

FLYLEAF

PH tester PH 5

Article number: EHX7.1

From:

Dostmann Electronic GmbH
Waldenbergweg 3B
97877 Wertheim
Germany

Date of compilation: 2020-06-02

1 Composition/information on ingredients

Bill of materials

Name of substance	Identifier	Number of pieces	Classifica- tion acc. to GHS	Pictograms	Page
Buffer solution pH 4,01 ±0,01 (20°C)	Article number KAY0	1			3 – 13
Buffer solution pH 7,00 ±0,01 (20°C)	Article number KAY1	1			14 - 24
Potassium chloride solution		1			25 - 34

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Article number: EHX7.1

2 Hazards identification

2.1 Label elements

Signal word Not required

Labelling according to Regulation (EC) No 1272/2008 (CLP)

Precautionary statements

3 Transport information

3.1 UN number Not subject to transport regulations

3.2 UN proper shipping name Not relevant3.4 Packing group Not relevant

3.5 Environmental hazardsNone (non-environmentally hazardous acc. to the

dangerous goods regulations)

3.6 Special precautions for user

There is no additional information.

3.7 Information for each of the UN Model Regulations

The cargo is not intended to be carried in bulk.

- 3.8 Information for each of the UN Model Regulations
 - Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)

Not subject to ADR, RID and ADN.

• International Maritime Dangerous Goods Code (IMDG)

Not subject to IMDG.

• International Civil Aviation Organization (ICAO-IATA/DGR)

Not subject to ICAO-IATA.

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Buffer solution pH 4,01 \pm 0,01 (20°C)

article number: KAY0 date of compilation: 2019-04-02 Version: **1.1 en**

Revision: 2020-06-02

Replaces version of: 2019-04-02

Version: (1)

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

Product identifier 1.1

Identification of the substance Buffer solution pH 4,01 \pm 0,01 (20°C)

Article number KAY0

Registration number (REACH) not relevant (mixture)

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

Identified uses: laboratory and analytical use

laboratory chemical

1.3 Details of the supplier of the safety data sheet

Carl Roth GmbH + Co KG Schoemperlenstr. 3-5 D-76185 Karlsruhe Germany

Telephone: +49 (0) 721 - 56 06 0 **Telefax:** +49 (0) 721 - 56 06 149 **e-mail:** sicherheit@carlroth.de **Website:** www.carlroth.de

Competent person responsible for the safety data : Department Health, Safety and Environment

e-mail (competent person): sicherheit@carlroth.de

1.4 **Emergency telephone number**

Name	Street	Postal code/city	Telephone	Website
National Poisons In- formation Service City Hospital	Dudley Rd	B187QH Birmingham	844 892 0111	

Emergency information service +49/(0)89 19240

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

This mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/ EC.

2.2 **Label elements**

Labelling according to Regulation (EC) No 1272/2008 (CLP)

not required

Signal word not required

2.3 Other hazards

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Buffer solution pH 4,01 ±0,01 (20°C)

article number: KAY0

There is no additional information.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Description of the mixture

This mixture does not meet the criteria for classification.

SECTION 4: First aid measures

4.1 Description of first aid measures



General notes

Take off contaminated clothing.

Following inhalation

Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.

Following skin contact

Rinse skin with water/shower. In all cases of doubt, or when symptoms persist, seek medical advice.

Following eye contact

Rinse cautiously with water for several minutes. In all cases of doubt, or when symptoms persist, seek medical advice.

Following ingestion

Rinse mouth. Call a doctor if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms and effects are not known to date

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures

5.1 Extinguishing media



Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings water spray, foam, dry extinguishing powder, carbon dioxide (CO₂)

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Non-combustible.

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Buffer solution pH 4,01 ±0,01 (20°C)

article number: KAY0

Hazardous combustion products

May produce toxic fumes of carbon monoxide if burning.

5.3 Advice for firefighters

Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures



For non-emergency personnel

No special measures are necessary.

6.2 Environmental precautions

Keep away from drains, surface and ground water.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains.

Advice on how to clean up a spill

Wipe up with absorbent material (e.g. cloth, fleece).

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

No special measures are necessary.

Advice on general occupational hygiene

Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed.

Incompatible substances or mixtures

Observe hints for combined storage.

Consideration of other advice

Ventilation requirements

Use local and general ventilation.

Specific designs for storage rooms or vessels

Recommended storage temperature: 15 – 25 °C.

7.3 Specific end use(s)

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Buffer solution pH 4,01 ±0,01 (20°C)

article number: KAY0

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

National limit values

Occupational exposure limit values (Workplace Exposure Limits)

Data are not available.

8.2 Exposure controls

Individual protection measures (personal protective equipment)

Eye/face protection





Use safety goggle with side protection.

Skin protection





hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374.

· type of material

NBR (Nitrile rubber)

material thickness

>0,11 mm

breakthrough times of the glove material

>480 minutes (permeation: level 6)

other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

Respiratory protection





Respiratory protection necessary at: Aerosol or mist formation.

Environmental exposure controls

Keep away from drains, surface and ground water.

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Buffer solution pH 4,01 ±0,01 (20°C)

article number: KAY0

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state liquid (fluid)
Colour colourless

Odour this information is not available

Odour threshold No data available

Other physical and chemical parameters

pH (value) 4,01 Melting point/freezing point $\sim 0 \, ^{\circ}\text{C}$ Initial boiling point and boiling range $\sim 100 \, ^{\circ}\text{C}$

Flash point not determined

Evaporation rate no data available

Flammability (solid, gas) not relevant (fluid)

Explosive limits

lower explosion limit (LEL) this information is not available
 upper explosion limit (UEL) this information is not available

Explosion limits of dust clouds not relevant

Vapour pressure This information is not available.

Density $\sim 1 \, {\rm g}/{\rm cm}^3$

Vapour density This information is not available.

Bulk density Not applicable

Relative density Information on this property is not available.

Solubility(ies)

Water solubility miscible in any proportion

Partition coefficient

n-octanol/water (log KOW) This information is not available.

Auto-ignition temperature Information on this property is not available.

Decomposition temperature no data available Viscosity not determined

Explosive properties Shall not be classified as explosive

Oxidising properties none

9.2 Other information

There is no additional information.

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Buffer solution pH 4,01 ±0,01 (20°C)

article number: KAY0

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is not reactive under normal ambient conditions.

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions

Violent reaction with: Strong oxidiser

10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

10.5 Incompatible materials

There is no additional information.

10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Shall not be classified as acutely toxic.

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

Summary of evaluation of the CMR properties

Shall not be classified as germ cell mutagenic, carcinogenic nor as a reproductive toxicant

Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

Symptoms related to the physical, chemical and toxicological characteristics

If swallowed

data are not available

• If in eyes

data are not available

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Buffer solution pH 4,01 ±0,01 (20°C)

article number: KAY0

If inhaled

data are not available

• If on skin

data are not available

Other information

None

SECTION 12: Ecological information

12.1 Toxicity

acc. to 1272/2008/EC: Shall not be classified as hazardous to the aquatic environment.

12.2 Process of degradability

The methods for determining the biological degradability are not applicable to inorganic substances.

12.3 Bioaccumulative potential

Data are not available.

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Other adverse effects

Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods



Consult the appropriate local waste disposal expert about waste disposal.

Sewage disposal-relevant information

Do not empty into drains.

13.2 Relevant provisions relating to waste

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

13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions.

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Buffer solution pH 4,01 \pm 0,01 (20°C)

article number: KAY0

SECTION 14: Transport information

14.1 UN number (not subject to transport regulations)

14.2 UN proper shipping name not relevant14.3 Transport hazard class(es) not relevant

Class -

14.4 Packing group not relevant not assigned to a packing group

14.5 Environmental hazards none (non-environmentally hazardous acc. to the danger-

ous goods regulations)

14.6 Special precautions for user

There is no additional information.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

The cargo is not intended to be carried in bulk.

- 14.8 Information for each of the UN Model Regulations
 - Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)

Not subject to ADR, RID and ADN.

International Maritime Dangerous Goods Code (IMDG)

Not subject to IMDG.

International Civil Aviation Organization (ICAO-IATA/DGR)

Not subject to ICAO-IATA.

SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture Relevant provisions of the European Union (EU)
 - Regulation 649/2012/EU concerning the export and import of hazardous chemicals (PIC) None of the ingredients are listed.
 - Regulation 1005/2009/EC on substances that deplete the ozone layer (ODS)

None of the ingredients are listed.

• Regulation 850/2004/EC on persistent organic pollutants (POP)

None of the ingredients are listed.

Restrictions according to REACH, Annex XVII

None of the ingredients are listed.

• Restrictions according to REACH, Title VIII

None.

• List of substances subject to authorisation (REACH, Annex XIV)/SVHC - candidate list none of the ingredients are listed

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Buffer solution pH 4,01 ±0,01 (20°C)

article number: KAY0

Seveso Directive

2012/	2012/18/EU (Seveso III)			
No	Dangerous substance/hazard categories	Qualifying quantity (tonnes) for the application of lower and upper-tier requirements	Notes	
	not assigned			

• Directive 75/324/EEC relating to aerosol dispensers

Filling batch

Deco-Paint Directive (2004/42/EC)

VOC content	0 %	
Directive on industrial emissions (VOCs, 2010/75/EU)		
VOC content	0 %	

Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) - Annex II

None of the ingredients are listed.

Regulation 166/2006/EC concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

None of the ingredients are listed.

Directive 2000/60/EC establishing a framework for Community action in the field of water policy (WFD)

None of the ingredients are listed.

Regulation 98/2013/EU on the marketing and use of explosives precursors

none of the ingredients are listed

Regulation 111/2005/EC laying down rules for the monitoring of trade between the Community and third countries in drug precursors

none of the ingredients are listed

National inventories

Country	National inventories	Status
AU	AICS	all ingredients are listed
CA	DSL	all ingredients are listed
CN	IECSC	all ingredients are listed
EU	ECSI	all ingredients are listed
EU	REACH Reg.	all ingredients are listed
JP	CSCL-ENCS	all ingredients are listed
KR	KECI	all ingredients are listed
MX	INSQ	all ingredients are listed
NZ	NZIoC	all ingredients are listed
PH	PICCS	all ingredients are listed
TW	TCSI	all ingredients are listed

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Buffer solution pH 4,01 ±0,01 (20°C)

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Country	National inventories	Status
US	TSCA	all ingredients are listed

Legend

AICS Australian Inventory of Chemical Substances CSCL-ENCS List of Existing and New Chemical Substances (CSCL-ENCS)

DSL Domestic Substances List (DSL)
ECSI EC Substance Inventory (EINECS, ELINCS, NLP)
IECSC Inventory of Existing Chemical Substances Produced or Imported in China
INSQ National Inventory of Chemical Substances
KECI Korea Existing Chemicals Inventory
NZIOC New Zealand Inventory of Chemicals
PICCS Philippine Inventory of Chemicals and Chemical Substances
REACH Reg. REACH registered substances
TCSI Taiwan Chemical Substance Inventory

Taiwan Chemical Substance Inventory Toxic Substance Control Act

TCSI TSCA

15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
CMR	Carcinogenic, Mutagenic or toxic for Reproduction
DGR	Dangerous Goods Regulations (see IATA/DGR)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
SVHC	Substance of Very High Concern
VOC	Volatile Organic Compounds
vPvB	very Persistent and very Bioaccumulative

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Buffer solution pH 4,01 ±0,01 (20°C)

article number: KAY0

Key literature references and sources for data

- Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU Regulation (EC) No. 1272/2008 (CLP, EU GHS) Dangerous Goods Regulations (DGR) for the air transport (IATA)
- International Maritime Dangerous Goods Code (IMDĠ)

List of relevant phrases (code and full text as stated in chapter 2 and 3)

not relevant.

Disclaimer

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.

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Buffer solution pH 7,00 ±0,01 (20°C)

article number: **KAY1**Version: **1.1 en**date of compilation: 2019-04-02
Revision: 2020-06-02

Revision: 20 Replaces version of: 2019-04-02

Version: (1)

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

1.1 Product identifier

Identification of the substance Buffer solution pH 7,00 ±0,01 (20°C)

Article number KAY

Registration number (REACH) not relevant (mixture)

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

Identified uses: laboratory and analytical use

laboratory chemical

1.3 Details of the supplier of the safety data sheet

Carl Roth GmbH + Co KG Schoemperlenstr. 3-5 D-76185 Karlsruhe Germany

Telephone: +49 (0) 721 - 56 06 0 **Telefax:** +49 (0) 721 - 56 06 149 **e-mail:** sicherheit@carlroth.de **Website:** www.carlroth.de

Competent person responsible for the safety data : Department Health, Safety and Environment

sheet:

e-mail (competent person): sicherheit@carlroth.de

1.4 Emergency telephone number

Name	Street	Postal code/city	Telephone	Website
National Poisons In- formation Service City Hospital	Dudley Rd	B187QH Birmingham	844 892 0111	

Emergency information service +49/(0)89 19240

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

This mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/ EC.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)

not required

Signal word not required

2.3 Other hazards

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Buffer solution pH 7,00 ±0,01 (20°C)

article number: KAY1

There is no additional information.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Description of the mixture

This mixture does not meet the criteria for classification.

SECTION 4: First aid measures

4.1 Description of first aid measures



General notes

Take off contaminated clothing.

Following inhalation

Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.

Following skin contact

Rinse skin with water/shower. In all cases of doubt, or when symptoms persist, seek medical advice.

Following eye contact

Rinse cautiously with water for several minutes. In all cases of doubt, or when symptoms persist, seek medical advice.

Following ingestion

Rinse mouth. Call a doctor if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms and effects are not known to date

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures

5.1 Extinguishing media



Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings water spray, foam, dry extinguishing powder, carbon dioxide (CO₂)

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Non-combustible.

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Buffer solution pH 7,00 ±0,01 (20°C)

article number: KAY1

Hazardous combustion products

May produce toxic fumes of carbon monoxide if burning.

5.3 Advice for firefighters

Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures



For non-emergency personnel

No special measures are necessary.

6.2 Environmental precautions

Keep away from drains, surface and ground water.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains.

Advice on how to clean up a spill

Wipe up with absorbent material (e.g. cloth, fleece).

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

No special measures are necessary.

Advice on general occupational hygiene

Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed.

Incompatible substances or mixtures

Observe hints for combined storage.

Consideration of other advice

Ventilation requirements

Use local and general ventilation.

Specific designs for storage rooms or vessels

Recommended storage temperature: 15 – 25 °C.

7.3 Specific end use(s)

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Buffer solution pH 7,00 ±0,01 (20°C)

article number: KAY1

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

National limit values

Occupational exposure limit values (Workplace Exposure Limits)

Data are not available.

8.2 Exposure controls

Individual protection measures (personal protective equipment)

Eye/face protection





Use safety goggle with side protection.

Skin protection





hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374.

· type of material

NBR (Nitrile rubber)

material thickness

>0,11 mm

breakthrough times of the glove material

>480 minutes (permeation: level 6)

other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

Respiratory protection





Respiratory protection necessary at: Aerosol or mist formation.

Environmental exposure controls

Keep away from drains, surface and ground water.

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Buffer solution pH 7,00 ±0,01 (20°C)

article number: KAY1

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state liquid (fluid)
Colour colourless

Odour this information is not available

Odour threshold No data available

Other physical and chemical parameters

pH (value) 7

Melting point/freezing point $\sim 0 \, ^{\circ}\text{C}$ Initial boiling point and boiling range $\sim 100 \, ^{\circ}\text{C}$

Flash point not determined

Evaporation rate no data available

Flammability (solid, gas) not relevant (fluid)

Explosive limits

lower explosion limit (LEL) this information is not available
 upper explosion limit (UEL) this information is not available

Explosion limits of dust clouds not relevant

Vapour pressure This information is not available.

Density $\sim 1 \, {\rm g}/{\rm cm}^3$

Vapour density This information is not available.

Bulk density Not applicable

Relative density Information on this property is not available.

Solubility(ies)

Water solubility miscible in any proportion

Partition coefficient

n-octanol/water (log KOW)

This information is not available.

Auto-ignition temperature Information on this property is not available.

Decomposition temperature no data available Viscosity not determined

Explosive properties Shall not be classified as explosive

Oxidising properties none

9.2 Other information

There is no additional information.

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Buffer solution pH 7,00 ±0,01 (20°C)

article number: KAY1

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is not reactive under normal ambient conditions.

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions

Violent reaction with: Strong oxidiser

10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

10.5 Incompatible materials

There is no additional information.

10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Shall not be classified as acutely toxic.

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

Summary of evaluation of the CMR properties

Shall not be classified as germ cell mutagenic, carcinogenic nor as a reproductive toxicant

Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

Symptoms related to the physical, chemical and toxicological characteristics

If swallowed

data are not available

• If in eyes

data are not available

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Buffer solution pH 7,00 ±0,01 (20°C)

article number: KAY1

If inhaled

data are not available

• If on skin

data are not available

Other information

None

SECTION 12: Ecological information

12.1 Toxicity

acc. to 1272/2008/EC: Shall not be classified as hazardous to the aquatic environment.

12.2 Process of degradability

The methods for determining the biological degradability are not applicable to inorganic substances.

12.3 Bioaccumulative potential

Data are not available.

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Other adverse effects

Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods



Consult the appropriate local waste disposal expert about waste disposal.

Sewage disposal-relevant information

Do not empty into drains.

13.2 Relevant provisions relating to waste

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

13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions.

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Buffer solution pH 7,00 \pm 0,01 (20°C)

article number: KAY1

SECTION 14: Transport information

14.1 UN number (not subject to transport regulations)

14.2 UN proper shipping name not relevant14.3 Transport hazard class(es) not relevant

Class -

14.4 Packing group not relevant not assigned to a packing group

14.5 Environmental hazards none (non-environmentally hazardous acc. to the danger-

ous goods regulations)

14.6 Special precautions for user

There is no additional information.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

The cargo is not intended to be carried in bulk.

- 14.8 Information for each of the UN Model Regulations
 - Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)

Not subject to ADR, RID and ADN.

• International Maritime Dangerous Goods Code (IMDG)

Not subject to IMDG.

International Civil Aviation Organization (ICAO-IATA/DGR)

Not subject to ICAO-IATA.

SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture Relevant provisions of the European Union (EU)
 - Regulation 649/2012/EU concerning the export and import of hazardous chemicals (PIC) None of the ingredients are listed.
 - Regulation 1005/2009/EC on substances that deplete the ozone layer (ODS)

None of the ingredients are listed.

• Regulation 850/2004/EC on persistent organic pollutants (POP)

None of the ingredients are listed.

Restrictions according to REACH, Annex XVII

None of the ingredients are listed.

• Restrictions according to REACH, Title VIII

None.

• List of substances subject to authorisation (REACH, Annex XIV)/SVHC - candidate list none of the ingredients are listed

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Buffer solution pH 7,00 ±0,01 (20°C)

article number: KAY1

Seveso Directive

2012/	2012/18/EU (Seveso III)			
No	Dangerous substance/hazard categories	Qualifying quantity (tonnes) for the application of lower and upper-tier requirements	Notes	
	not assigned			

• Directive 75/324/EEC relating to aerosol dispensers

Filling batch

Deco-Paint Directive (2004/42/EC)

VOC content	0 %	
Directive on industrial emissions (VOCs, 2010/75/EU)		
VOC content	0 %	

Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) - Annex II

None of the ingredients are listed.

Regulation 166/2006/EC concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

None of the ingredients are listed.

Directive 2000/60/EC establishing a framework for Community action in the field of water policy (WFD)

None of the ingredients are listed.

Regulation 98/2013/EU on the marketing and use of explosives precursors

none of the ingredients are listed

Regulation 111/2005/EC laying down rules for the monitoring of trade between the Community and third countries in drug precursors

none of the ingredients are listed

National inventories

Country	National inventories	Status
AU	AICS	all ingredients are listed
CA	DSL	all ingredients are listed
CN	IECSC	all ingredients are listed
EU	ECSI	all ingredients are listed
EU	REACH Reg.	all ingredients are listed
JP	CSCL-ENCS	all ingredients are listed
KR	KECI	all ingredients are listed
MX	INSQ	all ingredients are listed
NZ	NZIoC	all ingredients are listed
PH	PICCS	all ingredients are listed
TW	TCSI	all ingredients are listed

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Buffer solution pH 7,00 ±0,01 (20°C)

article number: KAY1

Country	National inventories	Status
US	TSCA	all ingredients are listed

Legend

AICS Australian Inventory of Chemical Substances CSCL-ENCS List of Existing and New Chemical Substances (CSCL-ENCS)

DSL Domestic Substances List (DSL)
ECSI EC Substance Inventory (EINECS, ELINCS, NLP)
IECSC Inventory of Existing Chemical Substances Produced or Imported in China
INSQ National Inventory of Chemical Substances
KECI Korea Existing Chemicals Inventory
NZIOC New Zealand Inventory of Chemicals
PICCS Philippine Inventory of Chemicals and Chemical Substances
REACH Reg. REACH registered substances
TCSI Taiwan Chemical Substance Inventory

Taiwan Chemical Substance Inventory Toxic Substance Control Act

TCSI TSCA

15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
CMR	Carcinogenic, Mutagenic or toxic for Reproduction
DGR	Dangerous Goods Regulations (see IATA/DGR)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
SVHC	Substance of Very High Concern
VOC	Volatile Organic Compounds
vPvB	very Persistent and very Bioaccumulative

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Buffer solution pH 7,00 ±0,01 (20°C)

article number: KAY1

Key literature references and sources for data

- Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU Regulation (EC) No. 1272/2008 (CLP, EU GHS) Dangerous Goods Regulations (DGR) for the air transport (IATA)
- International Maritime Dangerous Goods Code (IMDĠ)

List of relevant phrases (code and full text as stated in chapter 2 and 3)

not relevant.

Disclaimer

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.

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Potassium chloride solution 3 mol/l - 3 N, volumetric standard solution

article number:Version: **1.0 en** date of compilation: 2020-06-02

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

1.1 Product identifier

Identification of the substance Potassium chloride solution

Registration number (REACH) not relevant (mixture)

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

Identified uses: laboratory chemical

laboratory and analytical use

1.3 Details of the supplier of the safety data sheet

Carl Roth GmbH + Co KG Schoemperlenstr. 3-5 D-76185 Karlsruhe Germany

Telephone: +49 (0) 721 - 56 06 0 **Telefax:** +49 (0) 721 - 56 06 149 **e-mail:** sicherheit@carlroth.de **Website:** www.carlroth.de

Competent person responsible for the safety data : Department Health, Safety and Environment

sheet:

e-mail (competent person): sicherheit@carlroth.de

1.4 Emergency telephone number

Name	Street	Postal code/city	Telephone	Website
National Poisons In- formation Service City Hospital	Dudley Rd	B187QH Birmingham	844 892 0111	

Emergency information service +49/(0)89 19240

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

This mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/ EC.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)

not required

Signal word not required

2.3 Other hazards

There is no additional information.

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Potassium chloride solution 3 mol/l - 3 N, volumetric standard solution

article number:

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Description of the mixture

This mixture does not meet the criteria for classification.

SECTION 4: First aid measures

4.1 Description of first aid measures



General notes

Take off contaminated clothing.

Following inhalation

Provide fresh air.

Following skin contact

Rinse skin with water/shower.

Following eye contact

Rinse cautiously with water for several minutes.

Following ingestion

Rinse mouth. Call a doctor if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms and effects are not known to date

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

Co-ordinate fire-fighting measures to the fire surroundings water spray, foam, dry extinguishing powder, carbon dioxide (CO₂)

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Non-combustible.

Hazardous combustion products

in case of fire and/or explosion do not breathe fumes

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Potassium chloride solution 3 mol/l - 3 N, volumetric standard solution

article number:

5.3 Advice for firefighters

Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures



For non-emergency personnel

No special measures are necessary.

6.2 Environmental precautions

Keep away from drains, surface and ground water.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains.

Other information relating to spills and releases

Place in appropriate containers for disposal.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

No special measures are necessary.

Advice on general occupational hygiene

Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed.

Incompatible substances or mixtures

Observe hints for combined storage.

Consideration of other advice

Ventilation requirements

Use local and general ventilation.

Specific designs for storage rooms or vessels

Recommended storage temperature: 15 - 25 °C.

7.3 Specific end use(s)

No information available.

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Potassium chloride solution 3 mol/l - 3 N, volumetric standard solution

article number:

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

National limit values

Occupational exposure limit values (Workplace Exposure Limits)

Data are not available.

8.2 Exposure controls

Individual protection measures (personal protective equipment)

Eye/face protection





Use safety goggle with side protection.

Skin protection





hand protection

Hand protection is not required.

other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

Respiratory protection





Usually no personal respirative protection necessary. Respiratory protection necessary at: Aerosol or mist formation.

Environmental exposure controls

Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state liquid (fluid)
Colour colourless
Odour odourless

Odour threshold No data available

Other physical and chemical parameters

pH (value) ~ 7

Melting point/freezing point not determined

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Potassium chloride solution 3 mol/l - 3 N, volumetric standard solution

article number:

Initial boiling point and boiling range ~ 100 °C

Flash point not determined

Evaporation rate no data available

Flammability (solid, gas) not relevant (fluid)

Explosive limits

lower explosion limit (LEL)
 upper explosion limit (UEL)
 this information is not available

Explosion limits of dust clouds not relevant

Vapour pressure This information is not available.

Density 1,13 ^g/_{cm³} at 20 °C

Vapour density This information is not available.

Bulk density Not applicable

Relative density Information on this property is not available.

Solubility(ies)

Water solubility miscible in any proportion

Partition coefficient

n-octanol/water (log KOW)

This information is not available.

Auto-ignition temperature Information on this property is not available.

Decomposition temperature no data available Viscosity not determined

Explosive properties Shall not be classified as explosive

Oxidising properties none

9.2 Other information

There is no additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is not reactive under normal ambient conditions.

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions

No known hazardous reactions

10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

10.5 Incompatible materials

There is no additional information.

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Potassium chloride solution 3 mol/l - 3 N, volumetric standard solution

article number:

10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Shall not be classified as acutely toxic.

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

Summary of evaluation of the CMR properties

Shall not be classified as germ cell mutagenic, carcinogenic nor as a reproductive toxicant

• Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

• Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

Symptoms related to the physical, chemical and toxicological characteristics

If swallowed

data are not available

If in eyes

data are not available

If inhaled

data are not available

• If on skin

data are not available

Other information

None

SECTION 12: Ecological information

12.1 Toxicity

acc. to 1272/2008/EC: Shall not be classified as hazardous to the aquatic environment.

12.2 Process of degradability

The methods for determining the biological degradability are not applicable to inorganic substances.

12.3 Bioaccumulative potential

Data are not available.

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Potassium chloride solution 3 mol/l - 3 N, volumetric standard solution

article number:

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Other adverse effects

Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods



Consult the appropriate local waste disposal expert about waste disposal.

Sewage disposal-relevant information

Do not empty into drains.

13.2 Relevant provisions relating to waste

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

13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions.

SECTION 14: Transport information

14.1	UN number	(not subject to transport regulations)
		, , , , , , , , , , , , , , , , , , , ,

14.2 UN proper shipping name not relevant14.3 Transport hazard class(es) not relevant

Class -

14.4 Packing group not relevant not assigned to a packing group

14.5 Environmental hazards none (non-environmentally hazardous acc. to the danger-

ous goods regulations)

14.6 Special precautions for user

There is no additional information.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

The cargo is not intended to be carried in bulk.

14.8 Information for each of the UN Model Regulations

• Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)

Not subject to ADR, RID and ADN.

• International Maritime Dangerous Goods Code (IMDG)

Not subject to IMDG.

International Civil Aviation Organization (ICAO-IATA/DGR)

Not subject to ICAO-IATA.

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Potassium chloride solution 3 mol/l - 3 N, volumetric standard solution

article number:

SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture Relevant provisions of the European Union (EU)
 - Regulation 649/2012/EU concerning the export and import of hazardous chemicals (PIC) None of the ingredients are listed.
 - Regulation 1005/2009/EC on substances that deplete the ozone layer (ODS) None of the ingredients are listed.
 - Regulation 850/2004/EC on persistent organic pollutants (POP)

None of the ingredients are listed.

Restrictions according to REACH, Annex XVII

None of the ingredients are listed.

Restrictions according to REACH, Title VIII

None.

- List of substances subject to authorisation (REACH, Annex XIV)/SVHC candidate list none of the ingredients are listed
- Seveso Directive

2012/18/EU (Seveso III)			
No	Dangerous substance/hazard categories	Qualifying quantity (tonnes) for the application of lower and upper-tier requirements	Notes
	not assigned		

Directive 75/324/EEC relating to aerosol dispensers

Filling batch

Deco-Paint Directive (2004/42/EC)

VOC content	0 % 0 ^g / _l
Directive on industrial emissions (VOCs, 2010/75	/EU)
VOC content	0 %
VOC content	0 g/ı

Water content was discounted	
Directive 2011/65/EU on the restriction of the us	se of certain hazardous substances in electrical

and electronic equipment (RoHS) - Annex II

None of the ingredients are listed.

Regulation 166/2006/EC concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

None of the ingredients are listed.

Directive 2000/60/EC establishing a framework for Community action in the field of water policy (WFD)

None of the ingredients are listed.

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Potassium chloride solution 3 mol/l - 3 N, volumetric standard solution

article number:

Regulation 98/2013/EU on the marketing and use of explosives precursors

none of the ingredients are listed

Regulation 111/2005/EC laying down rules for the monitoring of trade between the Community and third countries in drug precursors

none of the ingredients are listed

National inventories

Country	National inventories	Status
AU	AICS	all ingredients are listed
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KR	KECI	all ingredients are listed
MX	INSQ	all ingredients are listed
NZ	NZIoC	all ingredients are listed
PH	PICCS	all ingredients are listed
TR	CICR	not all ingredients are listed
TW	TCSI	all ingredients are listed
US	TSCA	all ingredients are listed

Legend

AICS CICR CSCL-ENCS DSL ECSI

Australian Inventory of Chemical Substances Chemical Inventory and Control Regulation List of Existing and New Chemical Substances (CSCL-ENCS) Domestic Substances List (DSL)

EC Substance Inventory (EINECS, ELINCS, NLP)
Inventory of Existing Chemical Substances Produced or Imported in China
National Inventory of Chemical Substances IECSC

INSQ KECI NATION INVENTION OF CHEMICAL SUBSTANCES

KECI Korea Existing Chemicals Inventory

NZIOC New Zealand Inventory of Chemicals

PICCS Philippine Inventory of Chemicals and Chemical Substances

REACH Reg. REACH registered substances

Taiwan Chemical Substance Inventory

TSCA Toxic Substance Control Act

15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
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ADR	Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures

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Potassium chloride solution 3 mol/l - 3 N, volumetric standard solution

article number:

Abbr.	Descriptions of used abbreviations	
CMR	Carcinogenic, Mutagenic or toxic for Reproduction	
DGR	Dangerous Goods Regulations (see IATA/DGR)	
EINECS	European Inventory of Existing Commercial Chemical Substances	
ELINCS	European List of Notified Chemical Substances	
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ICAO	International Civil Aviation Organization	
IMDG	International Maritime Dangerous Goods Code	
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")	
NLP	No-Longer Polymer	
PBT	Persistent, Bioaccumulative and Toxic	
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals	
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)	
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VOC	Volatile Organic Compounds	
vPvB	very Persistent and very Bioaccumulative	

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- International Maritime Dangerous Goods Code (IMDG)

List of relevant phrases (code and full text as stated in chapter 2 and 3)

not relevant.

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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.

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