**

There are no data available on the mixture itself.

**SECTION 12: Ecological information**

**12.1. Toxicity**

There are no data available on the mixture itself.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
110-15-6	succinic acid					
	Acute fish toxicity	LC50 > 100 mg/l	96 h	Danio rerio	Study report (2010)	OECD Guideline 203
	Acute algae toxicity	ErC50 > 100 mg/l	72 h	Pseudokirchneriella subcapitata	Study report (2010)	OECD Guideline 201
	Acute bacteria toxicity	(EC50 > 300 mg/l)	3 h	activated sludge of a predominantly domestic sewage	Study report (2010)	OECD Guideline 209
1310-73-2	sodium hydroxide					
	Acute crustacea toxicity	EC50 40,4 mg/l	48 h	Ceriodaphnia sp.	Ecotoxicology and Environmental Safety,4	other: acute 48-h immobilization test ac

**12.2. Persistence and degradability**

There are no data available on the mixture itself.

**12.3. Bioaccumulative potential**

There are no data available on the mixture itself.



**Pufferlösung pH 5,4 (20 °C) zur Bestimmung des Gesamtcyanids - DIN 38405-13:1981, DEV D13.....**

Revision date: 30.08.2022

Product code: 03208

Page 9 of 10

**Partition coefficient n-octanol/water**

CAS No	Chemical name	Log Pow
110-15-6	succinic acid	-0,754

**12.4. Mobility in soil**

There are no data available on the mixture itself.

**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.

**12.6. Endocrine disrupting properties**

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

**12.7. Other adverse effects**

There are no data available on the mixture itself.

**Further information**

Do not allow to enter into surface water or drains.

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

**Disposal recommendations**

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

Do not allow to enter into surface water or drains.

**Contaminated packaging**

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

**SECTION 14: Transport information**

**Land transport (ADR/RID)**

<b>14.1. UN number or ID number:</b>	No dangerous good in sense of this transport regulation.
<b>14.2. UN proper shipping name:</b>	No dangerous good in sense of this transport regulation.
<b>14.3. Transport hazard class(es):</b>	No dangerous good in sense of this transport regulation.
<b>14.4. Packing group:</b>	No dangerous good in sense of this transport regulation.

**Inland waterways transport (ADN)**

<b>14.1. UN number or ID number:</b>	No dangerous good in sense of this transport regulation.
<b>14.2. UN proper shipping name:</b>	No dangerous good in sense of this transport regulation.
<b>14.3. Transport hazard class(es):</b>	No dangerous good in sense of this transport regulation.
<b>14.4. Packing group:</b>	No dangerous good in sense of this transport regulation.

**Marine transport (IMDG)**

<b>14.1. UN number or ID number:</b>	No dangerous good in sense of this transport regulation.
<b>14.2. UN proper shipping name:</b>	No dangerous good in sense of this transport regulation.
<b>14.3. Transport hazard class(es):</b>	No dangerous good in sense of this transport regulation.
<b>14.4. Packing group:</b>	No dangerous good in sense of this transport regulation.

**Air transport (ICAO-TI/IATA-DGR)**

<b>14.1. UN number or ID number:</b>	No dangerous good in sense of this transport regulation.
<b>14.2. UN proper shipping name:</b>	No dangerous good in sense of this transport regulation.
<b>14.3. Transport hazard class(es):</b>	No dangerous good in sense of this transport regulation.
<b>14.4. Packing group:</b>	No dangerous good in sense of this transport regulation.

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: No

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### Pufferlösung pH 5,4 (20 °C) zur Bestimmung des Gesamtcyanids - DIN 38405-13:1981, DEV D13.....

Revision date: 30.08.2022

Product code: 03208

Page 10 of 10

#### **14.6. Special precautions for user**

No dangerous good in sense of this transport regulation.

#### **14.7. Maritime transport in bulk according to IMO instruments**

No dangerous good in sense of this transport regulation.

### **SECTION 15: Regulatory information**

#### **15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

##### **EU regulatory information**

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 75

##### **National regulatory information**

Water hazard class (D): 1 - slightly hazardous to water

##### **Additional information**

No data available

### **SECTION 16: Other information**

#### **Changes**

This data sheet contains changes from the previous version in section(s): 2,4,9,12,15.

#### **Relevant H and EUH statements (number and full text)**

H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.

#### **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 information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights.

The receiver of our product is singularly responsible for adhering to existing laws and regulations.

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