

# BUFFER SOLUTION PH 9.00 ± 0.01

## Safety Data Sheet

according to Regulation (EU) 2015/830

Date of issue: 31/10/2017 Version: 0.0

Doc. No: SDS-908.B09/2



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

#### 1.1. Product identifier

Product form : Mixture  
Product name : BUFFER SOLUTION PH 9.00 ± 0.01 AT 20°C  
Type of product : Solution

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

##### 1.2.1. Relevant identified uses

Use of the substance/mixture : Laboratory chemicals

##### 1.2.2. Uses advised against

No additional information available

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

ISOLAB Laborgeräte GmbH  
Am Dillhof 2 - 63863 Eschau / GERMANY  
Tel: + 49 93 74 / 978 55-0  
Fax: +49 93 74 / 978 55-29  
[prodsafe@isolab.de](mailto:prodsafe@isolab.de)

#### 1.4. Emergency telephone number

Country	Organisation/Company	Address	Emergency number	Comment
Germany	Giftnotruf der Charité CBF, Haus VIII (Wirtschaftgebäude), UG	Hindenburgdamm 30 12203 Berlin	+49 30 19240	

### SECTION 2: Hazards identification

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

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

Repr. 1,1A or 1B H360

#### Adverse physicochemical, human health and environmental effects

No additional information available.

#### 2.2. Label elements

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

Hazard pictograms (CLP) :



GHS08

Signal word (CLP) :

Danger

Hazard statements (CLP) :

H360 - May damage fertility or the unborn child.

Precautionary statements (CLP) :

P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
P201 - Obtain special instructions before use  
P202 - Do not handle until all safety precautions have been read and understood.  
P308 + P313 - IF exposed or concerned: Get medical advice/ attention.  
P405 - Store locked up.  
P501 - Dispose of contents/container in accordance with local/regional/national/international regulations.

#### 2.3. Other hazards

No additional information available

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
disodium tetraborate, anhydrous, boric acid, disodium salt substance listed as REACH Candidate (Disodium tetraborate, anhydrous)	(CAS-No.) 1330-43-4 (EC-No.) 215-540-4 (EC Index-No.) 005-011-00-4	0.1 - 2.5	Repr. 1B, H360FD
hydrochloric acid ... %	(EC-No.) 231-595-7 (EC Index-No.) 017-002-01-X	0.1 - 2.5	Skin Corr. 1B, H314 STOT SE 3, H335
mercury diiodide	(CAS-No.) 7774-29-0 (EC-No.) 231-873-8 (EC Index-No.) 080-002-00-6	< 0.1	Acute Tox. 2 (Inhalation), H330 Acute Tox. 1 (Dermal), H310 Acute Tox. 2 (Oral), H300 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
potassium iodide	(CAS-No.) 7681-11-0 (EC-No.) 231-659-4	< 0.1	Not classified

### Specific concentration limits:

Name	Product identifier	Specific concentration limits
disodium tetraborate, anhydrous, boric acid, disodium salt	(CAS-No.) 1330-43-4 (EC-No.) 215-540-4 (EC Index-No.) 005-011-00-4	(C >= 4.5) Repr. 1B, H360FD
hydrochloric acid ... %	(EC-No.) 231-595-7 (EC Index-No.) 017-002-01-X	(C >= 10) STOT SE 3, H335 ( 10 =<C < 25) Eye Irrit. 2, H319 ( 10 =<C < 25) Skin Irrit. 2, H315 (C >= 25) Skin Corr. 1B, H314
mercury diiodide	(CAS-No.) 7774-29-0 (EC-No.) 231-873-8 (EC Index-No.) 080-002-00-6	(C >= 0.1) STOT RE 2, H373

Full text of H-statements: see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
- First-aid measures after skin contact : Wash skin with plenty of water.
- First-aid measures after eye contact : Rinse eyes with water as a precaution.
- First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

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

No additional 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 : Water spray. Dry powder. Foam. Carbon dioxide.

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

Hazardous decomposition products in case of fire : Toxic fumes may be released.

### 5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area.

#### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

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### 6.2. Environmental precautions

Avoid release to the environment.

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

Methods for cleaning up : Take up liquid spill into absorbent material.  
Other information : Dispose of materials or solid residues at an authorized site.

### 6.4. Reference to other sections

For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.  
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

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

Storage conditions : Store in a well-ventilated place. Keep cool.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

disodium tetraborate, anhydrous, boric acid, disodium salt (1330-43-4)		
Belgium	Local name	Borate, composés inorganiques de # Boraat, anorganische verbindingen van
Belgium	Limit value (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Belgium	Short time value (mg/m <sup>3</sup> )	6 mg/m <sup>3</sup>
Croatia	Local name	Dinatrijev tetraborat bezvodni; (Borna kiselina, dinatrijeva sol)
Croatia	GVI (granična vrijednost izloženosti) (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Croatia	Naznake (HR)	T (otrovno); Repr. kat. 2 (tvari koje vjerojatno smanjuju plodnost kod ljudi i/ili – tvari koje vjerojatno uzrokuju razvojnu otrovnost kod ljudi)
Ireland	Local name	Borates, (tetra) sodium anhydrous
Ireland	OEL (8 hours ref) (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Ireland	Notes (IE)	Repr.1B
Spain	Local name	Borato de sodio, anhidro (Tetraborato de sodio, anhidro)
Spain	VLA-ED (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Spain	VLA-EC (mg/m <sup>3</sup> )	6 mg/m <sup>3</sup>
Spain	Notes	TR1B (Cuando las pruebas utilizadas para la clasificación procedan principalmente de datos en animales).

hydrochloric acid ... %		
EU	Local name	Hydrogen chloride
EU	IOELV TWA (mg/m <sup>3</sup> )	8 mg/m <sup>3</sup>
EU	IOELV TWA (ppm)	5 ppm
EU	IOELV STEL (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup>
EU	IOELV STEL (ppm)	10 ppm
Austria	Local name	Chlorwasserstoff
Austria	MAK (mg/m <sup>3</sup> )	8 mg/m <sup>3</sup>
Austria	MAK (ppm)	5 ppm
Austria	MAK Short time value (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup>
Austria	MAK Short time value (ppm)	10 ppm
Belgium	Local name	Hydrogène (chlorure d') # Waterstofchloride
Belgium	Limit value (mg/m <sup>3</sup> )	8 mg/m <sup>3</sup>
Belgium	Limit value (ppm)	5 ppm
Belgium	Short time value (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup>
Belgium	Short time value (ppm)	10 ppm

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hydrochloric acid ... %		
Bulgaria	Local name	Хлороводород
Bulgaria	OEL TWA (mg/m <sup>3</sup> )	8 mg/m <sup>3</sup>
Bulgaria	OEL TWA (ppm)	5 ppm
Bulgaria	OEL STEL (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup>
Bulgaria	OEL STEL (ppm)	10 ppm
Bulgaria	Notes	• (Химични агенти, за които са определени гранични стойности във въздуха на работната среда за Европейската общност)
Croatia	Local name	Vodikov klorid
Croatia	GVI (granična vrijednost izloženosti) (mg/m <sup>3</sup> )	8 mg/m <sup>3</sup>
Croatia	GVI (granična vrijednost izloženosti) (ppm)	5 ppm
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup>
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (ppm)	10 ppm
Croatia	Naznake (HR)	EU* (naznaka da se radi o tvarima za koje su utvrđene indikativne granične vrijednosti izloženosti prema Direktivi 2000/39/ EC (prva lista)); T (otrovno); C (nagrizajuće)
Czech Republic	Local name	Chlorovodík
Czech Republic	Expoziční limity (PEL) (mg/m <sup>3</sup> )	8 mg/m <sup>3</sup>
Czech Republic	Expoziční limity (PEL) (ppm)	5.43 ppm
Czech Republic	Expoziční limity (NPK-P) (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup>
Czech Republic	Expoziční limity (NPK-P) (ppm)	10.19 ppm
Denmark	Local name	Hydrogenchlorid (Chlorbrinte)
Denmark	Grænseværdie (langvarig) (mg/m <sup>3</sup> )	8 mg/m <sup>3</sup>
Denmark	Grænseværdie (langvarig) (ppm)	5 ppm
Denmark	Anmærkninger (DK)	E (betyder, at stoffet har en EF-grænseværdi); L (markerer, at grænseværdien er en loftværdi, som ikke på noget tidspunkt må overskrides)
Estonia	Local name	Vesinikkloriid
Estonia	OEL TWA (mg/m <sup>3</sup> )	8 mg/m <sup>3</sup>
Estonia	OEL TWA (ppm)	5 ppm
Estonia	OEL STEL (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup>
Estonia	OEL STEL (ppm)	10 ppm
Finland	Local name	Kloorivety, vedetön
Finland	HTP-arvo (15 min)	7.6 mg/m <sup>3</sup>
Finland	HTP-arvo (15 min) (ppm)	5 ppm
France	Local name	Chlorure d'hydrogène (Acide chlorhydrique)
France	VLE (mg/m <sup>3</sup> )	7.6 mg/m <sup>3</sup>
France	VLE (ppm)	5 ppm
France	Note (FR)	Valeurs réglementaires contraignantes
Germany	Local name	Hydrogenchlorid
Germany	TRGS 900 Occupational exposure limit value (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup>
Germany	TRGS 900 Occupational exposure limit value (ppm)	2 ppm
Germany	Remark (TRGS 900)	DFG,EU,Y
Gibraltar	Eight hours mg/m <sup>3</sup>	8 mg/m <sup>3</sup>
Gibraltar	Eight hours ppm	5 ppm
Gibraltar	Short-term mg/m <sup>3</sup>	15 mg/m <sup>3</sup>
Gibraltar	Short-term ppm	10 ppm
Gibraltar	Name of agent	Hydrogen chloride
Greece	OEL TWA (mg/m <sup>3</sup> )	7 mg/m <sup>3</sup>
Greece	OEL TWA (ppm)	5 ppm
Greece	OEL STEL (mg/m <sup>3</sup> )	7 mg/m <sup>3</sup>

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Greece	OEL STEL (ppm)	5 ppm
Hungary	Local name	SÓSAV
Hungary	AK-érték	8 mg/m <sup>3</sup>
Hungary	CK-érték	16 mg/m <sup>3</sup>
Hungary	Megjegyzések (HU)	i, m; EU1
Ireland	Local name	Hydrogen chloride
Ireland	OEL (8 hours ref) (mg/m <sup>3</sup> )	8 mg/m <sup>3</sup>
Ireland	OEL (8 hours ref) (ppm)	5 ppm
Ireland	OEL (15 min ref) (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup>
Ireland	OEL (15 min ref) (ppm)	10 ppm
Ireland	Notes (IE)	IOELV
Italy	Local name	Acido cloridrico
Italy	OEL TWA (mg/m <sup>3</sup> )	8 mg/m <sup>3</sup>
Italy	OEL TWA (ppm)	5 ppm
Italy	OEL STEL (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup>
Italy	OEL STEL (ppm)	10 ppm
Latvia	Local name	Hlorūdeņradis
Latvia	OEL TWA (mg/m <sup>3</sup> )	8 mg/m <sup>3</sup>
Latvia	OEL TWA (ppm)	5 ppm
Latvia	OEL STEL (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup>
Latvia	OEL STEL (ppm)	10 ppm
Lithuania	Local name	Vandenilio chloridas
Lithuania	IPRV (mg/m <sup>3</sup> )	8 mg/m <sup>3</sup>
Lithuania	IPRV (ppm)	5 ppm
Lithuania	TPRV (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup>
Lithuania	TPRV (ppm)	10 ppm
Luxembourg	Local name	Chlorure d'hydrogène
Luxembourg	OEL TWA (mg/m <sup>3</sup> )	8 mg/m <sup>3</sup>
Luxembourg	OEL TWA (ppm)	5 ppm
Luxembourg	OEL STEL (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup>
Luxembourg	OEL STEL (ppm)	10 ppm
Malta	Local name	Hydrogenchloride
Malta	OEL TWA (mg/m <sup>3</sup> )	8 mg/m <sup>3</sup>
Malta	OEL TWA (ppm)	5 ppm
Malta	OEL STEL (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup>
Malta	OEL STEL (ppm)	10 ppm
Netherlands	Local name	Zoutzuur
Netherlands	Grenswaarde TGG 8H (mg/m <sup>3</sup> )	8 mg/m <sup>3</sup>
Netherlands	Grenswaarde TGG 15MIN (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup>
Poland	Local name	Chlorowodór
Poland	NDS (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup>
Poland	NDSch (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Portugal	Local name	Ácido clorídrico
Portugal	OEL - Ceilings (ppm)	2 ppm
Romania	Local name	Acid clorhidric
Romania	OEL TWA (mg/m <sup>3</sup> )	8 mg/m <sup>3</sup>
Romania	OEL TWA (ppm)	5 ppm
Romania	OEL STEL (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup>

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hydrochloric acid ... %		
Romania	OEL STEL (ppm)	10 ppm
Slovakia	Local name	Chlorovodík
Slovakia	NPHV (priemerná) (mg/m <sup>3</sup> )	8 mg/m <sup>3</sup>
Slovakia	NPHV (priemerná) (ppm)	5 ppm
Slovakia	OEL STEL (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup>
Slovakia	OEL STEL (ppm)	10 ppm
Slovenia	Local name	vodikov klorid, brezvodni (klorovodik, brezvodni)
Slovenia	OEL TWA (mg/m <sup>3</sup> )	8 mg/m <sup>3</sup>
Slovenia	OEL TWA (ppm)	5 ppm
Slovenia	OEL STEL (mg/m <sup>3</sup> )	16 mg/m <sup>3</sup>
Slovenia	OEL STEL (ppm)	10 ppm
Spain	Local name	Cloruro de hidrógeno
Spain	VLA-ED (mg/m <sup>3</sup> )	7.6 mg/m <sup>3</sup>
Spain	VLA-ED (ppm)	5 ppm
Spain	VLA-EC (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup>
Spain	VLA-EC (ppm)	10 ppm
Spain	Notes	VLI (Agente químico para el que la U.E. estableció en su día un valor límite indicativo. Todos estos agentes químicos figuran al menos en una de las directivas de valores límite indicativos publicadas hasta ahora (ver Anexo C. Bibliografía). Los estados miembros disponen de un tiempo fijado en dichas directivas para su transposición a los valores límites de cada país miembro. Una vez adoptados, estos valores tienen la misma validez que el resto de los valores adoptados por el país).
Sweden	Local name	Saltsyra
Sweden	nivågränsvärde (NVG) (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup> 3 mg/m <sup>3</sup>
Sweden	nivågränsvärde (NVG) (ppm)	2 ppm 2 ppm
Sweden	kortidsvärde (KTV) (mg/m <sup>3</sup> )	6 mg/m <sup>3</sup> 6 mg/m <sup>3</sup>
Sweden	kortidsvärde (KTV) (ppm)	4 ppm 4 ppm
United Kingdom	Local name	Hydrogen chloride
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup> gas and aerosol mists
United Kingdom	WEL TWA (ppm)	1 ppm gas and aerosol mists
United Kingdom	WEL STEL (mg/m <sup>3</sup> )	8 mg/m <sup>3</sup> gas and aerosol mists
United Kingdom	WEL STEL (ppm)	5 ppm gas and aerosol mists
Iceland	Local name	Vetnisklórið (klórvetni)
Iceland	OEL (15 min ref) (mg/m <sup>3</sup> )	8 mg/m <sup>3</sup>
Iceland	OEL (15 min ref) (ppm)	5 ppm
Russian Federation	Local name	Гидрохлорид
Russian Federation	OEL Ceiling (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup>
Russian Federation	Remark (RU)	2 класс опасности - высокоопасное; п (пары и/или газы); О (вещества с остронаправленным механизмом действия, требующие автоматического контроля за их содержанием в воздухе)
Norway	Local name	Hydrogenklorid (Saltsyre)
Norway	Grønseverdier (AN) (mg/m <sup>3</sup> )	7 mg/m <sup>3</sup>
Norway	Grønseverdier (AN) (ppm)	5 ppm

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<b>hydrochloric acid ... %</b>		
Norway	Merknader (NO)	T (Takverdi er en øyeblikksverdi som angir maksimalkonsentrasjon av et kjemikalie i pustesonen som ikke skal overskrides); E (EU har en veiledende grenseverdi for stoffet)
Switzerland	Local name	Chlorwasserstoff
Switzerland	MAK (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup> 3 mg/m <sup>3</sup>
Switzerland	MAK (ppm)	2 ppm 2 ppm
Switzerland	KZGW (mg/m <sup>3</sup> )	6 mg/m <sup>3</sup> 6 mg/m <sup>3</sup>
Switzerland	KZGW (ppm)	4 ppm 4 ppm
Switzerland	Remark (CH)	SSc - OAW <sup>KT AN</sup> - DFG, NIOSH, OSHA
Turkey	Local name	Hidrojen klorür
Turkey	OEL TWA (mg/m <sup>3</sup> )	8 mg/m <sup>3</sup>
Turkey	OEL TWA (ppm)	5 ppm
Turkey	OEL STEL (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup>
Turkey	OEL STEL (ppm)	10 ppm
Australia	Local name	Hydrogen chloride
USA - ACGIH	Local name	Hydrogen chloride
USA - ACGIH	ACGIH Ceiling (ppm)	2 ppm
USA - ACGIH	Remark (ACGIH)	URT irr
USA - OSHA	Local name	Hydrogen chloride
USA - OSHA	OSHA PEL (Ceiling) (mg/m <sup>3</sup> )	7 mg/m <sup>3</sup>
USA - OSHA	OSHA PEL (Ceiling) (ppm)	5 ppm
<b>mercury diiodide (7774-29-0)</b>		
EU	IOELV TWA (mg/m <sup>3</sup> )	0.02 mg/m <sup>3</sup> (Mercury, divalent inorganic compounds; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
Belgium	Limit value (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup> (Mercure et composés inorganiques bivalents du mercure, y compris l'oxyde de mercure et le chlorure mercurique (mesurés comme mercure) (8); Belgium; Time-weighted average exposure limit 8 h)
France	VME (mg/m <sup>3</sup> )	0.02 mg/m <sup>3</sup> (Mercure et composés bivalents du mercure, y compris l'oxyde de mercure et le chlorure de mercurique; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)
Netherlands	Grenswaarde TGG 8H (mg/m <sup>3</sup> )	0.02 mg/m <sup>3</sup> (Kwik en tweewaardige anorganische kwikverbindingen (gemeten als kwik); Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value; als Hg)
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	0.02 mg/m <sup>3</sup> Mercury divalent inorganic compounds including mercuric oxide and mercuric chloride (measured as mercury); United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
USA - ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	0.025 mg/m <sup>3</sup> (Mercury, Inorganic forms, as Hg; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
<b>potassium iodide (7681-11-0)</b>		
Belgium	Limit value (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup> (Iode et iodures (vapeur et aérosol); Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	0.01 ppm (Iode et iodures (vapeur et aérosol); Belgium; Time-weighted average exposure limit 8 h)
USA - ACGIH	ACGIH TWA (ppm)	0.01 ppm (Iodides; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value; Inhalable fraction and vapor)

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### 8.2. Exposure controls

#### Appropriate engineering controls:

Ensure good ventilation of the work station.

#### Hand protection:

Protective gloves

#### Eye protection:

Protective goggles

#### Skin and body protection:

Wear suitable protective clothing

#### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

#### Environmental exposure controls:

Avoid release to the environment.

## SECTION 9: Physical and chemical properties

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

Physical state	: Liquid
Appearance	: Liquid.
Colour	: Colourless. According to product specification.
Odour	: characteristic.
Odour threshold	: No data available
pH	: 8.99 - 9.01 at 20 °C
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: 0 °C
Freezing point	: No data available
Boiling point	: 100 °C
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not self-igniting
Vapour pressure	: 23 hPa (at 20 °C)
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 1.026 g/cm <sup>3</sup> (20 °C)
Solubility	: Miscible with water.
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: Not explosive.
Oxidising properties	: No data available
Explosive limits	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.



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### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

mercury diiodide (7774-29-0)	
LD50 oral rat	18 mg/kg (Rat)

potassium iodide (7681-11-0)	
LD50 oral rat	2779 mg/kg (Rat)
LD50 dermal rabbit	3160 mg/kg (Rabbit)

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

hydrochloric acid ... %	
LC50 fish 1	282 mg/l (LC50; 96 h; Gambusia affinis)
EC50 Daphnia 1	< 56 mg/l (EC50; 72 h; Daphnia magna)

mercury diiodide (7774-29-0)	
Threshold limit algae 1	0.16 mg/l (LC50; 18 h)

potassium iodide (7681-11-0)	
LC50 fish 1	1788.85 mg/l (LC50; 96 h)
EC50 Daphnia 1	483.68 mg/l (LC50; 48 h)

### 12.2. Persistence and degradability

hydrochloric acid ... %	
Persistence and degradability	Biodegradability: not applicable. No (test)data on mobility of the components available.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable

mercury diiodide (7774-29-0)	
Persistence and degradability	Biodegradability: not applicable. Forming sediments in water. Biodegradability in soil: not applicable. Adsorbs into the soil.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable

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<b>potassium iodide (7681-11-0)</b>	
Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable

### 12.3. Bioaccumulative potential

<b>hydrochloric acid ... %</b>	
Log Pow	0.25 (QSAR)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

<b>mercury diiodide (7774-29-0)</b>	
Bioaccumulative potential	Bioaccumable.

<b>potassium iodide (7681-11-0)</b>	
Bioaccumulative potential	Not bioaccumulative.

### 12.4. Mobility in soil

<b>hydrochloric acid ... %</b>	
Ecology - soil	May be harmful to plant growth, blooming and fruit formation.

### 12.5. Results of PBT and vPvB assessment

Component	
disodium tetraborate, anhydrous, boric acid, disodium salt (1330-43-4)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

### 12.6. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

## SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.2. UN proper shipping name</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.3. Transport hazard class(es)</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.4. Packing group</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.5. Environmental hazards</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
No supplementary information available				

### 14.6. Special precautions for user

#### - Overland transport

Not applicable

#### - Transport by sea

Not applicable

#### - Air transport

Not applicable

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### - Inland waterway transport

Not applicable

### - Rail transport

Not applicable

### 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains a substance on the REACH candidate list in concentration  $\geq 0.1\%$  or with a lower specific limit: disodium tetraborate, anhydrous, boric acid, disodium salt (EC 215-540-4, CAS 1330-43-4)

Contains no REACH Annex XIV substances

#### 15.1.2. National regulations

##### Germany

VwVwS Annex reference : Water hazard class (WGK) 1, low hazard to waters (Classification according to VwVwS, Annex 4)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

##### Netherlands

SZW-lijst van kankerverwekkende stoffen : None of the components are listed

SZW-lijst van mutagene stoffen : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : disodium tetraborate, anhydrous, boric acid, disodium salt is listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : disodium tetraborate, anhydrous, boric acid, disodium salt is listed

##### Denmark

Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product  
Pregnant/breastfeeding women working with the product must not be in direct contact with the product

The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use and disposal

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## SECTION 16: Other information

Abbreviations and acronyms:

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
EC50	Median effective concentration
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
OECD	Organisation for Economic Co-operation and Development
PBT	Persistent Bioaccumulative Toxic

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REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
vPvB	Very Persistent and Very Bioaccumulative

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Full text of H- and EUH-statements:	
Acute Tox. 1 (Dermal)	Acute toxicity (dermal), Category 1
Acute Tox. 2 (Inhalation)	Acute toxicity (inhal.), Category 2
Acute Tox. 2 (Oral)	Acute toxicity (oral), Category 2
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Repr. 1B	Reproductive toxicity, Category 1B
Skin Corr. 1B	Skin corrosion/irritation, Category 1B
STOT RE 2	Specific target organ toxicity — Repeated exposure, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H300	Fatal if swallowed.
H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage
H330	Fatal if inhaled.
H335	May cause respiratory irritation.
H360FD	May damage fertility. May damage the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
EUH210	Safety data sheet available on request.

SDS ISOLAB

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*