



# Safety Data Sheet

According to Regulation (EC) No 1907/2006  
(modified by regulation EU No. 878/2020)

Version 07

Revision: 2024-09-05

REF
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article name

MS E-5600	Plasma Renin Activity (PRA) ELISA
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MS E-5600R	Plasma Renin Activity (PRA) ELISA
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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**

<b>Product Name:</b>	1. Angiotensin-I-Biotin Conjugate 2. Streptavidin-Horseradish Peroxidase Conjugate Concentrate 3. Angiotensin-I Calibrators A, B, C, D, E, F, G, H 4. Angiotensin-I Control 1, and 2 5. Assay Buffer 6. Microplate
<b>Product Code:</b>	1. MS E-5610 2. MS E-5640 3. MS E-5601 – MS E-5608 4. MS E-5651 & MS E-5652 5. MS E-5613 6. MS E-5631

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

<b>Use:</b>	To be used as a component with the Plasma Renin Activity (PRA) ELISA according to the Instructions for Use provided with the kit.
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**1.3 Details of the supplier of the safety data sheet**

Name	LDN Labor Diagnostika Nord GmbH & Co. KG
Address	Am Eichenhain 1 48531 Nordhorn, Germany
Telephone	+49 (0)5921-8197 0 (Mo-Fr 8:00-16:00)
Telefax	+49 (0)5921 8197 201
Contact email	support@ldn.de

**1.4 Emergency telephone number**

Telephone	Refer to Appendix A of this document for emergency telephone numbers based on your country
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**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****Classification in accordance with the Classification Labeling and Packaging Regulation (EC) No 1272/2008**

This preparation is classified as not dangerous according to CLP (EC) No 1272/2008.

**2.2 Label elements according with the Classification Labeling and Packaging Regulation (EC) No 1272/2008**

Hazard Pictogram:	Not applicable.
Signal Word:	Not applicable.
Hazard Statement:	Not applicable.
Precaution:	Not applicable.

Trade Name: Biotin Conjugate, Streptavidin-Horseradish Peroxidase Conjugate, Calibrators A-H, Control 1&2, Assay Buffer, Microplate

Product No: MS E-5610, MS E-5640, MS E-5601 – MS E-5608, MS E-5651 & MS E-5652, MS E-5613, MS E-5631



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Prevention: Not applicable.  
Response: Not applicable.  
Storage: Not applicable.

Disposal: Not applicable.  
Additional Hazards: Not applicable.

## 2.3 Other hazards

**PBT & vPvB:** See section 12.5 for more detailed information on PBT and vPvB.

## SECTION 3: Composition/information on ingredients

No substances fulfill the criteria set forth in Annex II, section A of the REACH regulation (EC) n° 878/2020.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

Eye: In case of contact, immediately flush eyes with plenty of water. If easy to do, remove contact lenses, if worn. If eye irritation persists: Get medical advice/attention.

Skin: In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician if irritation develops and persists.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical advice/attention.

Ingestion: If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical advice/attention.

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

Eye: May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Skin: May cause skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin.

Inhalation: May cause respiratory tract irritation.

Ingestion: May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

Trade Name: Biotin Conjugate, Streptavidin-Horseradish Peroxidase Conjugate, Calibrators A-H, Control 1&2, Assay Buffer, Microplate

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

Note to Physicians:	Symptoms may not appear immediately.
Specific Treatments:	In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable Extinguishing Media:	Treat for surrounding material.
Unsuitable Extinguishing Media:	None known.

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

Products of Combustion:	May include and are not limited to: oxides of carbon.
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### 5.3 Advice for firefighters

Protection of Firefighters:	Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).
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## SECTION 6: Accidental release measures

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

Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Avoid any contact with the skin and eyes. Do not breathe vapour or mist.

### 6.2 Environmental precautions

Keep out of drains, sewers, ditches, and waterways. Minimize use of water to prevent environmental contamination.

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

Methods for Containment:	Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).
Methods for Cleaning-Up:	Scoop up material and place in a disposal container. Provide ventilation.

### 6.4 Reference to other sections

See section 8 for further information on protective clothing and equipment and section 13 for advice on waste disposal.

Trade Name: Biotin Conjugate, Streptavidin-Horseradish Peroxidase Conjugate, Calibrators A-H, Control 1&2, Assay Buffer, Microplate

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

- Handling:** Users should have a thorough understanding how to use this product. Do not breathe gas/fumes/ vapor/spray. Do not get in eyes, on skin, or on clothing. Do not swallow. Handle and open container with care. When using do not eat, drink or smoke. (See section 8).
- General Hygiene Advice:** Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.

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

- Storage:** Keep out of the reach of children. Keep container tightly closed and in a well-ventilated place. Product should be at room temperature and mixed gently but thoroughly before use. Do not use any component beyond the expiration date printed on the label. Unused chemicals should not be returned to the container. (See section 10)

### 7.3 Specific end use(s)

- End uses:** Not available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Ingredient	UK - Occupational Exposure Limits (TWA)
	Not applicable.

### 8.2 Exposure controls

- Appropriate Engineering Controls:** Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.  
Eye/face protection: Wear approved eye (properly fitted dust- or splash-proof chemical safety goggles) / face (face shield) protection.  
Hand protection: Wear solvent resistant gloves.  
Body Protection: Wear suitable protective clothing, including appropriate boots, boot covers, overshoes, etc., as may be appropriate.  
Respiratory Protection: In case of insufficient ventilation, wear suitable respiratory equipment.



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General Health & Safety Measures:

Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking.

Environmental Exposure Controls:

Handle in accordance with good industrial hygiene and safety practice.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Physical State:	Liquid.
Appearance:	Not available.
Color:	Not available.
Odour:	Not available.
Odour Threshold:	Not available.
pH:	Not available.
Melting Point:	Not available.
Boiling Point:	Not available.
Flash Point:	Not available.
Evaporation Rate:	Not available.
Flammability:	Not Flammable.
Lower Flammability/Explosive Limit:	Not available.
Upper Flammability/Explosive Limit:	Not available.
Vapor Pressure:	Not available.
Vapor Density:	Not available.
Relative Density:	Not available.
Solubility:	Not available.
Partition coefficient: n-octanol/water:	Not available.
Auto-ignition Temperature:	Not available.
Decomposition Temperature:	Not available.
Viscosity:	Not available.
Explosive Properties:	Not available.
Oxidizing Properties:	Not available.

### 9.2 Other information

Not available.

## SECTION 10: Stability and reactivity

<b>10.1 Reactivity</b>	No dangerous reaction known under conditions of normal use
<b>10.2 Chemical stability</b>	Stable under normal storage conditions
<b>10.3 Possibility of hazardous reactions</b>	No dangerous reactions known under conditions of normal use
<b>10.4 Conditions to avoid</b>	Heat. Incompatible materials
<b>10.5 Incompatible materials</b>	None known

Trade Name: Biotin Conjugate, Streptavidin-Horseradish Peroxidase Conjugate, Calibrators A-H, Control 1&2, Assay Buffer, Microplate

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## 10.6 Hazardous decomposition products

May include and are no limited to oxides of carbon

## SECTION 11: Toxicological information

Acute toxicity	Unknown toxicity 1% of Biotin Conjugate consists of ingredient(s) of unknown toxicity. 100% of Streptavidin-Horseradish Peroxidase Conjugate consists of ingredient(s) of unknown toxicity. 3% of Calibrators A-H and Controls 1& 2 consists of ingredient(s) of unknown toxicity. 0.7% Assay Buffer consists of ingredient(s) of unknown toxicity.
Inhalation	May cause respiratory tract irritation
Ingestion	May be harmful if swallowed. May cause stomach distress, nausea or vomiting
Skin corrosion	May cause skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin.
Eye damage	May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.
Respiratory sensitisation	Based on available data, the classification criteria are not met.
Germ cell mutagenicity	This product is not classified as a mutagen.
Carcinogenicity	This product is not classified as a carcinogen.
Reproductive toxicity	This product does not contain known reproductive or developmental toxins
Unique specific toxicity	Based on available data, the classification criteria are not met
Repeated specific toxicity	Based on available data, the classification criteria are not met
Aspiration hazard	Not expected to occur

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Other information

Not available

## SECTION 12: Ecological information

### 12.1 Toxicity

May cause long-term adverse effects in the aquatic environment  
0.8% of Biotin Conjugate consists of ingredient(s) of unknown aquatic hazards.  
100% of Streptavidin-Horseradish Peroxidase Conjugate consists of ingredient(s) of unknown aquatic hazards.  
99% of Calibrators A-H and Controls 1&2 consists of ingredient(s) of unknown aquatic hazards.  
99% Assay Buffer consists of ingredient(s) of unknown aquatic hazards

### 12.2 Persistence and degradability

Not available

### 12.3 Bioaccumulative potential

Not available

### 12.4 Mobility in soil

Not available

### 12.5 Results of PBT and vPvB assessment

A PBT assessment has not yet been carried out under REACH for the constituents. However, there are no indications that this product contains substances likely to be classified as PBT

A vPvB assessment has not yet been carried out under REACH for the constituents. However, there are no indications that this product contains substances likely to be classified as vPvB

### 12.6 Other adverse effects

Not available

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Disposal Method:

This material must be disposed of in accordance with all local, state, provincial, and federal regulations.

#### Other disposal recommendations:

Not available.





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## SECTION 14: Transport information

<b>14.1</b> UN number	Not applicable
<b>14.2</b> UN proper shipping name	Not applicable
<b>14.3</b> Transport hazard class(es)	Not applicable
<b>14.4</b> Packaging group	Not applicable
<b>14.5</b> Environmental hazards	Not applicable
<b>14.6</b> Special precautions for user	Do not handle until all safety precautions have been read and understood
<b>14.7</b> Transport in bulk according to Annex II of MARPOL 73/78 and IBC Code	Not applicable

## SECTION 15: Regulatory information

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

Authorizations and/or restrictions on use:

This Safety Data Sheet classification and labeling have been determined according to the (EC) No. 1272-2008 "Classification, Labeling and Packaging" regulation; as well as the EU Directives 67/548/EEC and 1999/45/EC and take into account the intended product use.

### 15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out for this product.

## SECTION 16: Other information

### Relevant R-, H- and EUH- Phrases:

Not Applicable

### Legend:

PBT - Persistent, Bioaccumulative and Toxic  
vPvB - very Persistent and very Bioaccumulative  
CAS No - Chemical Abstracts Service Number  
EC No - European Commission Number

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REACH No - Registration, Evaluation, Authorisation and restriction of Chemicals Number

STOT Specific target organ toxicity

logK<sub>ow</sub> - Partition coefficient n-octanol/water

BCF - Bioconcentration Factor

**Disclaimer:** We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.

**End of Safety Data Sheet**



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

### 1.1 Product identifier

Product Name: GENERATION BUFFER

Product Code: MS E-5616

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

**Use:** To be used as a component with the Plasma Renin Activity (PRA) ELISA kit according to the instructions provided with the kit.

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

Name LDN Labor Diagnostika Nord GmbH & Co. KG  
Address Am Eichenhain 1  
48531 Nordhorn, Germany  
Telephone +49 (0)5921-8197 0 (Mo-Fr 8:00-16:00)  
Telefax +49 (0)5921 8197 201  
Contact email support@ldn.de

### 1.4 Emergency telephone number

Telephone Refer to Appendix A of the document for emergency telephone numbers based on your country

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

#### Classification in accordance with the Classification Labeling and Packaging Regulation (EC) No 1272/2008

Hazard class	Hazard Statement
Acute toxicity 4 (Acute Tox. 4)	H332 Harmful if inhaled.
Skin sensitization 1 (Skin Sens. 1)	H317 May cause an allergic skin reaction.
Respiratory sensitization 1 (Resp. Sens. 1)	H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

#### Classification in accordance with the Dangerous Preparations Directive 1999/45/EC

Hazard class	R - Phrase
None.	R42 May cause sensitization by inhalation.
	R43 May cause sensitization by skin contact.

### 2.2 Label elements

#### Labeling in accordance with the Classification Labeling and Packaging Regulation (EC) No 1272/2008

Hazard Pictogram:



Signal Word:

Danger

Hazard Statement:

H332 Harmful if inhaled.  
H317 May cause an allergic skin reaction.  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Precaution:

Not applicable.

Prevention:

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P285 In case of inadequate ventilation wear respiratory protection.

Response:

P302+P352 IF ON SKIN: Wash with plenty of soap and water.  
P304+P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

Storage:

P402+P404 Store in a dry place. Store in a closed container.

Disposal:

P501 Dispose of contents and container in accordance with all local, regional, national and international regulations.

Additional Hazards:

Not applicable.

### 2.3 Other hazards

PBT &amp; vPvB:

See section 12.5 for more detailed information on PBT and vPvB.

## SECTION 3: Composition/information on ingredients

### 3.1 Mixtures

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

Ingredient	CAS No	EC No	REACH No	Wt. %	Class
Maleic acid	110-16-7	203-742-5	Not available.	1 - 5	Acute Tox. 4 H302 Skin Irrit. 2 H315 Skin Sens. 1 H317 Eye Irrit. 2 H319 STOT SE 3 H335

Neomycin sulfate	1405-10-3	215-773-1	Not available.	0.5 - 1.5	Skin Sens. 1 H317 Resp. Sens. 1 H334
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## Classification according to 67/548/EEC

Ingredient	CAS No	EC No	REACH No	Wt. %	Class
Maleic acid	110-16-7	203-742-5	Not available.	1 - 5	Xn; R22 R43 Xi; R36/37/38
Neomycin sulfate	1405-10-3	215-773-1	Not available.	0.5 - 1.5	R43; R42

Full text of R-, H- and EUH- phrases: see section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

Eye:	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses, if worn. Get medical attention immediately.
Skin:	In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician if irritation develops and persists.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical advice/attention.
Ingestion:	If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical advice/attention.

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

Eye:	May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.
Skin:	Causes sensitization by skin contact. Symptoms may include redness, edema, drying, defatting and cracking of the skin.
Inhalation:	Harmful by inhalation. Causes respiratory sensitization. Symptoms: vapours may cause drowsiness and dizziness.
Ingestion:	May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

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

Note to Physicians:	Symptoms may not appear immediately.
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Specific Treatments: In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable Extinguishing Media: Treat for surrounding material.

Unsuitable Extinguishing Media: None known.

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

Products of Combustion: May include, and are not limited to: oxides of carbon.

### 5.3 Advice for firefighters

Protection of Firefighters: Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

## SECTION 6: Accidental release measures

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

Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Avoid any contact with the skin and eyes. Do not breathe vapour or mist.

### 6.2 Environmental precautions

Keep out of drains, sewers, ditches, and waterways. Minimize use of water to prevent environmental contamination.

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

Methods for Containment: Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).

Methods for Cleaning-Up: Scoop up material and place in a disposal container. Provide ventilation.

### 6.4 Reference to other sections

See section 8 for further information on protective clothing and equipment and section 13 for advice on waste disposal.



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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Handling:	Users should have a thorough understanding how to use this product. Do not breathe gas/fumes/ vapor/spray. Do not get in eyes, on skin, or on clothing. Do not swallow. Handle and open container with care. When using do not eat, drink or smoke. (See section 8).
General Hygiene Advice:	Laundry contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.

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

Storage:	Keep out of the reach of children. Keep container tightly closed. Product should be at room temperature and mixed gently but thoroughly before use. Do not use any component beyond the expiration date printed on the label. Unused chemicals should not be returned to the container. (See section 10)
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### 7.3 Specific end use(s)

Not available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Ingredient	UK - Occupational Exposure Limits (TWA)
Maleic acid	Not available.
Neomycin sulfate	Not available.

### 8.2 Exposure controls

Engineering Controls	Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.
Personal Protective Equipment: Eye/Face Protection	Wear approved eye (properly fitted dust- or splash-proof chemical safety goggles) / face (face shield) protection.
Skin Protection: Hand Protection	Wear solvent resistant gloves.
Body Protection	Wear suitable protective clothing, including appropriate boots, boot covers, overshoes, etc., as may be appropriate.
Respiratory Protection	In case of insufficient ventilation, wear suitable respiratory equipment.
General Health & Safety Measures	Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking.

Environmental Exposure  
Controls

Handle in accordance with good industrial hygiene and safety practice.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Appearance:	Not available.
Color:	Not available.
Odour:	Not available.
Odour Threshold:	Not available.
Physical State:	Liquid.
pH:	Not available.
Melting Point:	Not available.
Boiling Point:	Not available.
Flash Point:	Not available.
Evaporation Rate:	Not available.
Flammability:	Not Flammable.
Lower Flammability/Explosive Limit:	Not available.
Upper Flammability/Explosive Limit:	Not available.
Vapor Pressure:	Not available.
Vapor Density:	Not available.
Relative Density:	Not available.
Solubility:	Not available.
Partition coefficient: n-octanol/water:	Not available.
Auto-ignition Temperature:	Not available.
Decomposition Temperature:	Not available.
Viscosity:	Not available.
Explosive Properties:	Not available.
Oxidizing Properties:	Not available.

### 9.2 Other information

Not available.

## SECTION 10: Stability and reactivity

<b>10.1</b> Reactivity	No dangerous reaction known under conditions of normal use.
<b>10.2</b> Chemical stability	Stable under normal storage conditions.
<b>10.3</b> Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.





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**10.4** Conditions to avoid

Heat. Incompatible materials.

**10.5** Incompatible materials

None known.

**10.6** Hazardous decomposition products

May include and are not limited to: oxides of carbon.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Likely Routes of Exposure:

Skin contact, skin absorption, eye contact, inhalation, and ingestion.

Acute Health Effects:

Eye:

May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Skin:

Cause sensitization by skin contact. Symptoms may include redness, edema, drying, defatting and cracking of the skin.

Ingestion:

May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

Inhalation:

Harmful by inhalation. Causes respiratory sensitization. Symptoms: vapours may cause drowsiness and dizziness.

#### Acute Toxicity:

Ingredient	LC50	LD50
Maleic acid	Inhalation Rat >0.72 mg/L 1 h	Oral Rat 708 mg/kg Dermal Rabbit 1560 mg/kg
Neomycin sulfate	Not available.	Oral Mouse >8 g/kg

0.9% of the mixture consists of ingredient(s) of unknown toxicity.

Skin Corrosion/Irritation:

May cause skin irritation.

Serious Eye Damage/Irritation:

May cause eye irritation.

Respiratory or Skin  
Sensitization:

May cause skin and respiratory sensitization.

STOT-Single Exposure:

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

Carcinogenicity:

This product is not classified as a carcinogen.

Germ Cell Mutagenicity:

This product is not classified as a mutagen.

Reproductive Toxicity:

Developmental: this product does not contain known reproductive or developmental toxins.

Fertility: no known significant effects or critical hazards.

STOT-Repeated Exposure:

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

Aspiration Hazard:

Not expected to occur.

Other Information:

Not available.



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## SECTION 12: Ecological information Section

### 12.1 Toxicity

**Acute/Chronic Toxicity:** May cause long-term adverse effects in the aquatic environment.

Ingredient	Aquatic Toxicity
Maleic acid	96 Hr LC50 Pimephales promelas: 5 mg/L [static] 48 Hr EC50 Daphnia magna: 250 - 400 mg/L
Neomycin sulfate	Not available.

Contains 0.9 % of components with unknown hazards to the aquatic environment.

<b>12.2</b> Persistence and degradability	Not available.
<b>12.3</b> Bioaccumulative potential	Bioaccumulation: Not available.
<b>12.4</b> Mobility in soil	Not available.
<b>12.5</b> Results of PBT and vPvB assessment	A <u>PBT</u> assessment has not yet been carried out under REACH for the constituents. However, there are no indications that this product contains substances likely to be classified as PBT A <u>vPvB</u> assessment has not yet been carried out under REACH for the constituents. However, there are no indications that this product contains substances likely to be classified as vPvB.
<b>12.6</b> Other adverse effects	Not available

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Disposal Method: This material must be disposed of in accordance with all local, state, provincial, and federal regulations.

Other disposal recommendations: Not available.

## SECTION 14: Transport information

<b>14.1</b> UN number	Not regulated.
<b>14.2</b> UN proper shipping name	Not applicable.
<b>14.3</b> Transport hazard class(es)	Not applicable.
<b>14.4</b> Packing group	Not applicable.
<b>14.5</b> Environmental hazards	Not applicable
<b>14.6</b> Special precautions for user	Do not handle until all safety precautions have been read and understood.

**14.7** Transport in bulk according to Annex II of MARPOL 73/78 and IBC Code Not available.

## SECTION 15: Regulatory information

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

Authorizations and/or restrictions on use:

This Safety Data Sheet classification and labeling have been determined according to the (EC) No. 1272-2008 "Classification, Labeling and Packaging" regulation; as well as the EU Directives 67/548/EEC and 1999/45/EC and take into account the intended product use.

### 15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out for this product.

## SECTION 16: Other information

### Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

#### Classification

Acute toxicity 4 (Acute Tox. 4)  
Skin sensitization 1 (Skin Sens. 1)  
Respiratory sensitization 1 (Resp. Sens. 1)

#### Classification Procedure

Calculation method.  
Concentration limits.  
Concentration limits.

#### Relevant R-, H- and EUH- Phrases:

H332 Harmful if inhaled.  
H317 May cause an allergic skin reaction.  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H302 Harmful if swallowed.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P285 In case of inadequate ventilation wear respiratory protection.

P302+P352 IF ON SKIN: Wash with plenty of soap and water.  
P304+P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

P402+P404 Store in a dry place. Store in a closed container.

P501 Dispose of contents and container in accordance with all local, regional, national and international regulations.



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- R42 May cause sensitization by inhalation.
- R43 May cause sensitisation by skin contact
- R22 Harmful if swallowed.
- R38 Irritating to skin.
- R36 Irritating to eyes.
- R37 Irritating to respiratory system.

## Legend:

PBT - Persistent, Bioaccumulative and Toxic  
vPvB - very Persistent and very Bioaccumulative  
CAS No - Chemical Abstracts Service Number  
EC No - European Commission Number  
REACH No - Registration, Evaluation, Authorisation and restriction of Chemicals Number  
STOT Specific target organ toxicity  
logK<sub>ow</sub> - Partition coefficient n-octanol/water  
BCF - Bioconcentration Factor

**Disclaimer:** We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.

**End of Safety Data Sheet**



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

### 1.1 Product identifier

Product Name: PMSF  
Product Code: MS E-5614

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

**Use:** To be used as a component with the Plasma Renin Activity (PRA) ELISA kit according to the instructions provided with the kit.

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

Name: LDN Labor Diagnostika Nord GmbH & Co. KG  
Address: Am Eichenhain 1  
48531 Nordhorn, Germany  
Telephone: +49 (0)5921-8197 0 (Mo-Fr 8:00-16:00)  
Telefax: +49 (0)5921 8197 201  
Contact email: support@ldn.de

### 1.4 Emergency telephone number

Telephone: Refer to Appendix A of the document for emergency telephone numbers based on your country

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

Classification in accordance with the Classification Labeling and Packaging Regulation (EC) No 1272/2008

Hazard class		Hazard Statement
Acute toxicity 3 (Acute Tox. 3)	H301	Toxic if swallowed.
Skin corrosion 1B (Skin Corr. 1B)	H314	Causes severe skin burns and eye damage.
Serious eye damage 1 (Eye Dam. 1)	H318	Causes serious eye damage.

Classification in accordance with the Dangerous Preparations Directive 1999/45/EC

Hazard class		R - Phrase
Toxic (T)	R25	Toxic if swallowed.
Corrosive (C)	R34	Causes burns.
	R41	Risk of serious damage to eyes.

### 2.2 Label elements

Labeling in accordance with the Classification Labeling and Packaging Regulation (EC) No 1272/2008

Hazard Pictogram:



Signal Word:

Danger

Hazard Statement:

H301 Toxic if swallowed.  
H314 Causes severe skin burns and eye damage.  
H318 Causes serious eye damage.

Precaution:

Not applicable.

Prevention:

P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
P264 Wash hands thoroughly after handling.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response:

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.  
P330 Rinse mouth.  
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P310 Immediately call a POISON CENTER or doctor/physician.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage:

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

Disposal:

P501 Dispose of contents and container in accordance with all local, regional, national and international regulations.

Additional Hazards:

Not applicable.

### 2.3 Other hazards

PBT &amp; vPvB:

See section 12.5 for more detailed information on PBT and vPvB.

## SECTION 3: Composition/information on ingredients

### 3.1 Mixtures

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

Ingredient	CAS No	EC No	REACH No	Wt. %	Class
Benzenemethane sulfonyl fluoride	329-98-6	206-350-2	Not available.	60 - 100	Acute Tox. 3 H301 Skin Cor. 1B H314

Trade Name: PMSF

Product No: MS E-5614

## Classification according to 67/548/EEC

Ingredient	CAS No	EC No	REACH No	Wt. %	Class
Benzenemethane sulfonyl fluoride	329-98-6	206-350-2	Not available.	60 - 100	T; R25 C; R34

Full text of R-, H- and EUH- phrases: see section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

Eye:	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses, if worn. Get medical attention immediately.
Skin:	Flush contaminated skin with plenty of water. Continue to rinse for at least 20 minutes. Get medical attention if symptoms occur. Chemical burns must be treated promptly by a physician.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical advice/attention.
Ingestion:	If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

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

Eye:	Causes burns. Severe irritation, redness and pain. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.
Skin:	Causes burns. Symptoms may include redness, pain and blisters.
Inhalation:	May be harmful by inhalation. Irritating to respiratory tract. Vapours may cause drowsiness and dizziness.
Ingestion:	Harmful if swallowed. May cause stomach distress, nausea or vomiting.

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

Note to Physicians:	Symptoms may not appear immediately.
Specific Treatments:	In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).



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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable Extinguishing Media: Powder, foam, carbon dioxide.

Unsuitable Extinguishing Media: None known.

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

Products of Combustion: May include, and are not limited to: oxides of carbon, halogenated compounds.

### 5.3 Advice for firefighters

Protection of Firefighters: Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

## SECTION 6: Accidental release measures

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

Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Avoid any contact with the skin and eyes.

### 6.2 Environmental precautions

Keep out of drains, sewers, ditches, and waterways Minimize use of water to prevent environmental contamination.

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

Methods for Containment: Pick up large pieces, then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).

Methods for Cleaning-Up: Scoop up material and place in a disposal container. Provide ventilation.

### 6.4 Reference to other sections

See section 8 for further information on protective clothing and equipment and section 13 for advice on waste disposal.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Handling: Users should have a thorough understanding how to use this product. Do not breathe gas/fumes/ vapor/spray. Do not get in eyes, on skin, or on clothing. Do not swallow. Handle and open





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container with care. When using do not eat, drink or smoke. (See section 8).

General Hygiene Advice: Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.

## 7.2 Conditions for safe storage, including any incompatibilities

Storage: Keep out of the reach of children. Keep container tightly closed. Product should be at room temperature and mixed gently but thoroughly before use. Do not use any component beyond the expiration date printed on the label. Store in an appropriate container. Unused chemicals should not be returned to the container. (See section 10)

## 7.3 Specific end use(s)

End uses: Not available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Ingredient	UK - Occupational Exposure Limits (TWA)
Benzenemethanesulfonyl fluoride	Not available.

### 8.2 Exposure controls

Engineering Controls: Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

Personal Protective Equipment:

Eye/Face Protection: Wear approved eye (properly fitted dust- or splash-proof chemical safety goggles) / face (face shield) protection.

Skin Protection:

Hand Protection: Wear solvent resistant gloves.

Body Protection: Wear suitable protective clothing, including appropriate boots, boot covers, overshoes, etc., as may be appropriate.

Respiratory Protection: In case of insufficient ventilation, wear suitable respiratory equipment.

General Health & Safety Measures: Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking.

Environmental Exposure Controls: Handle in accordance with good industrial hygiene and safety practice.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Appearance: Not available.

Color: Not available.

Odour:	Not available.
Odour Threshold:	Not available.
Physical State:	Solid.
pH:	Not available.
Melting Point:	~ 92 °C (~ 197.6 °F)
Boiling Point:	Decomposes.
Flash Point:	Not available.
Evaporation Rate:	Not available.
Flammability:	Not Flammable.
Lower Flammability/Explosive Limit:	Not available.
Upper Flammability/Explosive Limit:	Not available.
Vapor Pressure:	Not available.
Vapor Density:	Not available.
Relative Density:	Not available.
Solubility:	Not available.
Partition coefficient: n-octanol/water:	Not available.
Auto-ignition Temperature:	Not available.
Decomposition Temperature:	Not available.
Viscosity:	Not available.
Explosive Properties:	Not available.
Oxidizing Properties:	Not available.

## 9.2 Other information

Not available.

## SECTION 10: Stability and reactivity

<b>10.1</b> Reactivity	No dangerous reaction known under conditions of normal use.
<b>10.2</b> Chemical stability	Stable under normal storage conditions.
<b>10.3</b> Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
<b>10.4</b> Conditions to avoid	Heat. Incompatible materials.
<b>10.5</b> Incompatible materials	None known.
<b>10.6</b> Hazardous decomposition products	May include, and are not limited to: oxides of carbon, halogenated compounds.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Acute Health Effects:



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Eye: Causes burns. Severe irritation, redness and pain. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.

Skin: Causes burns. Symptoms may include redness, pain and blisters.

Ingestion: Harmful if swallowed. May cause stomach distress, nausea or vomiting.

Inhalation: May be harmful by inhalation. Irritating to respiratory tract. Vapours may cause drowsiness and dizziness.

## Acute Toxicity:

Ingredient	LC50	LD50
Benzenemethanesulfonyl fluoride	Not available.	Oral Mouse 200 mg/kg

Skin Corrosion/Irritation: Causes burns.

Eye Damage/Irritation: Risk of serious damage to eyes.

Respiratory /Skin

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

STOT-Single Exposure: Based on available data, the classification criteria are not met.

Carcinogenicity: This product is not classified as a carcinogen.

Germ Cell Mutagenicity: This product is not classified as a mutagen.

Reproductive Toxicity: This product does not contain known reproductive or developmental toxins.

Fertility, no known significant effects, or critical hazards.

STOT-Repeated Exposure: Based on available data, the classification criteria are not met.

Aspiration Hazard: Not expected to occur.

Other Information: Not available.

## SECTION 12: Ecological information Section

### 12.1 Toxicity

Acute/Chronic Toxicity: May cause long-term adverse effects in the aquatic environment.

Ingredient	Aquatic Toxicity
Benzenemethanesulfonyl fluoride	Not available.

Contains 100 % of components with unknown hazards to the aquatic environment.

**12.2 Persistence and degradability** Not available.

**12.3 Bioaccumulative potential** Bioaccumulation: Not available.

**12.4 Mobility in soil** Not available.



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## 12.5 Results of PBT and vPvB assessment

A PBT assessment has not yet been carried out under REACH for the constituents. However, there are no indications that this product contains substances likely to be classified as PBT.

A vPvB assessment has not yet been carried out under REACH for the constituents. However, there are no indications that this product contains substances likely to be classified as vPvB.

## 12.6 Other adverse effects

Not available.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Disposal Method: This material must be disposed of in accordance with all local, state, provincial, and federal regulations.

Other disposal recommendations: Not available.

## SECTION 14: Transport information

### 14.1 UN number

UN2928

### 14.2 UN proper shipping name

Toxic solid, corrosive, organic, n.o.s.  
(Benzenemethanesulfonyl fluoride)

### 14.3 Transport hazard class(es)

6.1(8)

### 14.4 Packing group

II

### 14.5 Environmental hazards

Not available

### 14.6 Special precautions for user

Do not handle until all safety precautions have been read and understood.

### 14.7 Transport in bulk according to Annex II of MARPOL73/78 and IBC Code

Not available.

## SECTION 15: Regulatory information

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

Authorizations and/or restrictions on use:

This Safety Data Sheet classification and labeling have been determined according to the (EC) No. 1272-2008 "Classification, Labeling and Packaging" regulation; as well as the EU Directives 67/548/EEC and 1999/45/EC and take into account the intended product use.

### 15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out for this product.

## SECTION 16: Other information

### Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

#### Classification

Acute toxicity 3 (Acute Tox. 3)  
Skin corrosion 1B (Skin Corr. 1B)  
Serious eye damage 1 (Eye Dam. 1)

#### Classification Procedure

Calculation method.  
Concentration limits.  
Concentration limits.

#### Relevant R-, H- and EUH- Phrases:

H301 Toxic if swallowed.  
H314 Causes severe skin burns and eye damage.  
H318 Causes serious eye damage.

P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
P264 Wash hands thoroughly after handling.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P330 Rinse mouth.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P310 Immediately call a POISON CENTER or doctor/physician.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P501 Dispose of contents and container in accordance with all local, regional, national and international regulations.

R25 Toxic if swallowed.  
R34 Causes burns.  
R41 Risk of serious damage to eyes.

#### Legend:

PBT - Persistent, Bioaccumulative and Toxic  
vPvB - very Persistent and very Bioaccumulative  
CAS No - Chemical Abstracts Service Number  
EC No - European Commission Number  
REACH No - Registration, Evaluation, Authorisation and restriction of Chemicals Number  
STOT Specific target organ toxicity  
logK<sub>ow</sub> - Partition coefficient n-octanol/water  
BCF - Bioconcentration Factor



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**End of Safety Data Sheet**



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

### 1.1 Product identifier

Product Name: WASH BUFFER CONCENTRATE

Product Code: AA E-0030

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

Use: To be used as a component with the Plasma Renin Activity (PRA) ELISA kit according to the instructions provided with the kit.

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

Name LDN Labor Diagnostika Nord GmbH & Co. KG  
Address Am Eichenhain 1  
48531 Nordhorn, Germany  
Telephone +49 (0)5921-8197 0 (Mo-Fr 8:00-16:00)  
Telefax +49 (0)5921 8197 201  
Contact email support@ldn.de

### 1.4 Emergency telephone number

Telephone: Refer to Appendix A of this document for emergency telephone numbers based on your country

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

Classification in accordance with the Classification Labeling and Packaging Regulation (EC) No 1272/2008

Hazard class	Hazard Statement
Not controlled.	EUH208 Contains 2-Methyl-3-isothiazolone. May produce an allergic reaction.

Classification in accordance with the Dangerous Preparations Directive 1999/45/EC

Hazard class	R - Phrase
Not controlled.	Contains 2-Methyl-3-isothiazolone. May produce an allergic reaction.'

### 2.2 Label elements

Labeling in accordance with the Classification Labeling and Packaging Regulation (EC) No 1272/2008

Hazard Pictogram: Not applicable.  
Signal Word: Not applicable.



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Hazard Statement:	Not applicable.
Precaution:	Not applicable.
Prevention:	Not applicable.
Response:	Not applicable.
Storage:	Not applicable.
Disposal:	Not applicable.
Additional Hazards:	EUH208 Contains 2-Methyl-3-isothiazolone. May produce an allergic reaction.

## 2.3 Other hazards

PBT & vPvB: See section 12.5 for more detailed information on PBT and vPvB.

## SECTION 3: Composition/information on ingredients

### 3.1 Mixtures

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

Ingredient	CAS No	EC No	REACH No	Wt. %	Class
2-Methyl-3-isothiazolone	2682-20-4	220-239-6	Not available.	0.1 - 1	Skin Corr. 1B H314 Acute Tox. 4 H332, H312, H302 Skin Sens. 1 H317 Aquatic. Acute 1 H400
Trometamol	77-86-1	201-064-4	Not available.	0.5 - 1.5	Skin Irrit. 2 H315 Eye Irrit. 2 H319 STOT SE 3 H335

Classification according to 67/548/EEC

Ingredient	CAS No	EC No	REACH No	Wt. %	Class
2-Methyl-3-isothiazolone	2682-20-4	220-239-6	Not available.	0.1 - 1	C; R34 Xn; R20/21/22 R43 N; R50
Trometamol	77-86-1	201-064-4	Not available.	0.5 - 1.5	Xi R36/37/38

Full text of R-, H- and EUH- phrases: see section 16.



## SECTION 4: First aid measures

### 4.1 Description of first aid measures

Eye:	In case of contact, immediately flush eyes with plenty of water. If easy to do, remove contact lenses, if worn. If eye irritation persists: Get medical advice/attention.
Skin:	In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician if irritation develops and persists.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical advice/attention.
Ingestion:	If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical advice/attention.

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

Eye:	May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.
Skin:	May cause skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin. May produce an allergic reaction.
Inhalation:	May cause respiratory tract irritation.
Ingestion:	May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

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

Note to Physicians:	Symptoms may not appear immediately.
Specific Treatments:	In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable Extinguishing Media:	Treat for surrounding material.
Unsuitable Extinguishing Media:	None known.

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

Products of Combustion:	May include, and are not limited to: oxides of carbon.
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## 5.3 Advice for firefighters

Protection of Firefighters: Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

## SECTION 6: Accidental release measures

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

Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Avoid any contact with the skin and eyes. Do not breathe vapour or mist.

### 6.2 Environmental precautions

Keep out of drains, sewers, ditches, and waterways. Minimize use of water to prevent environmental contamination.

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

Methods for Containment: Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).

Methods for Cleaning-Up: Scoop up material and place in a disposal container. Provide ventilation.

### 6.4 Reference to other sections

See section 8 for further information on protective clothing and equipment and section 13 for advice on waste disposal.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Handling: Users should have a thorough understanding how to use this product. Do not breathe gas/fumes/ vapor/spray. Do not get in eyes, on skin, or on clothing. Do not swallow. Handle and open container with care. When using do not eat, drink or smoke. (See section 8).

General Hygiene Advice: Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.

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

Storage: Keep out of the reach of children. Keep container tightly closed and in a well-ventilated place. Product should be at room temperature and mixed gently but thoroughly before use. Do not use any component beyond the expiration date printed on the label. Unused chemicals should not be returned to the container. (See section 10)



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## 7.3 Specific end use(s)

End uses: Not available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Ingredient	UK - Occupational Exposure Limits (TWA)
2-Methyl-3-isothiazolone	Not available.
Trometamol	Not available.

### 8.2 Exposure controls

Engineering Controls:	Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.
Personal Protective Equipment	<u>Eye/Face protection:</u> Wear approved eye (properly fitted dust- or splash-proof chemical safety goggles) / face (face shield) protection. <u>Skin Protection:</u> <u>Hand Protection:</u> Wear solvent resistant gloves. <u>Body Protection:</u> Wear suitable protective clothing, including appropriate boots, boot covers, overshoes, etc., as may be appropriate. <u>Respiratory Protection:</u> In case of insufficient ventilation, wear suitable respiratory equipment.
General Health & Safety Measures:	Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking.
Environmental Exposure Controls:	Handle in accordance with good industrial hygiene and safety practice.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Appearance:	Not available.
Color:	Not available.
Odour:	Not available.
Odour Threshold:	Not available.
Physical State:	Liquid.
pH:	Not available.
Melting Point:	Not available.
Boiling Point:	Not available.



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Flash Point:	Not available.
Evaporation Rate:	Not available.
Flammability:	Not Flammable.
Lower Flammability/Explosive Limit:	Not available.
Upper Flammability/Explosive Limit:	Not available.
Vapor Pressure:	Not available.
Vapor Density:	Not available.
Relative Density:	Not available.
Solubility:	Not available.
Partition coefficient: n-octanol/water:	Not available.
Auto-ignition Temperature:	Not available.
Decomposition Temperature:	Not available.
Viscosity:	Not available.
Explosive Properties:	Not available.
Oxidizing Properties:	Not available.

## 9.2 Other information

Not available.

## SECTION 10: Stability and reactivity

<b>10.1 Reactivity</b>	No dangerous reaction known under conditions of normal use.
<b>10.2 Chemical stability</b>	Stable under normal storage conditions.
<b>10.3 Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>10.4 Conditions to avoid</b>	Heat. Incompatible materials.
<b>10.5 Incompatible materials</b>	None known.
<b>10.6 Hazardous decomposition products</b>	May include, and are not limited to: oxides of carbon.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Acute Health Effects:	
Eye:	May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.
Skin:	May cause skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin. May produce an allergic reaction.
Ingestion:	May be harmful if swallowed. May cause stomach distress, nausea or vomiting.



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Inhalation: May cause respiratory tract irritation.

## Acute Toxicity:

Ingredient	LC50	LD50
2-Methyl-3-isothiazolone	Not available.	Not available.
Trometamol	Not available.	Oral Rat 5900 mg/kg

2.2 % of mixture consists of ingredient(s) of unknown toxicity.

Skin Corrosion/Irritation: Based on available data, the classification criteria are not met.

Serious Eye Damage/Irritation: Based on available data, the classification criteria are not met.

Respiratory or Skin

Sensitization: May produce an allergic reaction.

STOT-Single Exposure: Based on available data, the classification criteria are not met.

## Chronic Health Effects:

Carcinogenicity: This product is not classified as a carcinogen.

Germ Cell Mutagenicity: This product is not classified as mutagen.

## Reproductive Toxicity:

Developmental: This product does not contain known reproductive or developmental toxins.

Fertility: No known significant effects or critical hazards.

**STOT-Repeated Exposure:** Based on available data, the classification criteria are not met.

Aspiration Hazard: Not expected to occur.

Other Information: Not available.

## SECTION 12: Ecological information Section

### 12.1 Toxicity

Acute/Chronic Toxicity: May cause long-term adverse effects in the aquatic environment.

Ingredient	Aquatic Toxicity
2-Methyl-3-isothiazolone	Not available.
Trometamol	Not available.

99.2% of mixture consists of ingredient(s) of unknown hazards to the aquatic environment.



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## 12.2 Persistence and degradability

Not available.

## 12.3 Bioaccumulative potential

Bioaccumulation: Not available.

## 12.4 Mobility in soil

Not available.

## 12.5 Results of PBT and vPvB assessment

PBT results: A PBT assessment has not yet been carried out under REACH for the constituents. However, there are no indications that this product contains substances likely to be classified as PBT.

vPvB results: A vPvB assessment has not yet been carried out under REACH for the constituents. However, there are no indications that this product contains substances likely to be classified as vPvB.

## 12.6 Other adverse effects

Not available.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Disposal Method: This material must be disposed of in accordance with all local, state, provincial, and federal regulations.

Other disposal recommendations: Not available.

## SECTION 14: Transport information

### 14.1 UN number

Not regulated.

### 14.2 UN proper shipping name

Not applicable.

### 14.3 Transport hazard class(es)

Not applicable.

### 14.4 Packing group

Not applicable.



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## 14.5 Environmental hazards

Not available.

## 14.6 Special precautions for user

Do not handle until all safety precautions have been read and understood.

## 14.7 Transport in bulk according to Annex II of MARPOL73/78 and IBC Code

Not available.

## SECTION 15: Regulatory information

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

Authorizations and/or restrictions on use:

This Safety Data Sheet classification and labeling have been determined according to the (EC) No. 1272-2008 "Classification, Labeling and Packaging" regulation; as well as the EU Directives 67/548/EEC and 1999/45/EC and take into account the intended product use.

### 15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out for this product.

## SECTION 16: Other information

### Relevant R-, H- and EUH- Phrases:

- H314 Causes severe skin burns and eye damage.
- H332 Harmful if inhaled.
- H312 Harmful in contact with skin.
- H302 Harmful if swallowed.
- H317 May cause an allergic skin reaction.
- H400 Very toxic to aquatic life.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H335 May cause respiratory irritation.
- R34 Causes burns.
- R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
- R43 May cause sensitisation by skin contact.
- R50 Very toxic to aquatic organisms.
- R36/37/38 Irritating to eyes, respiratory system and skin.

### Legend:

PBT - Persistent, Bioaccumulative and Toxic  
vPvB - very Persistent and very Bioaccumulative  
CAS No - Chemical Abstracts Service Number  
EC No - European Commission Number



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REACH No - Registration, Evaluation, Authorisation and restriction of Chemicals Number

STOT Specific target organ toxicity

logK<sub>ow</sub> - Partition coefficient n-octanol/water

BCF - Bioconcentration Factor

**Disclaimer:** We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.

**End of Safety Data Sheet**



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

### 1.1 Product identifier

Product name : TMB SUBSTRATE  
Product code : MS E-5655  
Product form : Mixture

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

Main use category : Industrial use  
Use of the substance/mixture : To be used as a component with ELISA kits according to the instructions provided with the kit.  
Restrictions on use : For laboratory use only

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

Name : LDN Labor Diagnostika Nord GmbH & Co. KG  
Address : Am Eichenhain 1  
48531 Nordhorn, Germany  
Telephone : +49 (0)5921-8197 0 (Mo-Fr 8:00-16:00)  
Telefax : +49 (0)5921 8197 201  
Contact email : support@ldn.de

### 1.4 Emergency telephone number

Telephone Number: Refer to Appendix A of this document for emergency telephone numbers based on your country

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]  
Not classified.

Adverse physicochemical, human health and environmental effects  
No additional information available.

### 2.2 Label elements

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

EUH-statements : EUH-statements

### 2.3 Other hazards

Other hazards not contributing to the classification : Contains oxidising substance(s) at <0.5%.

## SECTION 3: Composition/information on ingredients

## 3.1. Substances

Not applicable.

## 3.2. Mixtures

Name	Product Identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
2-Pyrrolidinone	(CAS-No.) 616-45-5 (EC-No.) 210-483-1	1 - 6	Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319
Urea, compound with hydrogen peroxide (H <sub>2</sub> O <sub>2</sub> ) (1:1)	(CAS-No.) 124-43-6 (EC-No.) 204-701-4	< 0.4	Ox. Sol. 3, H272 Skin Irrit. 2, H315 Eye Dam. 1, H318

Full text of H-statements: see section 16.

## SECTION 4: First aid measures

## 4.1 Description of first aid measures

- First-aid measures after inhalation : If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.
- First-aid measures after skin contact : If skin irritation occurs: Wash skin with mild soap and water. Obtain medical attention if irritation persists.
- First-aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- First-aid measures after ingestion : Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.

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

- Symptoms/effects after inhalation : May cause irritation to the respiratory tract.
- Symptoms/effects after skin contact : May cause skin irritation. Repeated exposure may cause skin dryness or cracking.
- Symptoms/effects after eye contact : May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.
- Symptoms/effects after ingestion : May be harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.

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

Symptoms may be delayed. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire.  
Unsuitable extinguishing media : None known.

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

Fire hazard : Products of combustion may include, and are not limited to: oxides of carbon. Contains oxidising substance(s) at <0.5%.

#### 5.3 Advice for firefighters

Protection during firefighting : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

### SECTION 6: Accidental release measures

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

General measures : Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

##### 6.1.1. For non-emergency personnel

No additional information available.

##### 6.1.2. For emergency responders

No additional information available.

#### 6.2 Environmental precautions

Prevent entry to sewers and public waters. Do not allow to enter drains or water courses.

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

For containment : Absorb and/or contain spill with inert material (sand, vermiculite or other appropriate material), then place in suitable container. Do not flush into surface water or sewer system. Wear recommended personal protective equipment.  
Methods for cleaning up : Sweep or shovel spills into appropriate container for disposal. Provide ventilation. Flush contaminated areas with plenty of water.

#### 6.4 Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection".

### SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

- Precautions for safe handling : Avoid contact with eyes, skin and clothing. Avoid breathing dust/fume/gas/mist/vapours/spray. Do not swallow. Handle and open container with care. When using do not eat, drink or smoke. Provide adequate ventilation. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required.
- Hygiene measures : Wash contaminated clothing before reuse. Always wash hands after handling the product.

## 7.2 Conditions for safe storage, including any incompatibilities

- Storage conditions : Keep out of the reach of children. Keep container tightly closed. Store in a dry, cool and well-ventilated place. Store in correctly labelled container. Keep away from food, drink and animal feeding stuffs. The TMB Substrate is sensitive to light and should always be stored in dark bottles away from direct sunlight.

## 7.3 Specific end use(s)

Not available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

No additional information available.

### 8.2 Exposure controls

#### Appropriate engineering controls:

Ensure good ventilation of the work station. Provide readily accessible eye wash stations and safety showers.

#### Hand protection:

Chemical resistant gloves (according to European standard NF EN 374 or equivalent)

#### Eye protection:

Safety eyewear complying with an approved standard such as the European Standard EN166 should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

#### Skin and body protection:

Wear suitable protective clothing

#### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

#### Environmental exposure controls:

Avoid release to the environment.

#### Other information:

Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink or smoke when using this product.

**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties**

Physical state	: Liquid
Appearance	: Liquid
Colour	: Clear/ light blue
Odour	: Characteristic
Odour threshold	: No data available
pH	: 3.1 – 3.5
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not flammable
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Solubility	: Soluble in water
Partition coefficient n-octanol/water	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

**9.2 Other information**

No additional information available.

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

No dangerous reactions known under conditions of normal use.

**10.2 Chemical stability**

Stable under normal storage conditions.

**10.3 Possibility of hazardous reactions**

No dangerous reaction known under normal conditions of use.

**10.4 Conditions to avoid**

Incompatible materials. Extreme temperatures.

**10.5 Incompatible materials**

Combustible materials. Strong oxidizing agents.

**10.6 Hazardous decomposition products**

May include, and are not limited to: oxides of carbon.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Acute toxicity (oral) : Not classified.  
Acute toxicity (dermal) : Not classified.  
Acute toxicity (inhalation) : Not classified.

2-Pyrrolidinone (616-45-5)	
LD50 oral rat	328 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat	> 80 ppm (Exposure time: 8 h)

Skin corrosion/irritation : Not classified.  
pH: 3.1 – 3.5

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

Serious eye damage/irritation : Not classified.  
pH: 3.1 – 3.5

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

Respiratory or skin sensitisation : Not classified.

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

Germ cell mutagenicity : Not classified.

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

Carcinogenicity : Not classified.

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

Reproductive toxicity : Not classified.

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

STOT-single exposure : Not classified.

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

STOT-repeated exposure : Not classified.

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

Aspiration hazard : Not classified.

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

Other information : Likely routes of exposure: ingestion, inhalation, skin and eye.

## SECTION 12: Ecological information Section

## 12.1 Toxicity

Ecology - general	: May cause long-term adverse effects in the aquatic environment.
Unknown hazards to the aquatic environment (CLP)	: Contains 0.4 % of components with unknown hazards to the aquatic environment.
Hazardous to the aquatic environment, short-term (acute)	: Not classified.
Hazardous to the aquatic environment, long-term (chronic)	: Not classified.

2-Pyrrolidinone (616-45-5)	
LC50 fish 1	4600 – 10000 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static])
EC50 72h algae (1)	250 mg/l (Species: Desmodesmus subspicatus)
EC50 96h algae (1)	84 mg/l (Species: Desmodesmus subspicatus)

## 12.2 Persistence and degradability

TMB Substrate	
Persistence and degradability	Not established.

## 12.3 Bioaccumulative potential

TMB Substrate	
Bioaccumulative potential	Not established.

2-Pyrrolidinone (616-45-5)	
Partition coefficient n-octanol/water	-0.71 (at 25°C)

## 12.4 Mobility in soil

No additional information available.

## 12.5 Results of PBT and vPvB assessment

No additional information available.

## 12.6 Other adverse effects

Additional information : No other effects known.

## SECTION 13: Disposal considerations

## 13.1 Waste treatment methods



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Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Do not reuse container. Recycle empty containers where allowed.

## SECTION 14: Transport information

In accordance with ADR.

### 14.1 UN number

UN-No. (ADR) : Not regulated

### 14.2 UN proper shipping name

Proper Shipping Name (ADR) : Not regulated

### 14.3 Transport hazard class(es)

#### ADR

Transport hazard class(es) (ADR) : Not regulated

### 14.4 Packing group

Packing group (ADR) : Not regulated

### 14.5 Environmental hazards

Dangerous for the environment : No

Other information : No supplementary information available.

### 14.6 Special precautions for user

Special transport precautions : Do not handle until all safety precautions have been read and understood.

Overland transport : Not regulated.

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

Not applicable.

## SECTION 15: Regulatory information

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

#### 15.1.1.EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no REACH candidate substance.

Contains no REACH Annex XIV substances

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants



## 15.1.2. National regulations

No additional information available.

## 15.2 Chemical safety assessment

No chemical safety assessment has been carried out.

## SECTION 16: Other information

### 16.1. Abbreviations and acronyms

°C – Degrees Celsius

°F – Degrees Fahrenheit

ADR – European Agreement concerning the International Carriage of Dangerous Goods by Road.

ACGIH – American Conference of Governmental Industrial Hygienists

ATE – Acute Toxicity Estimate

BCF – Bioconcentration Factor

BEI – Biological Exposure Index

CAS – Chemical Abstracts Service

CLP – Regulation (EC) No 1272/2008 on the Classification, Labeling and Packaging of substances and mixtures.

cP – centipoise (unit of dynamic viscosity)

cSt – centistokes (unit of kinematic viscosity)

DNEL – Derived No-effect Level

EC50 – Half maximal effective concentration

ECHA – European Chemicals Agency

EC-No. – European Community number

EU – European Union

GHS – Globally Harmonized System of Classification and Labelling of Chemicals

h – Hours

IATA – International Air Transport Association

IDLH – Immediately Dangerous to Life or Health

IMDG – International Maritime Dangerous Goods

IOELV – Indicative Occupational Exposure Limit Value

kPa – kilopascal

Kow – Octanol-Water Partition Coefficient

LC50 – Median Lethal Concentration

LD50 – Median Lethal Dose

mg/l – Milligram per liter

mg/kg – Milligram per kilogram

mg/m<sup>3</sup> – Milligram per cubic meter

Min – Minutes

NIOSH – National Institute for Occupational Safety and Health

NOEC – No Observed Effect Concentration

N.O.S. – Not Otherwise Specified

OEL – Occupational Exposure Limit

PBT – Persistent, Bioaccumulative and Toxic

ppm – Parts per million

PVC – Polyvinyl chloride

REACH – Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006

RID – European Agreement concerning the International Carriage of Dangerous Goods by Rail

SDS – Safety Data Sheet

STEL – Short Term Exposure Limit



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TLV – Threshold Limit Value

TWA – Time Weighted Average

UN – United Nations

vPvB - Very Persistent and Very Bioaccumulative

## 16.2. Key literature references and sources for data

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

## 16.3. Full text of H- and EUH-statements:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Ox. Sol. 3	Oxidising Solids, Category 3
Skin Irrit. 2	Skin corrosion/irritation, Category 2
H272	May intensify fire; oxidiser.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
EUH210	Safety data sheet available on request.

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**End of Safety Data Sheet**

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier****Product Name:** STOPPING SOLUTION**Product Code:** MS E-5680**1.2 Relevant identified uses of the substance or mixture and uses advised against****Use:** To be used as a component with the Plasma Renin Activity  
ELISA kit according to the instructions provided with the kit.**1.3 Details of the supplier of the safety data sheet**

Name LDN Labor Diagnostika Nord GmbH & Co. KG  
Address Am Eichenhain 1  
48531 Nordhorn, Germany  
Telephone +49 (0)5921-8197 0 (Mo-Fr 8:00-16:00)  
Telefax +49 (0)5921 8197 201  
Contact email support@ldn.de

**1.4 Emergency telephone number**

Telephone Number: Refer to Appendix A of this document for emergency telephone  
numbers based on your country

**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture**Classification in accordance with the Classification Labeling and Packaging Regulation (EC) No  
1272/2008 (CLP)

Hazard class:	Hazard Statement:
Skin irritation 2	H315 Causes skin irritation.
Serious eye irritation 2	H319 Causes serious eye irritation.

Classification in accordance with the Dangerous Preparations Directive 1999/45/EC

Hazard class:	R - Phrase:
Irritant (Xi)	R36/38 Irritating to eyes and skin.

**2.2 Label elements**

Labeling by the Classification Labeling and Packaging Regulation (EC) No 1272/2008

**Hazard Pictogram:**



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<b>Signal Word:</b>	Warning
<b>Hazard Statement:</b>	H315 Causes skin irritation. H319 Causes serious eye irritation.
<b>Precaution:</b>	Not applicable.
<b>Prevention:</b>	P280 Wear protective gloves/protective clothing/eye protection/face protection. P264 Wash exposed skin thoroughly after handling
<b>Response:</b>	P302 + P352 + P332 + P313 -IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. P362 – Take off contaminated clothing and wash before reuse. P305 + P351 + P338 + P337 + P313 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
<b>Storage:</b>	Not applicable.
<b>Disposal:</b>	P501 Dispose of contents and container in accordance with all local, regional, national and international regulations.
<b>Additional Hazards:</b>	Not applicable.

## 2.3 Other hazards

PBT & vPvB: See section 12.5 for more detailed information on PBT and vPvB.

## SECTION 3: Composition/information on ingredients

### 3.1 Mixtures

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

Ingredient	CAS No	EC No	REACH No	Wt. %	Class
Sulfuric acid	7664-93-9	231-639-5	Not available.	9 - 10	Eye Irrit. 2; H319: 5% ≤ C < 15% Skin Irrit. 2; H315: 5% ≤ C < 15% Skin Corr. 1A; H314: C ≥ 15%

Classification according to 67/548/EEC

Ingredient	CAS No	EC No	REACH No	Wt. %	Class
Sulfuric acid	7664-93-9	231-639-5	Not available.	9 - 10	R35; C $\geq$ 15 % C Xi; R36/38; 5 % $\leq$ C < 15 %

Full text of R-, H- and EUH- phrases: see section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

Eye:	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses, if worn. Get medical advice/attention.
Skin:	In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Get medical advice/attention.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical advice/attention.
Ingestion:	If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical advice/attention.

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

Eye:	Cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.
Skin:	Cause skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin.
Inhalation:	May cause respiratory tract irritation.
Ingestion:	May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

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

Note to Physicians:	Symptoms may not appear immediately.
Specific Treatments:	In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Appropriated:	Use water spray or other suitable agent on fires adjacent to nonleaking tanks or intact acid containers. If only a small amount of combustibles is present, smother fire with dry chemicals. <u>Small fire</u> : Dry powder or CO <sub>2</sub> . Move containers from the fire area, if it can be done without risk. <u>Large fire</u> : Flood fire area with large quantities of water, knocking down vapors with water fog. Cool containers with flooding quantities of water until well after the fire is out. Do not get water inside containers. Withdraw immediately in case of rising sound from venting safety devices or discoloration of the tank.
Non appropriated:	Do not use solid water streams near ruptured tanks or spills of sulfuric acid.

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

Products of Combustion:	May include and are not limited to: oxides of carbon.
	Acid reacts violently with water and can spatter acid onto personnel. Reacts with most metals, especially when diluted: Hydrogen gas release, which is extremely flammable and explosive. Risk of explosion if acid combines with water, organic materials or base solutions in enclosed spaces. Mixing acids of different strengths/concentrations can also pose an explosive risk in an enclosed space/container.

### 5.3 Advice for firefighters

Protection of Firefighters:	Add chemical safety goggles if eye protection is not provided. Wear full protective clothing. Evacuate personnel to a safe area. Keep personnel removed and upwind of fire. Wear full protective clothing. Neutralize run-off with lime, soda ash, to prevent corrosion of metals and formation of hydrogen gas. Wear self-contained breathing apparatus if fumes or mists are present.
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## SECTION 6: Accidental release measures

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

Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Avoid any contact with the skin and eyes. Do not breathe vapour or mist.



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## 6.2 Environmental precautions

Keep out of drains, sewers, ditches, and waterways. Minimize use of water to prevent environmental contamination.

## 6.3 Methods and material for containment and cleaning up

Methods for Containment: Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).

Methods for Cleaning-Up: Scoop up material and place in a disposal container. Provide ventilation.

## 6.4 Reference to other sections

See section 8 for further information on protective clothing and equipment and section 13 for advice on waste disposal.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

**Handling:** Users should have a thorough understanding how to use this product. Do not breathe gas/fumes/ vapor/spray. Do not get in eyes, on skin, or on clothing. Do not swallow. Handle and open container with care. When using do not eat, drink or smoke. (See section 8).

**General Hygiene Advice:** Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.

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

**Storage:** Keep out of the reach of children. Keep container tightly closed. Product should be at room temperature and mixed gently but thoroughly before use. Do not use any component beyond the expiration date printed on the label. Store in an appropriate container. Unused chemicals should not be returned to the container. (See section 10)

### 7.3 Specific end use(s)

**End uses:** Not available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters



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Ingredient	UK - Occupational Exposure Limits (TWA)
Sulfuric acid	0.05 mg/m <sup>3</sup> TWA (mist)

## 8.2 Exposure controls

Engineering Controls: Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

### Personal Protective Equipment:

Eye/Face Protection: Wear approved eye (properly fitted dust- or splash-proof chemical safety goggles) / face (face shield) protection.

### Skin Protection:

Hand Protection: Wear solvent resistant gloves.

Body Protection: Wear suitable protective clothing, including appropriate boots, boot covers, overshoes, etc., as may be appropriate.

Respiratory Protection: In case of insufficient ventilation, wear suitable respiratory equipment.

General Health & Safety Measures: Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking.

Environmental Exposure Controls: Handle in accordance with good industrial hygiene and safety practice.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Appearance:	Not available.
Color:	Not available.
Odour:	Not available.
Odour Threshold:	Not available.
Physical State:	Liquid.
pH:	0
Melting Point:	Not available.
Boiling Point:	Not available.
Flash Point:	Not available.
Evaporation Rate:	Not available.
Flammability:	Not Flammable.
Lower Flammability/Explosive Limit:	Not available.





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Upper Flammability/Explosive Limit:	Not available.
Vapor Pressure:	Not available.
Vapor Density:	Not available.
Relative Density:	Not available.
Solubility:	Not available.
Partition coefficient: n-octanol/water:	Not available.
Auto-ignition Temperature:	Not available.
Decomposition Temperature:	Not available.
Viscosity:	Not available.
Explosive Properties:	Not available.
Oxidizing Properties:	Not available.

## 9.2 Other information

Not available.

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No dangerous reaction known under conditions of normal use.

### 10.2 Chemical stability

Stable under normal storage conditions.

### 10.3 Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

### 10.4 Conditions to avoid

Heat. Incompatible materials.

### 10.5 Incompatible materials

None known.

### 10.6 Hazardous decomposition products

May include, and are not limited to: oxides of carbon.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Likely Routes of Exposure: Skin contact, eye contact, inhalation, and ingestion.

Acute Health Effects:



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Eye: Cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Skin: Cause skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin.

Ingestion: May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

Inhalation: May cause respiratory tract irritation.

Acute Toxicity:

Ingredient	LC50	LD50
Sulfuric acid	Inhalation Mouse 320 mg/m <sup>3</sup> 2 h Inhalation Rat 510 mg/m <sup>3</sup> 2 h Inhalation Rat 347 ppm 1 h	Oral Rat 2140 mg/kg

Skin Corrosion/Irritation: Causes skin irritation.

Serious Eye Damage/Irritation: Causes eye irritation.

Respiratory or Skin Sensitization: Based on available data, the classification criteria are not met.

STOT-Single Exposure: Based on available data, the classification criteria are not met.

Chronic Health Effects:

Carcinogenicity: This product is not classified as a carcinogen.

Germ Cell Mutagenicity: This product is not classified as a mutagen.

Reproductive Toxicity:

Developmental: This product does not contain known reproductive or developmental toxins.

Fertility: No known significant effects or critical hazards.

STOT-Repeated Exposure: Based on available data, the classification criteria are not met.

Aspiration Hazard: Not expected to occur.

Other Information: Not available.

## SECTION 12: Ecological information Section

### 12.1 Toxicity

Acute/Chronic Toxicity: May cause long-term adverse effects in the aquatic environment.



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Ingredient	Aquatic Toxicity
Sulfuric acid	Not available.

Contains 100% of components with unknown hazards to the aquatic environment.

## 12.2 Persistence and degradability

Not available.

## 12.3 Bioaccumulative potential

Bioaccumulation: Not available.

## 12.4 Mobility in soil

Not available.

## 12.5 Results of PBT and vPvB assessment

PBT results: A PBT assessment has not yet been carried out under REACH for the constituents. However, there are no indications that this product contains substances likely to be classified as PBT.

vPvB results: A vPvB assessment has not yet been carried out under REACH for the constituents. However, there are no indications that this product contains substances likely to be classified as vPvB.

## 12.6 Other adverse effects

Not available.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Do not use the empty containers.  
Waste disposal according to the Directives EC 75/442/EEC and 91/689/EEC in their latest versions by incineration or dispose of waste material.

This material must be disposed of in accordance with all local, state, provincial, and federal regulations.

### 13.2. Waste code numbers/Waste identification

Not available.

## SECTION 14: Transport information

### 14.1 UN number

UN2796

### 14.2 UN proper shipping name

Battery fluid, acid: sulfuric acid with no more than 51% acid, or Sulfuric acid with no more than 51% acid

### 14.3 Transport hazard class(es)

8

### 14.4 Packing group

II

### 14.5 Environmental hazards

Not available

## 14.6 Special precautions for user

Do not handle until all safety precautions have been read and understood.

## 14.7 Transport in bulk according to Annex II of MARPOL73/78 and IBC Code

Not available

## SECTION 15: Regulatory information

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

Authorizations and/or restrictions on use:

This Safety Data Sheet classification and labeling have been determined according to the (EC) No. 1272-2008 "Classification, Labeling and Packaging" regulation; as well as the EU Directives 67/548/EEC and 1999/45/EC and take into account the intended product use.

### 15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out for this product.

## SECTION 16: Other information

### Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

#### Classification

Acute toxicity 3 (Acute Tox. 3)  
Skin irritation 2 (Skin Irrit. 2)  
Serious eye irritation 2 (Eye Irrit. 2)

#### Classification Procedure

Calculation method.  
Concentration limits.  
Concentration limits.

#### Relevant R-, H- and EUH- Phrases:

H331 Toxic if inhaled.

H314 Causes severe skin burns and eye damage.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H314 Causes severe skin burns and eye damage.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

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

P342+ P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.



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P501 Dispose of contents and container in accordance with all local, regional, national and international regulations.

R20 Harmful by inhalation

R36/38 Irritating to eyes and skin.

R35 Causes severe burns

## Legend:

PBT - Persistent, Bioaccumulative and Toxic

vPvB - very Persistent and very Bioaccumulative

CAS No - Chemical Abstracts Service Number

EC No - European Commission Number

REACH No - Registration, Evaluation, Authorisation and restriction of Chemicals Number

STOT Specific target organ toxicity

logK<sub>ow</sub> - Partition coefficient n-octanol/water

BCF - Bioconcentration Factor

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**End of Safety Data Sheet**



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## Appendix A: Emergency Telephone Numbers

Austria:	+431 406 43 43
Belgium:	+32 070 245 245
Bulgaria:	+359 2 9154 409
Czech Republic:	+420 224 919 293, +420 224 915 402
Denmark, the Faroe Islands, Greenland and Danish ships :	+45 82 12 12 12
Estonia:	Emergency number : 112 (7/7d, 24/24H), Poison centre number : - nationally: 16662, - from abroad: +372 626 93 90 (from Monday 9AM to Saturday 9AM)
United Kingdom:	NHS Direct: +44 0845 4647
Finland:	+358 (09)471 977 (direct), +358 (09) 4711 (exchange)
France:	+ 33 (0)1 45 42 59 59
Greece:	Contact local poison centre or emergency medical centre
Hungary:	+36 80 20 11 99
Iceland	Contact local poison centre or emergency medical centre
Ireland	+353 01 809 2166 (7/7d, 8 AM to 10 PM)
Italy	Contact local poison centre or emergency medical centre
Latvia	+371 67042473
Liechtenstein	Contact local poison centre or emergency medical centre
Lithuania	+370 5 236 20 52 or +370 687 53378
Luxembourg	Contact local poison centre or emergency medical centre
Malta	+356 2545 4030
Netherlands	Contact local poison centre or emergency medical centre
Norway	+47 22 59 13 00
Poland	Contact local poison centre or emergency medical centre
Portugal	+351 808 250 143
Romania	+40 021 318 36 06 (from 8AM to 15PM)
Slovakia	+421 2 5477 4166
Slovenia	Contact local poison centre or emergency medical centre
Spain	+ 34 91 562 04 20
Sweden	112 (7/7d, 24/24H) in case of emergency poisoning, +46 08 331231 (from Monday to Friday from 9AM to 17PM) for other questions concerning acute poisonings
Germany-Berlin	030/19240
Germany-Bonn	0228/19240 und 0228/287-33211
Germany-Erfurt	0361/730 730
Germany-Freiburg	0361/730 730
Germany-Göttingen	0551/19 240
Germany-Homburg	06841/19240 (Notfall) 06841/1628336 (Sekretariat)
Germany-Mainz	06131/19240; oder 0700-GIFTINFO; Infoline: 06131-23 24 66



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Germany-München	089/19240
Germany-Nürnberg	Giftnotruf: 0911/398-2451, Tel.: 0911/398 2665, Fax: 0911/398 2205