






## Lbis Rat LH ELISA KIT (630-23929)

### Composition/information on ingredients

Name of substance	Classification acc. to GHS	Pictograms
[2] Standard LH	Skin Irrit. 2 / H315 Eye Irrit. 2 / H319	
[3] Biotinylated antibody		
[4] HRP conjugated avidin		
[5] Chromogen (TMB)	Skin Irrit. 2 / H315 Eye Irrit. 2 / H319 STOT SE 3 / H335	
Wash Stock Solution (10X)		
[7] Buffer		
Stop Solution (1 mol/L sulfuric acid)	Met. Corr. 1 / H290 Skin Irrit. 2 / H315 Eye Irrit. 2 / H319	
[8] Sample dilution buffer		



# Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)

## [2] Standard LH

Lbis Rat LH ELISA KIT (630-23929)

Version number: 1.0

First version: 2017-03-07

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

#### 1.1 Product identifier

Trade name

[2] Standard LH

Registration number (REACH)

not relevant (mixture)

CAS number

not relevant (mixture)

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

Relevant identified uses

Chemicals for various applications  
For research use

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

Wako Chemicals GmbH  
Fuggerstr. 12  
41468 Neuss  
Germany

Telephone: +49 (0) 2131 - 311-0  
Telefax: +49(0)2131 - 311 100

e-mail (competent person)

sdb@csb-online.de

Please do not use this e-mail adress to ask for the latest safety data sheet. For this purpose contact Wako Chemicals GmbH.

#### 1.4 Emergency telephone number

As above or next toxicological information centre.

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

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

Classification acc. to GHS				
Section	Hazard class	Category	Hazard class and category	Hazard statement
3.2	skin corrosion/irritation	2	Skin Irrit. 2	H315
3.3	serious eye damage/eye irritation	2	Eye Irrit. 2	H319

## [2] Standard LH

for full text of abbreviations: see SECTION 16

### Additional information

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

## 2.2 Label elements

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

**Signal word** warning

### Pictograms

**GHS07**



### Hazard statements

**H315** Causes skin irritation.

**H319** Causes serious eye irritation.

### Precautionary statements

**P280** Wear protective gloves/eye protection.

**P312** Call a POISON CENTER/doctor if you feel unwell.

### Supplemental hazard information

**EUH208** Contains reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1). May produce an allergic reaction.

## 2.3 Other hazards

There is no additional information.

### Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances


not relevant (mixture)

### 3.2 Mixtures

#### Description of the mixture

Hazardous ingredients acc. to GHS				
Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms
Tris(hydroxymethyl)aminomethane	CAS No 77-86-1  EC No 201-064-4	1 - < 5	Skin Irrit. 2 / H315 Eye Irrit. 2 / H319	

## [2] Standard LH

Hazardous ingredients acc. to GHS				
Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	CAS No 55965-84-9  Index No 613-167-00-5	< 1	Acute Tox. 3 / H301 Acute Tox. 2 / H310 Acute Tox. 2 / H330 Skin Corr. 1B / H314 Eye Dam. 1 / H318 Skin Sens. 1 / H317 Aquatic Acute 1 / H400 Aquatic Chronic 1 / H410	

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

##### General notes

Take off immediately all contaminated clothing.

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

##### Following inhalation

Provide fresh air.

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions.

##### Following skin contact

Wash with plenty of soap and water.

##### Following eye contact

Rinse cautiously with water for several minutes.

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Remove contact lenses, if present and easy to do. Continue rinsing.

##### Following ingestion

Rinse mouth. Do not induce vomiting.

Get medical advice/attention if you feel unwell.

##### Notes for the doctor

none

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

These information are not available.

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

none

### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

##### **Suitable extinguishing media**

water spray, alcohol resistant foam, fire extinguishing powder, carbon dioxide (CO<sub>2</sub>)

##### **Unsuitable extinguishing media**

water jet

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

Hazardous decomposition products: Section 10.

##### **Hazardous combustion products**

nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>)

#### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes.

Co-ordinate firefighting measures to the fire surroundings.

Do not allow firefighting water to enter drains or water courses.

Collect contaminated firefighting water separately.

Fight fire with normal precautions from a reasonable distance.

##### **Special protective equipment for firefighters**

use suitable breathing apparatus

### SECTION 6: Accidental release measures

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

##### **For non-emergency personnel**

Remove persons to safety.

Ventilate affected area.

Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.

##### **For emergency responders**

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

#### 6.2 Environmental precautions

Keep away from drains, surface and ground water.

Retain contaminated washing water and dispose of it.

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

##### **Advices on how to clean up a spill**

Collect spillage.

Absorbent material (e.g. sand, diatomaceous earth, acid binder, universal binder, sawdust, etc.).

### **Appropriate containment techniques**

Use of adsorbent materials.

### **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**

#### **Measures to prevent fire as well as aerosol and dust generation**

Use local and general ventilation.

Keep away from sources of ignition - No smoking.

#### **Specific notes/details**

None.

#### **Measures to protect the environment**

Avoid release to the environment.

#### **Advice on general occupational hygiene**

Do not eat, drink and smoke in work areas.

Wash hands after use.

Preventive skin protection (barrier creams/ointments) is recommended.

Remove contaminated clothing and protective equipment before entering eating areas.

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

#### **Flammability hazards**

None.

#### **Incompatible substances or mixtures**

Incompatible materials: see section 10.

#### **Protect against external exposure, such as**

heat, frost, UV-radiation/sunlight

#### **Consideration of other advice**

Keep away from food, drink and animal feedingstuffs.

### Ventilation requirements

Provision of sufficient ventilation.

### Specific designs for storage rooms or vessels

#### Storage temperature

2 - 10 °C

### Packaging compatibilities

Keep only in original container.

### 7.3 Specific end use(s)

No information available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

No data available.

### 8.2 Exposure controls

#### Appropriate engineering controls

General ventilation.

#### Individual protection measures (personal protective equipment)

##### Eye/face protection

Wear eye/face protection.

##### Hand protection

Material
these information are not available

Wear suitable gloves.

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

Check leak-tightness/impermeability prior to use.

In the case of wanting to use the gloves again, clean them before taking off and air them well.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

#### Respiratory protection

In case of inadequate ventilation wear respiratory protection.

#### Environmental exposure controls

Use appropriate container to avoid environmental contamination.

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
Form	fluid
Colour	these information are not available
Odour	these information are not available
Odour threshold	these information are not available

##### Other safety parameters

pH (value)	7.4 - 7.6
Melting point/freezing point	these information are not available
Initial boiling point and boiling range	~100 °C
Flash point	these information are not available
Evaporation rate	these information are not available
Flammability (solid, gas)	not relevant (fluid)

##### Explosive limits

**Lower explosion limit (LEL)** these information are not available

**Upper explosion limit (UEL)** these information are not available

Vapour pressure these information are not available

Density ~1 g/cm<sup>3</sup> at 20 °C

Vapour density these information are not available

Relative density these information are not available

##### Solubility(ies)

**Water solubility** miscible in any proportion

##### Partition coefficient

n-octanol/water (log KOW) these information are not available

Auto-ignition temperature these information are not available

Relative self-ignition temperature for solids  
(Fluid) not relevant

Decomposition temperature these information are not available



### Viscosity

**Kinematic viscosity** these information are not available

**Dynamic viscosity** these information are not available

Explosive properties not explosive

Oxidising properties shall not be classified as oxidising

### 9.2 Other information

None

## 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

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

### 10.5 Incompatible materials

oxidisers

### 10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known.

Hazardous combustion products: see section 5.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Classification procedure

If not otherwise specified the classification is based on:

Ingredients of the mixture (additivity formula).

#### Classification according to GHS (1272/2008/EC, CLP)

#### Acute toxicity

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Acute toxicity estimate (ATE) of components of the mixture			
Name of substance	CAS No	Exposure route	ATE
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9	oral	64 mg/kg
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9	dermal	87 mg/kg
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9	inhalation: vapour	0.5 mg/l/4h
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9	inhalation: dust/mist	0.33 mg/l/4h

Acute toxicity of components of the mixture					
Name of substance	CAS No	Exposure route	Endpoint	Value	Species
Tris(hydroxymethyl)aminomethane	77-86-1	oral	LD50	>5,000 mg/kg	rat
Tris(hydroxymethyl)aminomethane	77-86-1	dermal	LD50	>5,000 mg/kg	rat

### Skin corrosion/irritation

Causes skin irritation.

### Serious eye damage/eye irritation

Causes serious eye irritation.

### Respiratory or skin sensitisation

Contains reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1). May produce an allergic reaction.

#### Skin sensitisation

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

#### Respiratory sensitisation

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

### Germ cell mutagenicity

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

### Carcinogenicity

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

### Reproductive toxicity

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

### Specific target organ toxicity - single exposure

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

### Specific target organ toxicity - repeated exposure

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

### Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

## SECTION 12: Ecological information

### 12.1 Toxicity

#### Aquatic toxicity (acute)

Test data are not available for the complete mixture.

#### Aquatic toxicity (acute) of components of the mixture

Aquatic toxicity (acute) of components of the mixture					
Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Tris(hydroxymethyl)aminomethane	77-86-1	EC50	>980 mg/l	aquatic invertebrates	48 h

#### Aquatic toxicity (chronic)

Test data are not available for the complete mixture.

### 12.2 Persistence and degradability

#### Degradability of components of the mixture

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Degradability of components of the mixture					
Name of substance	CAS No	Process	Degradation rate	Time	Source
Tris(hydroxy-methyl)amino-methane	77-86-1	oxygen depletion	100.7 %	28 d	ECHA
Tris(hydroxy-methyl)amino-methane	77-86-1	carbon dioxide generation	65.9 %	28 d	ECHA
Tris(hydroxy-methyl)amino-methane	77-86-1	DOC removal	97.1 %	28 d	ECHA

### Biodegradation

Data are not available.

### Persistence

Data are not available.

## 12.3 Bioaccumulative potential

Data are not available.

Bioaccumulative potential of components of the mixture			
Name of substance	CAS No	BCF	Log KOW
Tris(hydroxymethyl)amino-methane	77-86-1		-2.31
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9	54	

## 12.4 Mobility in soil

Data are not available.

## 12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

### 12.6 Other adverse effects

Data are not available.

#### Remarks

Water hazard class - WHC (Wassergefährdungsklasse): 1 (Slightly hazardous to water)

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

This material and its container must be disposed of as hazardous waste.

#### Sewage disposal-relevant information

Do not empty into drains.

#### Waste treatment of containers/packagings

Handle contaminated packages in the same way as the substance itself.

#### Remarks

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** -

**14.3 Transport hazard class(es)**

**Class** -

**14.4 Packing group** -

**14.5 Environmental hazards** -

**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.

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### 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

#### SECTION 16: Other information

##### Abbreviations and acronyms

Abbreviations and acronyms	
Abbr.	Descriptions of used abbreviations
Acute Tox.	Acute toxicity
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)
Aquatic Acute	Hazardous to the aquatic environment - acute hazard
Aquatic Chronic	Hazardous to the aquatic environment - chronic hazard
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DGR	Dangerous Goods Regulations (see IATA/DGR)
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
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

## [2] Standard LH

Abbreviations and acronyms	
Abbr.	Descriptions of used abbreviations
index No	The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
log KOW	n-Octanol/water
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)
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
Skin Sens.	Skin sensitisation
vPvB	Very Persistent and very Bioaccumulative

### Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.

Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU.

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

International Maritime Dangerous Goods Code (IMDG).

Dangerous Goods Regulations (DGR) for the air transport (IATA).

### Classification procedure

Physical and chemical properties.

Health hazards.

Environmental hazards.

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

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

List of relevant phrases (code and full text as stated in chapter 2 and 3)	
Code	Text
H301	Toxic if swallowed.
H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.

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List of relevant phrases (code and full text as stated in chapter 2 and 3)	
Code	Text
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

### Responsible for the safety data sheet

C.S.B. GmbH  
Düsseldorfer Str. 113  
47809 Krefeld

Telephone: +49 (0) 2151 - 652086 - 0  
Telefax: +49 (0) 2151 - 652086 - 9  
e-Mail: [info@csb-online.de](mailto:info@csb-online.de)  
Website: [www.csb-online.de](http://www.csb-online.de)

### Disclaimer

This information is based upon the present state of our knowledge.  
This SDS has been compiled and is solely intended for this product.





# Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)

## [3] Biotinylated antibody

Lbis Rat LH ELISA KIT (630-23929)

Version number: 1.0

First version: 2017-03-10

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

#### 1.1 Product identifier

**Trade name** [3] Biotinylated antibody

**Registration number (REACH)** not relevant (mixture)

**CAS number** not relevant (mixture)

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

**Relevant identified uses** Chemicals for various applications  
For research use

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

Wako Chemicals GmbH  
Fuggerstr. 12  
41468 Neuss  
Germany

Telephone: +49 (0) 2131 - 311-0  
Telefax: +49(0)2131 - 311 100

**e-mail (competent person)** [sdb@csb-online.de](mailto:sdb@csb-online.de)

Please do not use this e-mail adress to ask for the latest safety data sheet. For this purpose contact Wako Chemicals GmbH.

#### 1.4 Emergency telephone number

As above or next toxicological information centre.

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

for full text of abbreviations: see SECTION 16

##### Additional information

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

#### 2.2 Label elements

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

**Signal word** not required

**Pictograms** not required

## [3] Biotinylated antibody

### Supplemental hazard information

**EUH208** Contains reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1). May produce an allergic reaction.

### 2.3 Other hazards

There is no additional information.

### Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.


## SECTION 3: Composition/information on ingredients

### 3.1 Substances

not relevant (mixture)

### 3.2 Mixtures

#### Description of the mixture

Hazardous ingredients acc. to GHS				
Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	CAS No 55965-84-9  Index No 613-167-00-5	< 1	Acute Tox. 3 / H301 Acute Tox. 2 / H310 Acute Tox. 2 / H330 Skin Corr. 1B / H314 Eye Dam. 1 / H318 Skin Sens. 1 / H317 Aquatic Acute 1 / H400 Aquatic Chronic 1 / H410	

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General notes

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

#### Following inhalation

Provide fresh air.

#### Following skin contact

Wash with plenty of soap and water.

## [3] Biotinylated antibody

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### **Following eye contact**

Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

### **Following ingestion**

Rinse mouth. Do not induce vomiting.

Get medical advice/attention if you feel unwell.

### **Notes for the doctor**

none

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

These information are not available.

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

none

## **SECTION 5: Firefighting measures**

### **5.1 Extinguishing media**

#### **Suitable extinguishing media**

water spray, alcohol resistant foam, fire extinguishing powder, carbon dioxide (CO<sub>2</sub>)

#### **Unsuitable extinguishing media**

water jet

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

Hazardous decomposition products: Section 10.

#### **Hazardous combustion products**

carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>), sulphur oxides (SO<sub>x</sub>)

### **5.3 Advice for firefighters**

In case of fire and/or explosion do not breathe fumes.

Co-ordinate firefighting measures to the fire surroundings.

Do not allow firefighting water to enter drains or water courses.

Collect contaminated firefighting water separately.

Fight fire with normal precautions from a reasonable distance.

#### **Special protective equipment for firefighters**

use suitable breathing apparatus

## [3] Biotinylated antibody

### SECTION 6: Accidental release measures

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

##### For non-emergency personnel

Ventilate affected area.

Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.

##### For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

#### 6.2 Environmental precautions

Keep away from drains, surface and ground water.

Retain contaminated washing water and dispose of it.

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

##### Advices on how to clean up a spill

Collect spillage.

Absorbent material (e.g. sand, diatomaceous earth, acid binder, universal binder, sawdust, etc.).

##### Appropriate containment techniques

Use of adsorbent materials.

##### 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

##### Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation.

Keep away from sources of ignition - No smoking.

##### Specific notes/details

None.

## [3] Biotinylated antibody

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### **Measures to protect the environment**

Avoid release to the environment.

### **Advice on general occupational hygiene**

Do not eat, drink and smoke in work areas.

Wash hands after use.

Preventive skin protection (barrier creams/ointments) is recommended.

Remove contaminated clothing and protective equipment before entering eating areas.

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

### **Flammability hazards**

None.

### **Incompatible substances or mixtures**

Incompatible materials: see section 10.

### **Protect against external exposure, such as**

heat, frost, UV-radiation/sunlight

### **Consideration of other advice**

Keep away from food, drink and animal feedingstuffs.

### **Ventilation requirements**

Provision of sufficient ventilation.

### **Specific designs for storage rooms or vessels**

**Storage temperature** 2 - 10 °C

### **Packaging compatibilities**

Keep only in original container.

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

No information available.

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

### **8.1 Control parameters**

No data available.

### **8.2 Exposure controls**

#### **Appropriate engineering controls**

General ventilation.

#### **Individual protection measures (personal protective equipment)**

##### **Eye/face protection**

Wear eye/face protection.

## [3] Biotinylated antibody

### Hand protection

Material
these information are not available

Wear suitable gloves.

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

Check leak-tightness/impermeability prior to use.

In the case of wanting to use the gloves again, clean them before taking off and air them well.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

### Respiratory protection

In case of inadequate ventilation wear respiratory protection.

### Environmental exposure controls

Use appropriate container to avoid environmental contamination.

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
Form	fluid
Colour	these information are not available
Odour	these information are not available
Odour threshold	these information are not available

#### Other safety parameters

pH (value)	7.4 - 7.6
Melting point/freezing point	these information are not available
Initial boiling point and boiling range	~100 °C
Flash point	these information are not available
Evaporation rate	these information are not available
Flammability (solid, gas)	not relevant (fluid)

### [3] Biotinylated antibody

#### Explosive limits

##### Lower explosion limit (LEL)

these information are not available

##### Upper explosion limit (UEL)

these information are not available

Vapour pressure

these information are not available

Density

~1 g/cm<sup>3</sup> at 20 °C

Vapour density

these information are not available

Relative density

these information are not available

#### Solubility(ies)

##### Water solubility

miscible in any proportion

##### Partition coefficient

n-octanol/water (log KOW)

these information are not available

Auto-ignition temperature

these information are not available

Relative self-ignition temperature for solids

not relevant  
(Fluid)

Decomposition temperature

these information are not available

#### Viscosity

##### Kinematic viscosity

these information are not available

##### Dynamic viscosity

these information are not available

Explosive properties

not explosive

Oxidising properties

shall not be classified as oxidising

## 9.2 Other information

None

## 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.

## [3] Biotinylated antibody

### 10.3 Possibility of hazardous reactions

No known hazardous reactions.

### 10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

### 10.5 Incompatible materials

oxidisers

### 10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known.

Hazardous combustion products: see section 5.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Classification procedure

If not otherwise specified the classification is based on:

Ingredients of the mixture (additivity formula).

#### Classification according to GHS (1272/2008/EC, CLP)

#### Acute toxicity

Acute toxicity estimate (ATE) of components of the mixture			
Name of substance	CAS No	Exposure route	ATE
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9	oral	64 mg/kg
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9	dermal	87 mg/kg
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9	inhalation: vapour	0.5 mg/l/4h
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9	inhalation: dust/mist	0.33 mg/l/4h

#### Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.



## [3] Biotinylated antibody

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### **Serious eye damage/eye irritation**

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

### **Respiratory or skin sensitisation**

Contains reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1). May produce an allergic reaction.

### **Skin sensitisation**

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

### **Respiratory sensitisation**

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

### **Germ cell mutagenicity**

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

### **Carcinogenicity**

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

### **Reproductive toxicity**

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

### **Specific target organ toxicity - single exposure**

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

### **Specific target organ toxicity - repeated exposure**

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

### **Aspiration hazard**

Shall not be classified as presenting an aspiration hazard.

## SECTION 12: Ecological information

### 12.1 Toxicity

#### **Aquatic toxicity (acute)**

Test data are not available for the complete mixture.

#### **Aquatic toxicity (chronic)**

Test data are not available for the complete mixture.

## [3] Biotinylated antibody

### 12.2 Persistence and degradability

#### Biodegradation

Data are not available.

#### Persistence

Data are not available.

### 12.3 Bioaccumulative potential

Data are not available.

Bioaccumulative potential of components of the mixture		
Name of substance	CAS No	BCF
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9	54

### 12.4 Mobility in soil

Data are not available.

### 12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

### 12.6 Other adverse effects

Data are not available.

#### Endocrine disrupting potential

None of the ingredients are listed.

#### Remarks

Water hazard class - WHC (Wassergefährdungsklasse): 1 (Slightly hazardous to water)

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Dispose of contents/container in accordance with local/regional/national/international regulations.

#### Sewage disposal-relevant information

Do not empty into drains.

#### Waste treatment of containers/packagings

Handle contaminated packages in the same way as the substance itself.

### [3] Biotinylated antibody

#### Remarks

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** -

**14.3 Transport hazard class(es)**  
**Class** -

**14.4 Packing group** -

**14.5 Environmental hazards** -

**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)**

**Restrictions according to REACH, Annex XVII**  
none of the ingredients are listed

**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

### [3] Biotinylated antibody

#### 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

## SECTION 16: Other information

### Abbreviations and acronyms

Abbreviations and acronyms	
Abbr.	Descriptions of used abbreviations
Acute Tox.	Acute toxicity
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)
Aquatic Acute	Hazardous to the aquatic environment - acute hazard
Aquatic Chronic	Hazardous to the aquatic environment - chronic hazard
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DGR	Dangerous Goods Regulations (see IATA/DGR)
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
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)

### [3] Biotinylated antibody

Abbreviations and acronyms	
Abbr.	Descriptions of used abbreviations
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code
index No	The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
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)
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
Skin Sens.	Skin sensitisation
vPvB	Very Persistent and very Bioaccumulative

#### Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.

Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU.

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

International Maritime Dangerous Goods Code (IMDG).

Dangerous Goods Regulations (DGR) for the air transport (IATA).

#### Classification procedure

Physical and chemical properties.

Health hazards.

Environmental hazards.

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

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

List of relevant phrases (code and full text as stated in chapter 2 and 3)	
Code	Text
H301	Toxic if swallowed.
H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.

### [3] Biotinylated antibody

List of relevant phrases (code and full text as stated in chapter 2 and 3)	
Code	Text
H330	Fatal if inhaled.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

#### Responsible for the safety data sheet

C.S.B. GmbH  
Düsseldorfer Str. 113  
47809 Krefeld

Telephone: +49 (0) 2151 - 652086 - 0  
Telefax: +49 (0) 2151 - 652086 - 9  
e-Mail: [info@csb-online.de](mailto:info@csb-online.de)  
Website: [www.csb-online.de](http://www.csb-online.de)

#### Disclaimer

This information is based upon the present state of our knowledge.  
This SDS has been compiled and is solely intended for this product.



# Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)

## [4] HRP conjugated avidin

Lbis Rat LH ELISA KIT (630-23929)

Version number: 1.0

First version: 2017-03-09

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

#### 1.1 Product identifier

**Trade name** [4] HRP conjugated avidin

**Registration number (REACH)** not relevant (mixture)

**CAS number** not relevant (mixture)

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

**Relevant identified uses** Chemicals for various applications  
For research use

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

Wako Chemicals GmbH  
Fuggerstr. 12  
41468 Neuss  
Germany

Telephone: +49 (0) 2131 - 311-0  
Telefax: +49(0)2131 - 311 100

**e-mail (competent person)** [sdb@csb-online.de](mailto:sdb@csb-online.de)

Please do not use this e-mail adress to ask for the latest safety data sheet. For this purpose contact Wako Chemicals GmbH.

#### 1.4 Emergency telephone number

As above or next toxicological information centre.

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

for full text of abbreviations: see SECTION 16

##### Additional information

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

#### 2.2 Label elements

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

**Signal word** not required

**Pictograms** not required

## [4] HRP conjugated avidin

### Supplemental hazard information

**EUH208** Contains reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1). May produce an allergic reaction.

### 2.3 Other hazards

There is no additional information.

### Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.


## SECTION 3: Composition/information on ingredients

### 3.1 Substances

not relevant (mixture)

### 3.2 Mixtures

#### Description of the mixture

Hazardous ingredients acc. to GHS				
Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	CAS No 55965-84-9  Index No 613-167-00-5	< 1	Acute Tox. 3 / H301 Acute Tox. 2 / H310 Acute Tox. 2 / H330 Skin Corr. 1B / H314 Eye Dam. 1 / H318 Skin Sens. 1 / H317 Aquatic Acute 1 / H400 Aquatic Chronic 1 / H410	

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General notes

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

#### Following inhalation

Provide fresh air.

#### Following skin contact

Wash with plenty of soap and water.



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### **Following eye contact**

Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

### **Following ingestion**

Rinse mouth. Do not induce vomiting.

Get medical advice/attention if you feel unwell.

### **Notes for the doctor**

none

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

These information are not available.

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

none

## **SECTION 5: Firefighting measures**

### **5.1 Extinguishing media**

#### **Suitable extinguishing media**

water spray, alcohol resistant foam, fire extinguishing powder, carbon dioxide (CO<sub>2</sub>)

#### **Unsuitable extinguishing media**

water jet

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

Hazardous decomposition products: Section 10.

#### **Hazardous combustion products**

carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>)

### **5.3 Advice for firefighters**

In case of fire and/or explosion do not breathe fumes.

Co-ordinate firefighting measures to the fire surroundings.

Do not allow firefighting water to enter drains or water courses.

Collect contaminated firefighting water separately.

Fight fire with normal precautions from a reasonable distance.

#### **Special protective equipment for firefighters**

use suitable breathing apparatus

## [4] HRP conjugated avidin

### SECTION 6: Accidental release measures

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

##### For non-emergency personnel

Ventilate affected area.

Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.

##### For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

#### 6.2 Environmental precautions

Keep away from drains, surface and ground water.

Retain contaminated washing water and dispose of it.

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

##### Advices on how to clean up a spill

Collect spillage.

Absorbent material (e.g. sand, diatomaceous earth, acid binder, universal binder, sawdust, etc.).

##### Appropriate containment techniques

Use of adsorbent materials.

##### 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

##### Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation.

Keep away from sources of ignition - No smoking.

##### Specific notes/details

None.

## [4] HRP conjugated avidin

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### **Measures to protect the environment**

Avoid release to the environment.

### **Advice on general occupational hygiene**

Do not eat, drink and smoke in work areas.

Wash hands after use.

Preventive skin protection (barrier creams/ointments) is recommended.

Remove contaminated clothing and protective equipment before entering eating areas.

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

### **Flammability hazards**

None.

### **Incompatible substances or mixtures**

Incompatible materials: see section 10.

### **Protect against external exposure, such as**

heat, frost

### **Consideration of other advice**

Keep away from food, drink and animal feedingstuffs.

### **Ventilation requirements**

Provision of sufficient ventilation.

### **Specific designs for storage rooms or vessels**

#### **Storage temperature**

2 - 10 °C

### **Packaging compatibilities**

Keep only in original container.

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

No information available.

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

### **8.1 Control parameters**

No data available.

### **8.2 Exposure controls**

#### **Appropriate engineering controls**

General ventilation.

#### **Individual protection measures (personal protective equipment)**

##### **Eye/face protection**

Wear eye/face protection.

## [4] HRP conjugated avidin

### Hand protection

Material
these information are not available

Wear suitable gloves.

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

Check leak-tightness/impermeability prior to use.

In the case of wanting to use the gloves again, clean them before taking off and air them well.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

### Respiratory protection

In case of inadequate ventilation wear respiratory protection.

### Environmental exposure controls

Use appropriate container to avoid environmental contamination.

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
Form	fluid
Colour	these information are not available
Odour	these information are not available
Odour threshold	these information are not available

#### Other safety parameters

pH (value)	7.4 - 7.6
Melting point/freezing point	these information are not available
Initial boiling point and boiling range	~100 °C
Flash point	these information are not available
Evaporation rate	these information are not available
Flammability (solid, gas)	not relevant (fluid)

## [4] HRP conjugated avidin

### Explosive limits

#### Lower explosion limit (LEL)

these information are not available

#### Upper explosion limit (UEL)

these information are not available

Vapour pressure

these information are not available

Density

~1 g/cm<sup>3</sup> at 20 °C

Vapour density

these information are not available

Relative density

these information are not available

### Solubility(ies)

#### Water solubility

miscible in any proportion

#### Partition coefficient

n-octanol/water (log KOW)

these information are not available

Auto-ignition temperature

these information are not available

Relative self-ignition temperature for solids

not relevant  
(Fluid)

Decomposition temperature

these information are not available

### Viscosity

#### Kinematic viscosity

these information are not available

#### Dynamic viscosity

these information are not available

Explosive properties

not explosive

Oxidising properties

shall not be classified as oxidising

## 9.2 Other information

None

## 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.

## [4] HRP conjugated avidin

### 10.3 Possibility of hazardous reactions

No known hazardous reactions.

### 10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

### 10.5 Incompatible materials

oxidisers

### 10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known.

Hazardous combustion products: see section 5.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Classification procedure

If not otherwise specified the classification is based on:

Ingredients of the mixture (additivity formula).

#### Classification according to GHS (1272/2008/EC, CLP)

#### Acute toxicity

Acute toxicity estimate (ATE) of components of the mixture			
Name of substance	CAS No	Exposure route	ATE
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9	oral	64 mg/kg
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9	dermal	87 mg/kg
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9	inhalation: vapour	0.5 mg/l/4h
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9	inhalation: dust/mist	0.33 mg/l/4h

#### Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

## [4] HRP conjugated avidin

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### **Serious eye damage/eye irritation**

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

### **Respiratory or skin sensitisation**

Contains reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1). May produce an allergic reaction.

#### **Skin sensitisation**

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

#### **Respiratory sensitisation**

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

### **Germ cell mutagenicity**

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

### **Carcinogenicity**

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

### **Reproductive toxicity**

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

### **Specific target organ toxicity - single exposure**

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

### **Specific target organ toxicity - repeated exposure**

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

### **Aspiration hazard**

Shall not be classified as presenting an aspiration hazard.

## SECTION 12: Ecological information

### 12.1 Toxicity

#### **Aquatic toxicity (acute)**

Test data are not available for the complete mixture.

#### **Aquatic toxicity (chronic)**

Test data are not available for the complete mixture.

## [4] HRP conjugated avidin

### 12.2 Persistence and degradability

#### Biodegradation

Data are not available.

#### Persistence

Data are not available.

### 12.3 Bioaccumulative potential

Data are not available.

Bioaccumulative potential of components of the mixture		
Name of substance	CAS No	BCF
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9	54

### 12.4 Mobility in soil

Data are not available.

### 12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

### 12.6 Other adverse effects

Data are not available.

#### Endocrine disrupting potential

None of the ingredients are listed.

#### Remarks

Water hazard class - WHC (Wassergefährdungsklasse): 1 (Slightly hazardous to water)

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Dispose of contents/container in accordance with local/regional/national/international regulations.

#### Sewage disposal-relevant information

Do not empty into drains.

#### Waste treatment of containers/packagings

Handle contaminated packages in the same way as the substance itself.



## [4] HRP conjugated avidin

### Remarks

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** -

**14.3 Transport hazard class(es)**  
**Class** -

**14.4 Packing group** -

**14.5 Environmental hazards** -

**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)**

**Restrictions according to REACH, Annex XVII**  
none of the ingredients are listed

**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

## [4] HRP conjugated avidin

### 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

## SECTION 16: Other information

### Abbreviations and acronyms

Abbreviations and acronyms	
Abbr.	Descriptions of used abbreviations
Acute Tox.	Acute toxicity
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)
Aquatic Acute	Hazardous to the aquatic environment - acute hazard
Aquatic Chronic	Hazardous to the aquatic environment - chronic hazard
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DGR	Dangerous Goods Regulations (see IATA/DGR)
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
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)

## [4] HRP conjugated avidin

Abbreviations and acronyms	
Abbr.	Descriptions of used abbreviations
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code
index No	The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
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)
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
Skin Sens.	Skin sensitisation
vPvB	Very Persistent and very Bioaccumulative

### Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.

Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU.

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

International Maritime Dangerous Goods Code (IMDG).

Dangerous Goods Regulations (DGR) for the air transport (IATA).

### Classification procedure

Physical and chemical properties.

Health hazards.

Environmental hazards.

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

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

List of relevant phrases (code and full text as stated in chapter 2 and 3)	
Code	Text
H301	Toxic if swallowed.
H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.

## [4] HRP conjugated avidin

List of relevant phrases (code and full text as stated in chapter 2 and 3)	
Code	Text
H330	Fatal if inhaled.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

### Responsible for the safety data sheet

C.S.B. GmbH  
Düsseldorfer Str. 113  
47809 Krefeld

Telephone: +49 (0) 2151 - 652086 - 0  
Telefax: +49 (0) 2151 - 652086 - 9  
e-Mail: [info@csb-online.de](mailto:info@csb-online.de)  
Website: [www.csb-online.de](http://www.csb-online.de)

### Disclaimer

This information is based upon the present state of our knowledge.  
This SDS has been compiled and is solely intended for this product.



# Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)

## [5] Chromogen (TMB)

for ELISA kits

Version number: 4.0  
Replaces version of: 2017-02-10 (3)

Revision: 2017-03-03  
First version: 2016-11-15

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

#### 1.1 Product identifier

**Trade name**

**[5] Chromogen (TMB)**

**Product number**

(638-13079)

**Registration number (REACH)**

A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

**EC number**

224-621-3

**CAS number**

4430-24-4

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

**Relevant identified uses**

General use

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

Wako Chemicals GmbH  
Fuggerstr. 12  
41468 Neuss  
Germany

Telephone: +49 (0) 2131 - 311-0  
Telefax: +49(0)2131 - 311 100

**e-mail (competent person)**

sdb@csb-online.de

Please do not use this e-mail address to ask for the latest safety data sheet. For this purpose contact Wako Chemicals GmbH.

#### 1.4 Emergency telephone number

As above or next toxicological information centre.

## [5] Chromogen (TMB)

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

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

Classification acc. to GHS				
Section	Hazard class	Category	Hazard class and category	Hazard statement
3.2	skin corrosion/irritation	2	Skin Irrit. 2	H315
3.3	serious eye damage/eye irritation	2	Eye Irrit. 2	H319
3.8R	specific target organ toxicity - single exposure (respiratory tract irritation)	3	STOT SE 3	H335

for full text of abbreviations: see SECTION 16

#### Additional information

According to the results of its assessment, this substance is not a PBT or a vPvB.

#### 2.2 Label elements

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

**Signal word** warning

#### Pictograms

GHS07



#### Hazard statements

**H315** Causes skin irritation.  
**H319** Causes serious eye irritation.  
**H335** May cause respiratory irritation.

#### Precautionary statements

**P260** Do not breathe dust.  
**P280** Wear protective gloves/protective clothing/eye protection/face protection.  
**P312** Call a POISON CENTER/doctor if you feel unwell.

**Labelling of packages where the contents do not exceed 125 ml**

**Signal word** warning

## [5] Chromogen (TMB)

### Hazard pictogram(s)

Warning. GHS07



### Hazard statements

#### 2.3 Other hazards

Dust explosion hazards.

#### Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

### SECTION 3: Composition/information on ingredients

#### 3.1 Substances

<b>Name of substance</b>	3',3'',5',5''-Tetraiodophenolsulfonephthalein
<b>Identifiers</b>	
CAS No	4430-24-4
EC No	224-621-3
<b>Molecular formula</b>	C <sub>19</sub> H <sub>10</sub> I <sub>4</sub> O <sub>5</sub> S
<b>Molar mass</b>	858 g/mol

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

##### General notes

Take off immediately all contaminated clothing.

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

##### Following inhalation

Provide fresh air.

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions.

In case of respiratory tract irritation, consult a physician.

##### Following skin contact

Rinse skin with water/shower.

Wash with plenty of soap and water.

##### Following eye contact

Rinse cautiously with water for several minutes.

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Remove contact lenses, if present and easy to do. Continue rinsing.

## [5] Chromogen (TMB)

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### **Following ingestion**

Rinse mouth. Do not induce vomiting.

Get medical advice/attention if you feel unwell.

### **Notes for the doctor**

none

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

Narcotic effects.

Cough, pain, choking, and breathing difficulties.

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

none

## **SECTION 5: Firefighting measures**

### **5.1 Extinguishing media**

#### **Suitable extinguishing media**

water, foam, alcohol resistant foam, fire extinguishing powder

#### **Unsuitable extinguishing media**

water jet

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

Hazardous decomposition products: Section 10.

Danger of dust explosion.

Deposited combustible dust has considerable explosion potential.

#### **Hazardous combustion products**

carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>), sulphur oxides (SO<sub>x</sub>), hydrogen iodide (HI)

### **5.3 Advice for firefighters**

In case of fire and/or explosion do not breathe fumes.

Co-ordinate firefighting measures to the fire surroundings.

Do not allow firefighting water to enter drains or water courses.

Collect contaminated firefighting water separately.

Fight fire with normal precautions from a reasonable distance.

#### **Special protective equipment for firefighters**

use suitable breathing apparatus



### SECTION 6: Accidental release measures

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

##### For non-emergency personnel

Remove persons to safety.

Ventilate affected area.

Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.

##### For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

#### 6.2 Environmental precautions

Keep away from drains, surface and ground water.

Retain contaminated washing water and dispose of it.

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

##### Advices on how to contain a spill

take up mechanically

##### Advices on how to clean up a spill

Take up mechanically.

Collect spillage.

##### 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

##### Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation.

Keep away from sources of ignition - No smoking.

Take precautionary measures against static discharge.

Only vacuum cleaners containing no ignition sources may be used for combustible dusts.

Use explosion-proof electrical/ventilating/lighting equipment.

Use only non-sparking tools.

## [5] Chromogen (TMB)

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### **Specific notes/details**

Layers, deposits and heaps of combustible dust must be considered, like any other source which can form a hazardous explosive atmosphere.

Dust deposits may accumulate on all deposition surfaces in a technical room.

Danger of dust explosion.

### **Measures to protect the environment**

Avoid release to the environment.

### **Advice on general occupational hygiene**

Do not eat, drink and smoke in work areas.

Wash hands after use.

Preventive skin protection (barrier creams/ointments) is recommended.

Remove contaminated clothing and protective equipment before entering eating areas.

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

### **Explosive atmospheres**

Removal of dust deposits.

Only vacuum cleaners containing no ignition sources may be used for combustible dusts.

### **Flammability hazards**

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Take precautionary measures against static discharge.

Ground/bond container and receiving equipment.

### **Incompatible substances or mixtures**

Incompatible materials: see section 10.

### **Protect against external exposure, such as**

heat, humidity, UV-radiation/sunlight

### **Consideration of other advice**

Keep away from food, drink and animal feedingstuffs.

### **Ventilation requirements**

Provision of sufficient ventilation.

### **Specific designs for storage rooms or vessels**

#### **Storage temperature**

<25 °C

#### **Packaging compatibilities**

Keep only in original container.

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

No information available.

## [5] Chromogen (TMB)

### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)						
Country	Name of agent	Notation	Identifier	TWA [mg/m³]	STEL [mg/m³]	Source
GB	dust	i	WEL	10		EH40/2005
GB	dust	r	WEL	4		EH40/2005

##### Notation

i inhalable fraction

r respirable fraction

STEL short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period unless otherwise specified

TWA time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average

#### 8.2 Exposure controls

##### Appropriate engineering controls

General ventilation.

##### Individual protection measures (personal protective equipment)

##### Eye/face protection

Wear eye/face protection.

##### Hand protection

Material
these information are not available

Wear suitable gloves.

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

Check leak-tightness/impermeability prior to use.

In the case of wanting to use the gloves again, clean them before taking off and air them well.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

##### Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Particulate filter device (EN 143).

## [5] Chromogen (TMB)

### Environmental exposure controls

Use appropriate container to avoid environmental contamination.

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	solid
Form	powder
Colour	orange - brown
Odour	these information are not available
Odour threshold	these information are not available

#### Other safety parameters

pH (value)	these information are not available
Melting point/freezing point	these information are not available
Initial boiling point and boiling range	these information are not available
Flash point	not applicable
Evaporation rate	these information are not available
Flammability (solid, gas)	this material is combustible, but will not ignite readily
Explosion limits of dust clouds	not determined
Vapour pressure	these information are not available
Density	these information are not available
Vapour density	these information are not available
Relative density	these information are not available

#### Solubility(ies)

<b>Water solubility</b>	these information are not available
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#### Partition coefficient

n-octanol/water (log KOW)	these information are not available
Auto-ignition temperature	not relevant (Solid matter)
Relative self-ignition temperature for solids	these information are not available
Decomposition temperature	229 °C

## [5] Chromogen (TMB)

### Viscosity

#### Kinematic viscosity

not relevant  
(solid matter)

#### Dynamic viscosity

not relevant  
(solid matter)

Explosive properties

dust explosion hazards

Oxidising properties

shall not be classified as oxidising

### 9.2 Other information

None

## 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

Danger of dust explosion.

### 10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharge.

### 10.5 Incompatible materials

oxidisers

### 10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known.

Hazardous combustion products: see section 5.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

If not otherwise specified the classification is based on:

Animal studies; Evidence from any other toxicity tests; Expert judgement (weight of evidence determination).

## [5] Chromogen (TMB)

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### **Classification according to GHS (1272/2008/EC, CLP)**

#### **Acute toxicity**

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

#### **Skin corrosion/irritation**

Causes skin irritation.

#### **Serious eye damage/eye irritation**

Causes serious eye irritation.

#### **Respiratory or skin sensitisation**

##### **Skin sensitisation**

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

##### **Respiratory sensitisation**

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

#### **Germ cell mutagenicity**

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

#### **Carcinogenicity**

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

#### **Reproductive toxicity**

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

#### **Specific target organ toxicity - single exposure**

May cause respiratory irritation.

#### **Specific target organ toxicity - repeated exposure**

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

#### **Aspiration hazard**

Shall not be classified as presenting an aspiration hazard.

### SECTION 12: Ecological information

#### 12.1 Toxicity

##### **Aquatic toxicity (acute)**

No data available.

##### **Aquatic toxicity (chronic)**

No data available.

#### 12.2 Persistence and degradability

##### **Biodegradation**

Data are not available.

##### **Persistence**

Data are not available.

#### 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

According to the results of its assessment, this substance is not a PBT or a vPvB.

#### 12.6 Other adverse effects

Data are not available.

##### **Remarks**

Water hazard class - WHC (Wassergefährdungsklasse): 1 (Slightly hazardous to water)

### SECTION 13: Disposal considerations

#### 13.1 Waste treatment methods

This material and its container must be disposed of as hazardous waste.

##### **Sewage disposal-relevant information**

Do not empty into drains.

##### **Waste treatment of containers/packagings**

Handle contaminated packages in the same way as the substance itself.

##### **Remarks**

Please consider the relevant national or regional provisions.

## [5] Chromogen (TMB)

### SECTION 14: Transport information

**14.1 UN number** not subject to transport regulations

**14.2 UN proper shipping name** -

**14.3 Transport hazard class(es)**  
**Class** -

**14.4 Packing group** -

**14.5 Environmental hazards** -

**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)**

**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		



## [5] Chromogen (TMB)

### SECTION 16: Other information

#### Indication of changes (revised safety data sheet)

Indication of changes: Section Xxx

#### Abbreviations and acronyms

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)
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DGR	Dangerous Goods Regulations (see IATA/DGR)
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EH40/2005	EH40/2005 Workplace exposure limits ( <a href="http://www.nationalarchives.gov.uk/doc/open-government-licence/">http://www.nationalarchives.gov.uk/doc/open-government-licence/</a> )
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)
STEL	Short-term exposure limit
TWA	Time-weighted average
vPvB	Very Persistent and very Bioaccumulative

## [5] Chromogen (TMB)

### Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
WEL	Workplace exposure limit

### Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.

Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU.

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

International Maritime Dangerous Goods Code (IMDG).

Dangerous Goods Regulations (DGR) for the air transport (IATA).

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

List of relevant phrases (code and full text as stated in chapter 2 and 3)	
Code	Text
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

### Responsible for the safety data sheet

C.S.B. GmbH

Düsseldorfer Str. 113

47809 Krefeld

Telephone: +49 (0) 2151 - 652086 - 0

Telefax: +49 (0) 2151 - 652086 - 9

e-Mail: [info@csb-online.de](mailto:info@csb-online.de)

Website: [www.csb-online.de](http://www.csb-online.de)

### Disclaimer

This information is based upon the present state of our knowledge.

This SDS has been compiled and is solely intended for this product.



# Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)

## Wash Stock Solution (10X)

for ELISA kits

Version number: 3.0

Replaces version of: 2017-01-06 (2)

Revision: 2017-01-23

First version: 2016-11-23

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

#### 1.1 Product identifier

Trade name	<u>Wash Stock Solution (10X)</u>
Registration number (REACH)	not relevant (mixture)
CAS number	not relevant (mixture)

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

Relevant identified uses	Chemicals for various applications For research use
--------------------------	--

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

Wako Chemicals GmbH	Telephone: +49 (0) 2131 - 311-0
Fuggerstr. 12	Telefax: +49(0)2131 - 311 100
41468 Neuss	
Germany	

**e-mail (competent person)** [sdb@csb-online.de](mailto:sdb@csb-online.de)

Please do not use this e-mail adress to ask for the latest safety data sheet. For this purpose contact Wako Chemicals GmbH.

#### 1.4 Emergency telephone number

As above or next toxicological information centre.

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

for full text of abbreviations: see SECTION 16

##### Additional information

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

#### 2.2 Label elements

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

Signal word	not required
Pictograms	not required

# Wash Stock Solution (10X)

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## Supplemental hazard information

**EUH210** Safety data sheet available on request.

### 2.3 Other hazards

There is no additional information.

### Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

not relevant (mixture)

### 3.2 Mixtures

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General notes

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

#### Following inhalation

Provide fresh air.

#### Following skin contact

Wash with plenty of soap and water.

#### Following eye contact

Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

#### Following ingestion

Rinse mouth. Do not induce vomiting.

Get medical advice/attention if you feel unwell.

#### Notes for the doctor

none

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

These information are not available.

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

none

# Wash Stock Solution (10X)

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

water spray, alcohol resistant foam, fire extinguishing powder, carbon dioxide (CO<sub>2</sub>)

#### Unsuitable extinguishing media

water jet

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

Hazardous decomposition products: Section 10.

#### Hazardous combustion products

carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>)

### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes.

Co-ordinate firefighting measures to the fire surroundings.

Do not allow firefighting water to enter drains or water courses.

Collect contaminated firefighting water separately.

Fight fire with normal precautions from a reasonable distance.

#### Special protective equipment for firefighters

use suitable breathing apparatus

## SECTION 6: Accidental release measures

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

#### For non-emergency personnel

Ventilate affected area.

Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.

#### For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

### 6.2 Environmental precautions

Keep away from drains, surface and ground water.

Retain contaminated washing water and dispose of it.

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

#### Advices on how to clean up a spill

Collect spillage.

Absorbent material (e.g. sand, diatomaceous earth, acid binder, universal binder, sawdust, etc.).

# Wash Stock Solution (10X)

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## **Appropriate containment techniques**

Use of adsorbent materials.

## **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**

#### **Measures to prevent fire as well as aerosol and dust generation**

Use local and general ventilation.

Keep away from sources of ignition - No smoking.

#### **Specific notes/details**

None.

#### **Measures to protect the environment**

Avoid release to the environment.

#### **Advice on general occupational hygiene**

Do not eat, drink and smoke in work areas.

Wash hands after use.

Preventive skin protection (barrier creams/ointments) is recommended.

Remove contaminated clothing and protective equipment before entering eating areas.

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

#### **Flammability hazards**

None.

#### **Incompatible substances or mixtures**

Incompatible materials: see section 10.

#### **Protect against external exposure, such as**

heat, frost, UV-radiation/sunlight

#### **Consideration of other advice**

Keep away from food, drink and animal feedingstuffs.

# Wash Stock Solution (10X)

## Ventilation requirements

Provision of sufficient ventilation.

## Specific designs for storage rooms or vessels

### Storage temperature

<25 °C

## Packaging compatibilities

Keep only in original container.

## 7.3 Specific end use(s)

No information available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

No data available.

### 8.2 Exposure controls

#### Appropriate engineering controls

General ventilation.

#### Individual protection measures (personal protective equipment)

##### Eye/face protection

Wear eye/face protection.

##### Hand protection

Material
these information are not available

Wear suitable gloves.

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

Check leak-tightness/impermeability prior to use.

In the case of wanting to use the gloves again, clean them before taking off and air them well.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

#### Respiratory protection

In case of inadequate ventilation wear respiratory protection.

#### Environmental exposure controls

Use appropriate container to avoid environmental contamination.

Keep away from drains, surface and ground water.

# Wash Stock Solution (10X)

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

Physical state	liquid
Form	fluid
Colour	these information are not available
Odour	these information are not available
Odour threshold	these information are not available

#### Other safety parameters

pH (value)	7.2 - 7.4
Melting point/freezing point	these information are not available
Initial boiling point and boiling range	these information are not available
Flash point	these information are not available
Evaporation rate	these information are not available
Flammability (solid, gas)	not relevant (fluid)

#### Explosive limits

**Lower explosion limit (LEL)** these information are not available

**Upper explosion limit (UEL)** these information are not available

Vapour pressure these information are not available

Density these information are not available

Vapour density these information are not available

Relative density these information are not available

#### Solubility(ies)

**Water solubility** miscible in any proportion

#### Partition coefficient

n-octanol/water (log KOW) these information are not available

Auto-ignition temperature these information are not available

Relative self-ignition temperature for solids  
(Fluid) not relevant

Decomposition temperature these information are not available



## Wash Stock Solution (10X)

### Viscosity

#### Kinematic viscosity

these information are not available

#### Dynamic viscosity

these information are not available

#### Explosive properties

not explosive

#### Oxidising properties

shall not be classified as oxidising

### 9.2 Other information

None

## 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

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

### 10.5 Incompatible materials

oxidisers

### 10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known.

Hazardous combustion products: see section 5.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Classification procedure

If not otherwise specified the classification is based on:

Ingredients of the mixture (additivity formula).

#### Classification according to GHS (1272/2008/EC, CLP)

#### Acute toxicity

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

## Wash Stock Solution (10X)

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### **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**

#### **Skin sensitisation**

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

#### **Respiratory sensitisation**

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

### **Germ cell mutagenicity**

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

### **Carcinogenicity**

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

### **Reproductive toxicity**

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

### **Specific target organ toxicity - single exposure**

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

### **Specific target organ toxicity - repeated exposure**

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

### **Aspiration hazard**

Shall not be classified as presenting an aspiration hazard.

## SECTION 12: Ecological information

### 12.1 Toxicity

#### **Aquatic toxicity (acute)**

Test data are not available for the complete mixture.

#### **Aquatic toxicity (chronic)**

Test data are not available for the complete mixture.

## Wash Stock Solution (10X)

### 12.2 Persistence and degradability

#### Biodegradation

The relevant substances of the mixture are readily biodegradable.

#### Persistence

Data are not available.

### 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

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

### 12.6 Other adverse effects

Data are not available.

#### Remarks

Water hazard class - WHC (Wassergefährdungsklasse): 1 (Slightly hazardous to water)

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Dispose of contents/container in accordance with local/regional/national/international regulations.

#### Sewage disposal-relevant information

Do not empty into drains.

#### Waste treatment of containers/packagings

Handle contaminated packages in the same way as the substance itself.

#### Remarks

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	-
14.3	Transport hazard class(es)	
	Class	-
14.4	Packing group	-
14.5	Environmental hazards	-

## Wash Stock Solution (10X)

### 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

## SECTION 16: Other information

### Indication of changes (revised safety data sheet)

Indication of changes (revised safety data sheet)		
Section	Former entry (text/value)	Actual entry (text/value)
1.1	Trade name: [6] Wash Stock Solution (10X)	Trade name: Wash Stock Solution (10X)

### Abbreviations and acronyms

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)
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DGR	Dangerous Goods Regulations (see IATA/DGR)

## Wash Stock Solution (10X)

Abbreviations and acronyms	
Abbr.	Descriptions of used abbreviations
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")
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)
vPvB	Very Persistent and very Bioaccumulative

### Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.

Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU.

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

International Maritime Dangerous Goods Code (IMDG).

Dangerous Goods Regulations (DGR) for the air transport (IATA).

### Classification procedure

Physical and chemical properties.

Health hazards.

Environmental hazards.

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

### Responsible for the safety data sheet

C.S.B. GmbH

Düsseldorfer Str. 113

47809 Krefeld

Telephone: +49 (0) 2151 - 652086 - 0

Telefax: +49 (0) 2151 - 652086 - 9

e-Mail: [info@csb-online.de](mailto:info@csb-online.de)

Website: [www.csb-online.de](http://www.csb-online.de)

### Disclaimer

This information is based upon the present state of our knowledge.

This SDS has been compiled and is solely intended for this product.



# Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)

## [7] Buffer

Lbis Rat LH ELISA KIT (630-23929)

Version number: 1.0

First version: 2017-03-09

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

#### 1.1 Product identifier

Trade name	<u>[7] Buffer</u>
Registration number (REACH)	not relevant (mixture)
CAS number	not relevant (mixture)

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

Relevant identified uses	Chemicals for various applications For research use
--------------------------	--

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

Wako Chemicals GmbH	Telephone: +49 (0) 2131 - 311-0
Fuggerstr. 12	Telefax: +49(0)2131 - 311 100
41468 Neuss	
Germany	

**e-mail (competent person)** sdb@csb-online.de

Please do not use this e-mail adress to ask for the latest safety data sheet. For this purpose contact Wako Chemicals GmbH.

#### 1.4 Emergency telephone number

As above or next toxicological information centre.

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

for full text of abbreviations: see SECTION 16

##### Additional information

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

#### 2.2 Label elements

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

**Signal word** not required

**Pictograms** not required

## [7] Buffer

### Supplemental hazard information

**EUH208** Contains reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1). May produce an allergic reaction.

### 2.3 Other hazards

There is no additional information.

### Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.


## SECTION 3: Composition/information on ingredients

### 3.1 Substances

not relevant (mixture)

### 3.2 Mixtures

#### Description of the mixture

Hazardous ingredients acc. to GHS				
Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	CAS No 55965-84-9  Index No 613-167-00-5	< 1	Acute Tox. 3 / H301 Acute Tox. 2 / H310 Acute Tox. 2 / H330 Skin Corr. 1B / H314 Eye Dam. 1 / H318 Skin Sens. 1 / H317 Aquatic Acute 1 / H400 Aquatic Chronic 1 / H410	

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General notes

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

#### Following inhalation

Provide fresh air.

#### Following skin contact

Wash with plenty of soap and water.

### **Following eye contact**

Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

### **Following ingestion**

Rinse mouth. Do not induce vomiting.

Get medical advice/attention if you feel unwell.

### **Notes for the doctor**

none

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

These information are not available.

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

none

## **SECTION 5: Firefighting measures**

### **5.1 Extinguishing media**

#### **Suitable extinguishing media**

water spray, alcohol resistant foam, fire extinguishing powder, carbon dioxide (CO<sub>2</sub>)

#### **Unsuitable extinguishing media**

water jet

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

Hazardous decomposition products: Section 10.

#### **Hazardous combustion products**

carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>), sulphur oxides (SO<sub>x</sub>)

### **5.3 Advice for firefighters**

In case of fire and/or explosion do not breathe fumes.

Co-ordinate firefighting measures to the fire surroundings.

Do not allow firefighting water to enter drains or water courses.

Collect contaminated firefighting water separately.

Fight fire with normal precautions from a reasonable distance.

#### **Special protective equipment for firefighters**

use suitable breathing apparatus



### SECTION 6: Accidental release measures

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

##### For non-emergency personnel

Ventilate affected area.

Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.

##### For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

#### 6.2 Environmental precautions

Keep away from drains, surface and ground water.

Retain contaminated washing water and dispose of it.

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

##### Advices on how to clean up a spill

Collect spillage.

Absorbent material (e.g. sand, diatomaceous earth, acid binder, universal binder, sawdust, etc.).

##### Appropriate containment techniques

Use of adsorbent materials.

##### 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

##### Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation.

Keep away from sources of ignition - No smoking.

##### Specific notes/details

None.

### **Measures to protect the environment**

Avoid release to the environment.

### **Advice on general occupational hygiene**

Do not eat, drink and smoke in work areas.

Wash hands after use.

Preventive skin protection (barrier creams/ointments) is recommended.

Remove contaminated clothing and protective equipment before entering eating areas.

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

### **Flammability hazards**

None.

### **Incompatible substances or mixtures**

Incompatible materials: see section 10.

### **Protect against external exposure, such as**

heat, frost, UV-radiation/sunlight

### **Consideration of other advice**

Keep away from food, drink and animal feedingstuffs.

### **Ventilation requirements**

Provision of sufficient ventilation.

### **Specific designs for storage rooms or vessels**

#### **Storage temperature**

2 - 10 °C

### **Packaging compatibilities**

Keep only in original container.

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

No information available.

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

### **8.1 Control parameters**

No data available.

### **8.2 Exposure controls**

#### **Appropriate engineering controls**

General ventilation.

#### **Individual protection measures (personal protective equipment)**

##### **Eye/face protection**

Wear eye/face protection.

## [7] Buffer

### Hand protection

Material
these information are not available

Wear suitable gloves.

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

Check leak-tightness/impermeability prior to use.

In the case of wanting to use the gloves again, clean them before taking off and air them well.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

### Respiratory protection

In case of inadequate ventilation wear respiratory protection.

### Environmental exposure controls

Use appropriate container to avoid environmental contamination.

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
Form	fluid
Colour	these information are not available
Odour	these information are not available
Odour threshold	these information are not available

#### Other safety parameters

pH (value)	7.4 - 7.6
Melting point/freezing point	these information are not available
Initial boiling point and boiling range	~100 °C
Flash point	these information are not available
Evaporation rate	these information are not available
Flammability (solid, gas)	not relevant (fluid)

## [7] Buffer

### Explosive limits

#### Lower explosion limit (LEL)

these information are not available

#### Upper explosion limit (UEL)

these information are not available

Vapour pressure

these information are not available

Density

~1 g/cm<sup>3</sup> at 20 °C

Vapour density

these information are not available

Relative density

these information are not available

### Solubility(ies)

#### Water solubility

miscible in any proportion

#### Partition coefficient

n-octanol/water (log KOW)

these information are not available

Auto-ignition temperature

these information are not available

Relative self-ignition temperature for solids

not relevant  
(Fluid)

Decomposition temperature

these information are not available

### Viscosity

#### Kinematic viscosity

these information are not available

#### Dynamic viscosity

these information are not available

Explosive properties

not explosive

Oxidising properties

shall not be classified as oxidising

## 9.2 Other information

None

## 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.

## [7] Buffer

### 10.3 Possibility of hazardous reactions

No known hazardous reactions.

### 10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

### 10.5 Incompatible materials

oxidisers

### 10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known.

Hazardous combustion products: see section 5.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Classification procedure

If not otherwise specified the classification is based on:

Ingredients of the mixture (additivity formula).

#### Classification according to GHS (1272/2008/EC, CLP)

#### Acute toxicity

Acute toxicity estimate (ATE) of components of the mixture			
Name of substance	CAS No	Exposure route	ATE
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9	oral	64 mg/kg
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9	dermal	87 mg/kg
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9	inhalation: vapour	0.5 mg/l/4h
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9	inhalation: dust/mist	0.33 mg/l/4h

#### 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**

Contains reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1). May produce an allergic reaction.

**Skin sensitisation**

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

**Respiratory sensitisation**

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

**Germ cell mutagenicity**

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

**Carcinogenicity**

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

**Reproductive toxicity**

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

**Specific target organ toxicity - single exposure**

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

**Specific target organ toxicity - repeated exposure**

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

**Aspiration hazard**

Shall not be classified as presenting an aspiration hazard.

## SECTION 12: Ecological information

### 12.1 Toxicity

**Aquatic toxicity (acute)**

Test data are not available for the complete mixture.

**Aquatic toxicity (chronic)**

Test data are not available for the complete mixture.

### 12.2 Persistence and degradability

#### Biodegradation

Data are not available.

#### Persistence

Data are not available.

### 12.3 Bioaccumulative potential

Data are not available.

Bioaccumulative potential of components of the mixture		
Name of substance	CAS No	BCF
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9	54

### 12.4 Mobility in soil

Data are not available.

### 12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

### 12.6 Other adverse effects

Data are not available.

#### Endocrine disrupting potential

None of the ingredients are listed.

#### Remarks

Water hazard class - WHC (Wassergefährdungsklasse): 1 (Slightly hazardous to water)

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Dispose of contents/container in accordance with local/regional/national/international regulations.

#### Sewage disposal-relevant information

Do not empty into drains.

#### Waste treatment of containers/packagings

Handle contaminated packages in the same way as the substance itself.

## [7] Buffer

### Remarks

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** -

**14.3 Transport hazard class(es)**  
**Class** -

**14.4 Packing group** -

**14.5 Environmental hazards** -

**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)**

**Restrictions according to REACH, Annex XVII**  
none of the ingredients are listed

**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



## [7] Buffer

### 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

## SECTION 16: Other information

### Abbreviations and acronyms

Abbreviations and acronyms	
Abbr.	Descriptions of used abbreviations
Acute Tox.	Acute toxicity
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)
Aquatic Acute	Hazardous to the aquatic environment - acute hazard
Aquatic Chronic	Hazardous to the aquatic environment - chronic hazard
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DGR	Dangerous Goods Regulations (see IATA/DGR)
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
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)

## [7] Buffer

Abbreviations and acronyms	
Abbr.	Descriptions of used abbreviations
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code
index No	The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
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)
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
Skin Sens.	Skin sensitisation
vPvB	Very Persistent and very Bioaccumulative

### Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.

Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU.

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

International Maritime Dangerous Goods Code (IMDG).

Dangerous Goods Regulations (DGR) for the air transport (IATA).

### Classification procedure

Physical and chemical properties.

Health hazards.

Environmental hazards.

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

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

List of relevant phrases (code and full text as stated in chapter 2 and 3)	
Code	Text
H301	Toxic if swallowed.
H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.

## [7] Buffer

List of relevant phrases (code and full text as stated in chapter 2 and 3)	
Code	Text
H330	Fatal if inhaled.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

### Responsible for the safety data sheet

C.S.B. GmbH  
Düsseldorfer Str. 113  
47809 Krefeld

Telephone: +49 (0) 2151 - 652086 - 0  
Telefax: +49 (0) 2151 - 652086 - 9  
e-Mail: [info@csb-online.de](mailto:info@csb-online.de)  
Website: [www.csb-online.de](http://www.csb-online.de)

### Disclaimer

This information is based upon the present state of our knowledge.  
This SDS has been compiled and is solely intended for this product.



# Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)

## Stop Solution (1 mol/L sulfuric acid)

for ELISA kits

Version number: 4.0

Replaces version of: 2017-01-23 (3)

Revision: 2017-03-03

First version: 2016-10-27

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

#### 1.1 Product identifier

Trade name	<u>Stop Solution (1 mol/L sulfuric acid)</u>
Registration number (REACH)	not relevant (mixture)
CAS number	not relevant (mixture)

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

Relevant identified uses	Chemicals for various applications For research use
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#### 1.3 Details of the supplier of the safety data sheet

Wako Chemicals GmbH  
Fuggerstr. 12  
41468 Neuss  
Germany

Telephone: +49 (0) 2131 - 311-0  
Telefax: +49(0)2131 - 311 100

**e-mail (competent person)** [sdb@csb-online.de](mailto:sdb@csb-online.de)

Please do not use this e-mail adress to ask for the latest safety data sheet. For this purpose contact Wako Chemicals GmbH.

#### 1.4 Emergency telephone number

As above or next toxicological information centre.

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

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

Classification acc. to GHS				
Section	Hazard class	Category	Hazard class and category	Hazard statement
2.16	substance or mixture corrosive to metals	1	Met. Corr. 1	H290
3.2	skin corrosion/irritation	2	Skin Irrit. 2	H315
3.3	serious eye damage/eye irritation	2	Eye Irrit. 2	H319

# Stop Solution (1 mol/L sulfuric acid)

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for full text of abbreviations: see SECTION 16

## Additional information

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

## 2.2 Label elements

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

**Signal word** warning

### Pictograms

**GHS05**



### Hazard statements

**H290** May be corrosive to metals.

**H315** Causes skin irritation.

**H319** Causes serious eye irritation.

### Precautionary statements

**P280** Wear protective gloves/protective clothing/eye protection/face protection.

**P312** Call a POISON CENTER/doctor if you feel unwell.

### Labelling of packages where the contents do not exceed 125 ml

**Signal word** warning

### Hazard pictogram(s)

Warning. **GHS05**



### Hazard statements

## 2.3 Other hazards

There is no additional information.

### Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

# Stop Solution (1 mol/L sulfuric acid)


## SECTION 3: Composition/information on ingredients

### 3.1 Substances

not relevant (mixture)

### 3.2 Mixtures

#### Description of the mixture

Hazardous ingredients acc. to GHS				
Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms
sulfuric acid	CAS No 7664-93-9  EC No 231-639-5  Index No 016-020-00-8	5 - < 10	Met. Corr. 1 / H290 Skin Corr. 1A / H314 Eye Dam. 1 / H318	

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General notes

Take off immediately all contaminated clothing.

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

#### Following inhalation

Provide fresh air.

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions.

#### Following skin contact

Wash with plenty of soap and water.

#### Following eye contact

Rinse cautiously with water for several minutes.

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Remove contact lenses, if present and easy to do. Continue rinsing.

#### Following ingestion

Rinse mouth. Do not induce vomiting.

Get medical advice/attention if you feel unwell.

# Stop Solution (1 mol/L sulfuric acid)

## Notes for the doctor

none

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

These information are not available.

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

none

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

water spray, alcohol resistant foam, fire extinguishing powder, carbon dioxide (CO<sub>2</sub>)

#### Unsuitable extinguishing media

water jet

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

Hazardous decomposition products: Section 10.

Substance or mixture corrosive to metals.

### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes.

Co-ordinate firefighting measures to the fire surroundings.

Do not allow firefighting water to enter drains or water courses.

Collect contaminated firefighting water separately.

Fight fire with normal precautions from a reasonable distance.

#### Special protective equipment for firefighters

use suitable breathing apparatus

## SECTION 6: Accidental release measures

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

#### For non-emergency personnel

Remove persons to safety.

Ventilate affected area.

Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.

#### For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

## Stop Solution (1 mol/L sulfuric acid)

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### 6.2 Environmental precautions

Keep away from drains, surface and ground water.  
Retain contaminated washing water and dispose of it.

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

#### Advices on how to clean up a spill

Collect spillage.  
Absorbent material (e.g. sand, diatomaceous earth, acid binder, universal binder, sawdust, etc.).

#### Appropriate containment techniques

Neutralisation techniques.  
Use of adsorbent materials.

#### Other information relating to spills and releases

Place in appropriate containers for disposal.  
Ventilate affected area.

### 6.4 Reference to other sections

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

#### Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation.

#### Specific notes/details

None.

#### Handling of incompatible substances or mixtures

Do not mix with alkali.

#### Keep away from

organic absorbing material, pulp/paper

#### Measures to protect the environment

Avoid release to the environment.

#### Advice on general occupational hygiene

Do not eat, drink and smoke in work areas.  
Wash hands after use.  
Preventive skin protection (barrier creams/ointments) is recommended.  
Remove contaminated clothing and protective equipment before entering eating areas.



# Stop Solution (1 mol/L sulfuric acid)

## 7.2 Conditions for safe storage, including any incompatibilities

### Corrosive conditions

Store in corrosive resistant container with a resistant inner liner.

### Flammability hazards

None.

### Incompatible substances or mixtures

Incompatible materials: see section 10.

Observe hints for combined storage.

### Protect against external exposure, such as

heat, frost

### Consideration of other advice

Keep away from food, drink and animal feedingstuffs.

### Ventilation requirements

Provision of sufficient ventilation.

### Packaging compatibilities

Only packagings which are approved (e.g. acc. to ADR) may be used.

## 7.3 Specific end use(s)

No information available.

## SECTION 8: Exposure controls/personal protection

## 8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)							
Country	Name of agent	CAS No	Notation	Identifier	TWA [mg/m <sup>3</sup> ]	STEL [mg/m <sup>3</sup> ]	Source
EU	sulphuric acid	7664-93-9	t, mist	IOELV	0.05		2009/161/EU
GB	sulphuric acid	7664-93-9	t, mist	WEL	0.05		EH40/2005

### Notation

mist as mists

STEL short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period unless otherwise specified

t thoracic fraction

TWA time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average

## Stop Solution (1 mol/L sulfuric acid)

Relevant DNELs of components of the mixture						
Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
sulfuric acid	7664-93-9	DNEL	0.05 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - local effects

Relevant PNECs of components of the mixture				
Name of substance	CAS No	Endpoint	Threshold level	Environmental compartment
sulfuric acid	7664-93-9	PNEC	2 mg/cm <sup>3</sup>	soil
sulfuric acid	7664-93-9	PNEC	0.25 mg/cm <sup>3</sup>	marine water
sulfuric acid	7664-93-9	PNEC	2.5 mg/cm <sup>3</sup>	freshwater
sulfuric acid	7664-93-9	PNEC	8.8 mg/cm <sup>3</sup>	sewage treatment plant (STP)
sulfuric acid	7664-93-9	PNEC	0.003 mg/l	freshwater
sulfuric acid	7664-93-9	PNEC	0 mg/l	marine water
sulfuric acid	7664-93-9	PNEC	8.8 mg/l	sewage treatment plant (STP)
sulfuric acid	7664-93-9	PNEC	0.002 mg/kg	freshwater sediment
sulfuric acid	7664-93-9	PNEC	0.002 mg/kg	marine sediment

## 8.2 Exposure controls

### Appropriate engineering controls

General ventilation.

### Individual protection measures (personal protective equipment)

#### Eye/face protection

Wear eye/face protection.

#### Hand protection

Material
these information are not available

## Stop Solution (1 mol/L sulfuric acid)

Wear suitable gloves.

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

Check leak-tightness/impermeability prior to use.

In the case of wanting to use the gloves again, clean them before taking off and air them well.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

### Respiratory protection

In case of inadequate ventilation wear respiratory protection.

### Environmental exposure controls

Use appropriate container to avoid environmental contamination.

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
Form	fluid
Colour	colourless
Odour	odourless
Odour threshold	these information are not available

#### Other safety parameters

pH (value)	≤1, acid
Melting point/freezing point	these information are not available
Initial boiling point and boiling range	100 °C
Flash point	not applicable
Evaporation rate	these information are not available
Flammability (solid, gas)	not relevant (fluid)

#### Explosive limits

Lower explosion limit (LEL)	these information are not available
Upper explosion limit (UEL)	these information are not available
Vapour pressure	these information are not available
Density	1.1 g/cm <sup>3</sup>
Vapour density	these information are not available
Relative density	these information are not available

## Stop Solution (1 mol/L sulfuric acid)

### Solubility(ies)

**Water solubility** miscible in any proportion

### Partition coefficient

n-octanol/water (log KOW) these information are not available

Auto-ignition temperature these information are not available

Relative self-ignition temperature for solids not relevant  
(Fluid)

Decomposition temperature these information are not available

### Viscosity

**Kinematic viscosity** these information are not available

**Dynamic viscosity** these information are not available

Explosive properties not explosive

Oxidising properties shall not be classified as oxidising

## 9.2 Other information

None

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Substance or mixture corrosive to metals.

### 10.2 Chemical stability

See below "Conditions to avoid".

### 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

bases

Release of flammable materials with:

light metals (due to the release of hydrogen in an acid/alkaline medium)

## Stop Solution (1 mol/L sulfuric acid)

### 10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Classification procedure

The mixture does not contain a substance with a skin corrosion/irritation above its concentration limit.

#### Classification according to GHS (1272/2008/EC, CLP)

#### Acute toxicity

Acute toxicity of components of the mixture					
Name of substance	CAS No	Exposure route	Endpoint	Value	Species
sulfuric acid	7664-93-9	oral	LD50	1,540 - 2,990 mg/kg	rat

#### Skin corrosion/irritation

Causes skin irritation.

#### Classification procedure

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 (CLP).

#### Serious eye damage/eye irritation

Causes serious eye irritation.

#### Respiratory or skin sensitisation

##### Skin sensitisation

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

##### Respiratory sensitisation

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

#### Germ cell mutagenicity

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

## Stop Solution (1 mol/L sulfuric acid)

### Carcinogenicity

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

### Reproductive toxicity

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

### Specific target organ toxicity - single exposure

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

### Specific target organ toxicity - repeated exposure

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

### Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

## SECTION 12: Ecological information

### 12.1 Toxicity

#### Aquatic toxicity (acute)

Test data are not available for the complete mixture.

#### Aquatic toxicity (acute) of components of the mixture

Aquatic toxicity (acute) of components of the mixture					
Name of substance	CAS No	Endpoint	Value	Species	Exposure time
sulfuric acid	7664-93-9	EC50	>100 mg/l	daphnia magna	48 h
sulfuric acid	7664-93-9	ErC50	>100 mg/l	algae (Desmod-esmus subspicatus)	72 h
sulfuric acid	7664-93-9	LC50	16 - 28 mg/l	blue sunfish (Lepomis macrochirus)	96 h

#### Aquatic toxicity (chronic)

Test data are not available for the complete mixture.

### 12.2 Persistence and degradability

#### Biodegradation

The relevant substances of the mixture are readily biodegradable.

## Stop Solution (1 mol/L sulfuric acid)

### Persistence

Data are not available.

### 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

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

### 12.6 Other adverse effects

Data are not available.

### Endocrine disrupting potential

None of the ingredients are listed.

### Remarks

Water hazard class - WHC (Wassergefährdungsklasse): 1 (Slightly hazardous to water)

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

This material and its container must be disposed of as hazardous waste.

### Sewage disposal-relevant information

Do not empty into drains.

### Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used.

Handle contaminated packages in the same way as the substance itself.

### Remarks

Please consider the relevant national or regional provisions.

## SECTION 14: Transport information

14.1	UN number	2796
14.2	UN proper shipping name	SULPHURIC ACID
14.3	Transport hazard class(es)	
	Class	8
14.4	Packing group	II
14.5	Environmental hazards	non-environmentally hazardous acc. to the dangerous goods regulations

## Stop Solution (1 mol/L sulfuric acid)

---

### 14.6 Special precautions for user


Provisions for dangerous goods (ADR) should be complied within the premises.

### 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)


UN number	2796
Proper shipping name	UN2796, SULPHURIC ACID, 8, II, (E)
Class	8
Classification code	C1
Packing group	II
Danger label(s)	8
	
Excepted quantities (EQ)	E2
Limited quantities (LQ)	1 L
Transport category (TC)	2.
Tunnel restriction code (TRC)	E
Hazard identification No	80
Emergency Action Code	2R

#### International Maritime Dangerous Goods Code (IMDG)

UN number	2796
Proper shipping name	UN2796, SULPHURIC ACID, 8, II
Class	8
Packing group	II
Danger label(s)	8
	
Special provisions (SP)	-
Excepted quantities (EQ)	E2
Limited quantities (LQ)	1 L
EmS	F-A, S-B



## Stop Solution (1 mol/L sulfuric acid)

Stowage category	B
Segregation group	1 - Acids
<b>International Civil Aviation Organization (ICAO-IATA/DGR)</b>	
UN number	2796
Proper shipping name	UN2796, Sulphuric acid, 8, II
Class	8
Packing group	II
Danger label(s)	8
	
Excepted quantities (EQ)	E2
Limited quantities (LQ)	0,5 L

### 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)

##### Restrictions according to REACH, Annex XVII

none of the ingredients are listed

##### List of substances subject to authorisation (REACH, Annex XIV)

none of the ingredients are listed

##### 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

# Stop Solution (1 mol/L sulfuric acid)

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

Explosives precursors which are subject to restrictions			
Name of substance	CAS No	Type of registration	Limit value
sulfuric acid	7664-93-9	Annex II	

### Legend

annex II Substances on their own or in mixtures or in substances for which suspicious transactions shall be reported

## SECTION 16: Other information

### Indication of changes (revised safety data sheet)

Indication of changes (revised safety data sheet)		
Section	Former entry (text/value)	Actual entry (text/value)
2.2		Precautionary statements: change in the listing (table)
2.2		Labelling of packages where the contents do not exceed 125 ml
2.2		Signal word: warning
2.2		Hazard pictogram(s): change in the listing (table)
2.2		Hazard statements: change in the listing (table)

### Abbreviations and acronyms

Abbreviations and acronyms	
Abbr.	Descriptions of used abbreviations
2009/161/EU	Commission Directive establishing a third list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC and amending Commission Directive 2000/39/EC
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)
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)

## Stop Solution (1 mol/L sulfuric acid)

Abbreviations and acronyms	
Abbr.	Descriptions of used abbreviations
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EH40/2005	EH40/2005 Workplace exposure limits ( <a href="http://www.nationalarchives.gov.uk/doc/open-government-licence/">http://www.nationalarchives.gov.uk/doc/open-government-licence/</a> )
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
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
index No	The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
IOELV	Indicative occupational exposure limit value
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
Met. Corr.	Substance or mixture corrosive to metals
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
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)
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
STEL	Short-term exposure limit

## Stop Solution (1 mol/L sulfuric acid)

Abbreviations and acronyms	
Abbr.	Descriptions of used abbreviations
TWA	Time-weighted average
vPvB	Very Persistent and very Bioaccumulative
WEL	Workplace exposure limit

### Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.

Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU.

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

International Maritime Dangerous Goods Code (IMDG).

Dangerous Goods Regulations (DGR) for the air transport (IATA).

### Classification procedure

Physical and chemical properties.

Health hazards.

Environmental hazards.

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

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

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

### Responsible for the safety data sheet

C.S.B. GmbH  
Düsseldorfer Str. 113  
47809 Krefeld

Telephone: +49 (0) 2151 - 652086 - 0  
Telefax: +49 (0) 2151 - 652086 - 9  
e-Mail: [info@csb-online.de](mailto:info@csb-online.de)  
Website: [www.csb-online.de](http://www.csb-online.de)

## Stop Solution (1 mol/L sulfuric acid)

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### **Disclaimer**

This information is based upon the present state of our knowledge.  
This SDS has been compiled and is solely intended for this product.



# Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)

## [8] Sample dilution buffer

Lbis Rat LH ELISA KIT (630-23929)

Version number: 1.0

First version: 2017-03-10

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

#### 1.1 Product identifier

**Trade name** [8] Sample dilution buffer

**Registration number (REACH)** not relevant (mixture)

**CAS number** not relevant (mixture)

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

**Relevant identified uses** Chemicals for various applications  
For research use

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

Wako Chemicals GmbH  
Fuggerstr. 12  
41468 Neuss  
Germany

Telephone: +49 (0) 2131 - 311-0  
Telefax: +49(0)2131 - 311 100

**e-mail (competent person)** [sdb@csb-online.de](mailto:sdb@csb-online.de)

Please do not use this e-mail adress to ask for the latest safety data sheet. For this purpose contact Wako Chemicals GmbH.

#### 1.4 Emergency telephone number

As above or next toxicological information centre.

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

for full text of abbreviations: see SECTION 16

##### Additional information

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

#### 2.2 Label elements

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

**Signal word** not required

**Pictograms** not required

## [8] Sample dilution buffer

### Supplemental hazard information

**EUH208** Contains reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1). May produce an allergic reaction.

**EUH210** Safety data sheet available on request.

### 2.3 Other hazards

There is no additional information.

### Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.



## SECTION 3: Composition/information on ingredients

### 3.1 Substances

not relevant (mixture)

### 3.2 Mixtures

#### Description of the mixture

Hazardous ingredients acc. to GHS				
Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms
Tris(hydroxymethyl)aminomethane	CAS No 77-86-1  EC No 201-064-4	1 - < 5	Skin Irrit. 2 / H315 Eye Irrit. 2 / H319	
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	CAS No 55965-84-9  Index No 613-167-00-5	< 1	Acute Tox. 3 / H301 Acute Tox. 2 / H310 Acute Tox. 2 / H330 Skin Corr. 1B / H314 Eye Dam. 1 / H318 Skin Sens. 1 / H317 Aquatic Acute 1 / H400 Aquatic Chronic 1 / H410	

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General notes

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

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### **Following inhalation**

Provide fresh air.

### **Following skin contact**

Wash with plenty of soap and water.

### **Following eye contact**

Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

### **Following ingestion**

Rinse mouth. Do not induce vomiting.

Get medical advice/attention if you feel unwell.

### **Notes for the doctor**

none

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

These information are not available.

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

none

## **SECTION 5: Firefighting measures**

### **5.1 Extinguishing media**

#### **Suitable extinguishing media**

water spray, alcohol resistant foam, fire extinguishing powder, carbon dioxide (CO<sub>2</sub>)

#### **Unsuitable extinguishing media**

water jet

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

Hazardous decomposition products: Section 10.

#### **Hazardous combustion products**

nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>), sulphur oxides (SO<sub>x</sub>)

### **5.3 Advice for firefighters**

In case of fire and/or explosion do not breathe fumes.

Co-ordinate firefighting measures to the fire surroundings.

Do not allow firefighting water to enter drains or water courses.

Collect contaminated firefighting water separately.

Fight fire with normal precautions from a reasonable distance.

#### **Special protective equipment for firefighters**

use suitable breathing apparatus



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### SECTION 6: Accidental release measures

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

##### For non-emergency personnel

Ventilate affected area.

Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.

##### For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

#### 6.2 Environmental precautions

Keep away from drains, surface and ground water.

Retain contaminated washing water and dispose of it.

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

##### Advices on how to clean up a spill

Collect spillage.

Absorbent material (e.g. sand, diatomaceous earth, acid binder, universal binder, sawdust, etc.).

##### Appropriate containment techniques

Use of adsorbent materials.

##### 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

##### Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation.

Keep away from sources of ignition - No smoking.

##### Specific notes/details

None.

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### **Measures to protect the environment**

Avoid release to the environment.

### **Advice on general occupational hygiene**

Do not eat, drink and smoke in work areas.

Wash hands after use.

Preventive skin protection (barrier creams/ointments) is recommended.

Remove contaminated clothing and protective equipment before entering eating areas.

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

### **Flammability hazards**

None.

### **Incompatible substances or mixtures**

Incompatible materials: see section 10.

### **Protect against external exposure, such as**

heat, frost, UV-radiation/sunlight

### **Consideration of other advice**

Keep away from food, drink and animal feedingstuffs.

### **Ventilation requirements**

Provision of sufficient ventilation.

### **Specific designs for storage rooms or vessels**

### **Storage temperature**

2 - 10 °C

### **Packaging compatibilities**

Keep only in original container.

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

No information available.

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

### **8.1 Control parameters**

No data available.

### **8.2 Exposure controls**

#### **Appropriate engineering controls**

General ventilation.

#### **Individual protection measures (personal protective equipment)**

#### **Eye/face protection**

Wear eye/face protection.

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### Hand protection

Material
these information are not available

Wear suitable gloves.

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

Check leak-tightness/impermeability prior to use.

In the case of wanting to use the gloves again, clean them before taking off and air them well.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

### Respiratory protection

In case of inadequate ventilation wear respiratory protection.

### Environmental exposure controls

Use appropriate container to avoid environmental contamination.

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
Form	fluid
Colour	these information are not available
Odour	these information are not available
Odour threshold	these information are not available

#### Other safety parameters

pH (value)	7.4 - 7.6
Melting point/freezing point	these information are not available
Initial boiling point and boiling range	~100 °C
Flash point	these information are not available
Evaporation rate	these information are not available
Flammability (solid, gas)	not relevant (fluid)

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### Explosive limits

#### Lower explosion limit (LEL)

these information are not available

#### Upper explosion limit (UEL)

these information are not available

Vapour pressure

these information are not available

Density

~1 g/cm<sup>3</sup> at 20 °C

Vapour density

these information are not available

Relative density

these information are not available

### Solubility(ies)

#### Water solubility

miscible in any proportion

#### Partition coefficient

n-octanol/water (log KOW)

these information are not available

Auto-ignition temperature

these information are not available

Relative self-ignition temperature for solids

not relevant  
(Fluid)

Decomposition temperature

these information are not available

### Viscosity

#### Kinematic viscosity

these information are not available

#### Dynamic viscosity

these information are not available

Explosive properties

not explosive

Oxidising properties

shall not be classified as oxidising

## 9.2 Other information

None

## 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.

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### 10.3 Possibility of hazardous reactions

No known hazardous reactions.

### 10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

### 10.5 Incompatible materials

oxidisers

### 10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known.

Hazardous combustion products: see section 5.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Classification procedure

If not otherwise specified the classification is based on:

Ingredients of the mixture (additivity formula).

#### Classification according to GHS (1272/2008/EC, CLP)

#### Acute toxicity

Acute toxicity estimate (ATE) of components of the mixture			
Name of substance	CAS No	Exposure route	ATE
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9	oral	64 mg/kg
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9	dermal	87 mg/kg
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9	inhalation: vapour	0.5 mg/l/4h
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9	inhalation: dust/mist	0.33 mg/l/4h

Acute toxicity of components of the mixture					
Name of substance	CAS No	Exposure route	Endpoint	Value	Species
Tris(hydroxymethyl)aminomethane	77-86-1	oral	LD50	>5,000 mg/kg	rat
Tris(hydroxymethyl)aminomethane	77-86-1	dermal	LD50	>5,000 mg/kg	rat

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### **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**

Contains reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1). May produce an allergic reaction.

### **Skin sensitisation**

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

### **Respiratory sensitisation**

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

### **Germ cell mutagenicity**

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

### **Carcinogenicity**

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

### **Reproductive toxicity**

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

### **Specific target organ toxicity - single exposure**

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

### **Specific target organ toxicity - repeated exposure**

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

### **Aspiration hazard**

Shall not be classified as presenting an aspiration hazard.

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### SECTION 12: Ecological information

#### 12.1 Toxicity

##### Aquatic toxicity (acute)

Test data are not available for the complete mixture.

Aquatic toxicity (acute) of components of the mixture					
Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Tris(hydroxymethyl)aminomethane	77-86-1	EC50	>980 mg/l	aquatic invertebrates	48 h

##### Aquatic toxicity (chronic)

Test data are not available for the complete mixture.

#### 12.2 Persistence and degradability

Degradability of components of the mixture					
Name of substance	CAS No	Process	Degradation rate	Time	Source
Tris(hydroxymethyl)aminomethane	77-86-1	oxygen depletion	100.7 %	28 d	ECHA
Tris(hydroxymethyl)aminomethane	77-86-1	carbon dioxide generation	65.9 %	28 d	ECHA
Tris(hydroxymethyl)aminomethane	77-86-1	DOC removal	97.1 %	28 d	ECHA

##### Biodegradation

Data are not available.

##### Persistence

Data are not available.

#### 12.3 Bioaccumulative potential

Data are not available.

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Bioaccumulative potential of components of the mixture			
Name of substance	CAS No	BCF	Log KOW
Tris(hydroxymethyl)amino-methane	77-86-1		-2.31
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9	54	

### 12.4 Mobility in soil

Data are not available.

### 12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

### 12.6 Other adverse effects

Data are not available.

#### Endocrine disrupting potential

None of the ingredients are listed.

#### Remarks

Water hazard class - WHC (Wassergefährdungsklasse): 1 (Slightly hazardous to water)

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Dispose of contents/container in accordance with local/regional/national/international regulations.

#### Sewage disposal-relevant information

Do not empty into drains.

#### Waste treatment of containers/packagings

Handle contaminated packages in the same way as the substance itself.

#### Remarks

Please consider the relevant national or regional provisions.



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### SECTION 14: Transport information

14.1	UN number	not subject to transport regulations
14.2	UN proper shipping name	-
14.3	Transport hazard class(es)	
	Class	-
14.4	Packing group	-
14.5	Environmental hazards	-
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	<u>Information for each of the UN Model Regulations</u>	
	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)	
	Restrictions according to REACH, Annex XVII	none of the ingredients are listed
	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

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### 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

## SECTION 16: Other information

### Abbreviations and acronyms

Abbreviations and acronyms	
Abbr.	Descriptions of used abbreviations
Acute Tox.	Acute toxicity
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)
Aquatic Acute	Hazardous to the aquatic environment - acute hazard
Aquatic Chronic	Hazardous to the aquatic environment - chronic hazard
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DGR	Dangerous Goods Regulations (see IATA/DGR)
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
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

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Abbreviations and acronyms	
Abbr.	Descriptions of used abbreviations
index No	The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
log KOW	n-Octanol/water
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)
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
Skin Sens.	Skin sensitisation
vPvB	Very Persistent and very Bioaccumulative

### Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.

Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU.

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

International Maritime Dangerous Goods Code (IMDG).

Dangerous Goods Regulations (DGR) for the air transport (IATA).

### Classification procedure

Physical and chemical properties.

Health hazards.

Environmental hazards.

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

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

List of relevant phrases (code and full text as stated in chapter 2 and 3)	
Code	Text
H301	Toxic if swallowed.
H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.

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List of relevant phrases (code and full text as stated in chapter 2 and 3)	
Code	Text
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

### Responsible for the safety data sheet

C.S.B. GmbH  
Düsseldorfer Str. 113  
47809 Krefeld

Telephone: +49 (0) 2151 - 652086 - 0  
Telefax: +49 (0) 2151 - 652086 - 9  
e-Mail: [info@csb-online.de](mailto:info@csb-online.de)  
Website: [www.csb-online.de](http://www.csb-online.de)

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