

**Revision date:** 2018-08-31

**Version:** SES\_4\_en



## **1. Identification of the substance/mixture and of the company/undertaking**

### **Product identifier**

Substance name: Serotonin High Sensitive - ELISA      Article number.: R E F EA630/96

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

Relevant identified uses:  
Reagent / Immunoassay  
For in-vitro diagnostic use only. For professional use only.

Uses advised against:  
/

### **Details of the supplier of the safety data sheet:**

#### **Supplier**

DLD Diagnostika GmbH

#### **Address**

Adlerhorst 15  
22459 Hamburg  
Germany

#### **Information contact**

E-Mail: [contact@dld-diagnostika.de](mailto:contact@dld-diagnostika.de)  
Internet: [www.dld-diagnostika.de](http://www.dld-diagnostika.de)

#### **Telephone / Fax / E-Mail**

Tel +49 (0) 40 555 87 10 / Fax +49 (0) 40 555 87 111 / [contact@dld-diagnostika.de](mailto:contact@dld-diagnostika.de)

#### **Emergency Telephone Number**

Tel +49 (0) 40 555 87 10

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## **2. Hazards identification**

### **Classification of the substance or mixture**

Some components of this kit are containing hazardous reagents. These components are marked with the adequate hazard label:

Solvent  
Acylation Buffer Concentrate  
Enzyme Conjugate  
Substrate

Corresponding safety data sheets: see following safety data sheets (below)

Following components (see 3. Composition/information on ingredients) contain no hazardous reagents in concentrations to be declared.

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### **3. Composition/information on ingredients**

Microtiterstrips	Polystyrol-Microtiterplate coated with specific antigen
Standard	Diluted antigen
Control	Diluted antigen
Acylation Buffer	Protein, lyophilized
Acylation Reagent	Acylation reagent, lyophilized
Deactivator	Diluted specific antiserum (rabbit), neutral buffer solution, stabilized
Reaction Plate	Polypropylene-Microtiterplate
Foil	/
Wash Buffer	Diluted buffer solution with detergent, neutral, concentrate
Stop Solution	0.3 mol/l sulphuric acid
Ascorbic acid	10% ascorbic acid
Standard Buffer	Diluted buffer solution, neutral

Components above contain no hazardous reagents in concentrations to be declared.

### **4. First aid measures**

#### **General informations:**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

#### **After inhalation**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. If unconsciousness, bedding and transport in recovery position.

#### **After skin contact**

Generally the product does not irritate the skin.

#### **After eye contact**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

#### **After swallowing**

If symptoms persist consult doctor.

### **5. Firefighting measures**

#### **Extinguishing media**

Suitable:

*CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.*

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## **6. Accidental release measures**

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

Wear protective clothing.

### **Environmental precautions**

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

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

Absorb with liquid-binding material.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

### **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

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## **7. Handling and storage**

### **Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Always close receptacle after use.

Prevent formation of aerosols.

### **Information about fire - and explosion protection:**

Keep respiratory protective device available.

### **Aerosol and dust generation preventions**

Open and handle receptacle with care.

Always close receptacle after use.

### **Environmental precautions**

Do not allow to enter sewers/ surface or ground water.

### **General hygiene measures**

- Eating, drinking or smoking is prohibited in working areas.

- Wash hands after handling.

- Remove contaminated clothing and protective equipment before entering any food handling areas.

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

No special requirements

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## 8. Exposure controls/personal protection

Occupational exposure limit sulphuric acid:

Inhalable fraction: 0,1 mg/m<sup>3</sup>

### Personal protective equipment

#### Eye / Face protection

Tightly sealed goggles.

#### Skin protection

##### Protective Gloves

##### Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. The quality of the protective gloves must be chosen as a function of the specific working place concentration and quantity of hazardous substances.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

The exact break through time: Call the manufacturer of the protective gloves and this has to be observed.

##### Other skin protection measures

Lab coat.

#### Respiratory protection

No special requirements.

#### Thermal hazards

No special requirements.

#### Environmental exposure controls

See sections 6 und 7.

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## 9. Physical and chemical properties

Microtiterstrips	Polystyrol-Microtiterplate in foil packet.
Standard	Colorless liquid.
Control	Colorless liquid.
Acylation Buffer	Powder
Acylation Reagent	Powder
Deactivator	Colored, neutral liquid
Reaction Plate	Polypropylene-Microtiterplate in foil packet.
Foil	Adhesive foil in foil packet.
Wash Buffer	Colorless, neutral liquid.
Stop Solution	Colorless, acidic liquid, pH < 1.
Ascorbic acid	Colorless liquid.
Standard Buffer	Colorless, neutral liquid.

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## 10. Stability and reactivity

Stability of components: See Label.

Used according to intended use and stored under appropriate conditions no dangerous reactions known.

Conditions to avoid

Substrate is light-sensitive.

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**11. Toxicological information**

Used according to intended use no toxicological reactions known.

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**12. Ecological information**

Used according to intended use no ecological reactions known.

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**13. Disposal considerations**

Dispose of waste according to applicable local, state, and federal regulations.

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**14. Transport information**

This product is not subject to official transport regulations

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**15. Regulatory information**

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

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

**National Regulations**

**Water hazard class**

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.

**Further relevant regulations**

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**Chemical Safety Assessment**

A Chemical Safety Assessment has not been carried out.

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**16. Other information**

**Indication of changes**

Entire Revision

**Key literature references and sources for data**

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

Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

Directive 1999/45/EC of the European Parliament and of the Council concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations.

**Further Informations**

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. This shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

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**1. Identification of the substance/mixture and of the company/undertaking**

**1.1 Product identifier**

Substance name: Solvent

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

Relevant identified uses:

Reagent / Immunoassay

For in-vitro diagnostic use only. For professional use only.

Uses advised against:

/

**1.3 Details of the supplier of the safety data sheet:**

**Supplier**

DLD Diagnostika GmbH

**Address**

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**1.4 Emergency Telephone Number**

Tel +49 (0) 40 555 87 10

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## 2. Hazards identification

### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]:  
Flam. Liq. 2 H225 Eye Irrit. 2; H319 STOT SE 3; H336

### 2.2 Label elements

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

##### Hazard pictograms / Signal words:



Danger GHS02



Warning GHS07

##### Hazard-determining components of labelling

Acetone

##### Hazard statements

H225 Highly flammable liquid and vapour.  
H319+EUH066 Causes serious eye irritation.  
Repeated exposure may cause skin dryness or cracking.  
H336 May cause drowsiness or dizziness.

##### Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.  
P233 Keep container tightly closed.  
P280 Wear protective gloves/protective clothing/eye protection/face protection  
P303 + P361 + P353 IF ON SKIN (or hair) Remove/Take off Immediately all contaminated clothing. Rinse SKIN with water/shower.  
P264 Wash hands thoroughly after handling.  
P305+P351+P338 IF IN EYES Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P337 + P313 If eye irritation persists Get medical advice/attention.  
P501 Dispose of contents/container to applicable local, state, and federal regulations.

##### Supplemental Hazard information (EU)

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### 2.3 Other hazards

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### 3. Composition/information on ingredients

#### 3.1 Substances

This product is a mixture.

#### 3.2 Mixture

Substance: Acetone

EG-Nr.: 200-662-2 CAS-Nr. : 67-64-1 Index-Nr.: 606-001-00-8

Content: 50 - 100%

Classification according to (EG) Nr. 1272/2008:

Flamm. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336

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### 4. First aid measures

#### 4.1 Description of first aid measures

##### General informations:

Immediately remove any clothing soiled by the product.

##### After inhalation

Supply fresh air; consult doctor in case of complaints.

##### After skin contact

Immediately rinse with water. If skin irritation continues, consult a doctor.

##### After eye contact

Rinse opened eye for several minutes under running water. Then consult a doctor.

##### After swallowing

Rinse out mouth. Do not induce vomiting; call for medical help immediately.

Risk of aspiration! Keep airways free.

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

No further relevant information available.

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

No further relevant information available.

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### 5. Firefighting measures

#### 5.1 Extinguishing media

Suitable:

CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

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

Combustible. Vapours are heavier than air and may spread along floors.

Forms explosive mixtures with air at ambient temperatures. Beware of backfiring.

#### 5.3 Advice for fire-fighters

##### Protective equipment:

Wear self-contained respiratory protective device. In order to avoid contact with skin, keep a safety distance and wear suitable protective clothing. Wear fully protective suit.

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## **6. Accidental release measures**

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

Wear protective equipment. Keep unprotected persons away.  
Do not inhale steams/aerosols. Keep away from ignition sources.  
Avoid substance contact. Ensure adequate ventilation

### **6.2 Environmental precautions**

Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.

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

Absorb with liquid-binding material.  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.

### **6.4 Reference to other sections**

See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

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## **7. Handling and storage**

### **7.1 Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace. Open and handle receptacle with care.  
Always close receptacle after use. Prevent formation of aerosols.

#### **Information about fire - and explosion protection:**

Keep ignition sources away - Do not smoke.

#### **Aerosol and dust generation preventions**

Open and handle receptacle with care.  
Always close receptacle after use.

#### **Environmental precautions**

Do not allow to enter sewers/ surface or ground water.

#### **General hygiene measures**

- Eating, drinking or smoking is prohibited in working areas.
- Wash hands after handling.
- Remove contaminated clothing and protective equipment before entering any food handling areas.

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

#### **Information about storage conditions**

No special requirements.

#### **Requirements for storage rooms and vessels**

No special requirements.  
Keep receptacle tightly sealed.

Storage class: /

### **7.3 Specific end uses**

No further relevant information available.

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## **8. Exposure controls/personal protection**

### **8.1 Control parameters**

#### **8.1.1 Components with workplace control parameters**

##### **Limit Value Type (AGW) Germany**

Substance: Acetone, CAS-Nr. : 67-64-1  
Source : AGW  
Value : 1200 mg/m<sup>3</sup>, 500 ml/m<sup>3</sup>, 2(I); DFG, EU

### **8.2 Exposure controls**

#### **8.2.1 Appropriate engineering controls**

Ensuring good ventilation.  
This can be achieved by local suction or general exhaust air.

#### **8.2.2 Personal protective equipment**

##### **General protective and hygienic measures**

Immediately remove all soiled and contaminated clothing  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes and skin.

##### **Eye / Face protection**

Tightly sealed goggles.

##### **Skin protection**

###### **Protective Gloves**

###### **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. The quality of the protective gloves must be chosen as a function of the specific working place concentration and quantity of hazardous substances.  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
The exact break through time: Call the manufacturer of the protective gloves and this has to be observed.

###### **Other skin protection measures**

Lab coat.

##### **Respiratory protection**

Respiratory protection: If limit value of working place is exceeded.

##### **Thermal hazards**

No special requirements.

#### **8.2.3 Environmental exposure controls**

See sections 6 und 7.

## **9. Physical and chemical properties**

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

Appearance	
- Form:	Liquid
- Colour:	Yellowish
Odour:	Fruit-like
Odour Threshold:	No data available
pH:	No data available
Melting point/freezing point:	No data available
Initial boiling point and boiling range:	No data available
Flash point:	No data available
Evaporation rate:	No data available
Flammability (solid, gas):	No data available
Upper/lower flammability or explosive limits:	No data available
Vapour pressure:	No data available
Vapour density:	No data available
Relative density:	No data available
Water solubility:	completely miscible
Partition coefficient: n-octanol/water:	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity:	No data available
Explosive properties:	No data available
Oxidizing properties:	No data available

### **9.2 Other safety information**

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## **10. Stability and reactivity**

### **10.1 Reactivity**

No data available.

### **10.2 Chemical stability**

No decomposition if used according to specifications.

### **10.3 Possibility of hazardous reactions**

Reacts with reducing agents.  
Reacts with strong acids and oxidizing agents.  
Forms explosive gas mixture with air.

### **10.4 Conditions to avoid**

Heat, flames and sparks.

### **10.5 Incompatible materials**

No data available.

### **10.6 Hazardous decomposition products**

No dangerous decomposition products known.

## **11. Toxicological information**

### **11.1 Information on toxicological effects**

#### **Substance**

This product is a mixture.

#### **Mixture**

No data available for this mixture.

#### **Acute toxicity**

Acetone CAS-Nr.: 68-12-2

LD50 Oral – rat – 5,800 mg/kg

LD50 Dermal – rabbit – 20,000 mg/kg

#### **Irritation**

**Skin:** No irritant effect known.

**Eye:** Irritating effect.

**Inhalation:** No irritant effect known.

#### **Corrosivity**

No corrosive effect known.

#### **Sensitisation**

No sensitizing effects known.

#### **Repeated dose toxicity**

No data available.

#### **Carcinogenicity**

No data available.

#### **Mutagenicity**

No data available.

#### **Toxicity for reproduction**

No data available.

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

No data available.

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

No data available.

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## **12. Ecological information**

### **12.1 Toxicity**

No further relevant information available.

### **12.2 Persistence and degradability**

No further relevant information available.

### **12.3 Bioaccumulative potential**

No further relevant information available.

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#### **12.4 Mobility in soil**

No further relevant information available.

#### **12.5 Results of PBT and vPvB assessment**

No further relevant information available.

#### **12.6 Other adverse effects**

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

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### **13. Disposal considerations**

#### **13.1 Waste treatment methods**

Dispose of waste according to applicable local, state, and federal regulations.

##### **Contaminated packaging**

Dispose of packaging according to applicable local, state, and federal regulations.

##### **Waste codes**

Confirm precise waste code with the disposer.

##### **Special precautions**

No further relevant information available.

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### **14. Transport information**

#### **14.1 UN number**

ADR/RID: 1090

IMDG: 1090

IATA: 1090

#### **14.2 UN proper shipping name**

##### **ADR/RID**

ADR/RID: ACETON

##### **IMDG-Code / ICAO-TI / IATA-DGR**

IMDG: ACETONE

IATA: Acetone

#### **14.3 Transport hazard class(es)**

ADR/RID: 3

IMDG: 3

IATA: 3.

#### **14.4 Packaging group**

ADR/RID: II

IMDG: II

IATA: II

#### **14.5 Environmental hazards**

ADR/RID / IMDG-Code / ICAO-TI / IATA-DGR:  yes /  no

Marine Pollutant:  yes /  no

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

See sections 6 -8.

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

Not applicable.

## 15. Regulatory information

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

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

#### National Regulations

##### Water hazard class

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.

#### Further relevant regulations

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### 15.2 Chemical Safety Assessment

A Chemical Safety Assessment has not been carried out.

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## 16. Other information

### Indication of changes

Entire Revision

### Abbreviations and acronyms

*PBT: persistent, bioaccumulative, toxic substance (REACH)*

*vPvB: very persistent, very bioaccumulative substance (REACH)*

*REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals*

*CLP: Regulation on classification, labelling and packaging of substances and mixtures*

*ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International*

*Carriage of Dangerous Goods by Road)*

*RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the*

*International Transport of Dangerous Goods by Rail)*

*IMDG: International Maritime Code for Dangerous Goods*

*IATA: International Air Transport Association*

*ICAO: International Civil Aviation Organization*

*GHS: Globally Harmonized System of Classification and Labelling of Chemicals*

*EINECS: European Inventory of Existing Commercial Chemical Substances*

*CAS: Chemical Abstracts Service (division of the American Chemical Society)*

*LC50: Lethal concentration, 50 percent*

*LD50: Lethal dose, 50 percent*

### Key literature references and sources for data

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

Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

Directive 1999/45/EC of the European Parliament and of the Council concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations.

### Further Informationen

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. This shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

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**1. Identification of the substance/mixture and of the company/undertaking**

**1.1 Product identifier**

Substance name: Acylation Buffer Concentrate

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

Relevant identified uses:

Reagent / Immunoassay

For in-vitro diagnostic use only. For professional use only.

Uses advised against:

/

**1.3 Details of the supplier of the safety data sheet:**

**Supplier**

DLD Diagnostika GmbH

**Address**

Adlerhorst 15  
22459 Hamburg  
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**Information contact**

E-Mail: [contact@dld-diagnostika.de](mailto:contact@dld-diagnostika.de)

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**1.4 Emergency Telephone Number**

Tel +49 (0) 40 555 87 10

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## 2. **Hazards identification**

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

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

Eye Irrit. 2; H319                      Skin Irrit. 2; H315

### 2.2 **Label elements**

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

**Hazard pictograms / Signal words:**



Warning GHS07

**Hazard-determining components of labelling**

/

**Hazard statements:**

H319 Causes serious eye irritation.

H315 Causes skin irritation

**Precautionary statements**

P264 Wash hands thoroughly after handling.

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

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

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

P332 + P313 IF SKIN irritation occurs: Get medical advice/attention.

P337 + P313 If eye irritation persists: Get medical advice/attention.

P362 + P364 Take off contaminated clothing and wash before reuse.

**Supplemental Hazard information (EU):**

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### 2.3 **Other hazards**

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### **3. Composition/information on ingredients**

#### **3.1 Substances**

This product is a mixture.

#### **3.2 Mixture**

Substance: /

Content : 20 - 40%

Classification according to (EG) Nr. 1272/2008:

Eye Irrit. 2; H319 Skin Irrit. 2; H315

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### **4. First aid measures**

#### **4.1 Description of first aid measures**

##### **General informations:**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

##### **After inhalation**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. If unconsciousness, bedding and transport in recovery position.

##### **After skin contact**

Immediately rinse with water.

##### **After eye contact**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

##### **After swallowing**

Drink copious amounts of water and provide fresh air. Call for doctor immediately.

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

No further relevant information available.

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

No further relevant information available.

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### **5. Firefighting measures**

#### **5.1 Extinguishing media**

Suitable:

CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

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

In case of fire, the following can be released:

Nitrogen oxides (NO<sub>x</sub>), Carbon monoxide and carbon dioxide.

#### **5.3 Advice for fire-fighters**

**Protective equipment:** Mount respiratory protective device.

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## **6. Accidental release measures**

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

Wear protective clothing.

### **6.2 Environmental precautions**

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

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

Absorb with liquid-binding material.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

### **6.4 Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

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## **7. Handling and storage**

### **7.1 Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Always close receptacle after use.

Prevent formation of aerosols.

#### **Information about fire - and explosion protection:**

Keep respiratory protective device available.

#### **Aerosol and dust generation preventions**

Open and handle receptacle with care.

Always close receptacle after use.

#### **Environmental precautions**

Do not allow to enter sewers/ surface or ground water.

#### **General hygiene measures**

- Eating, drinking or smoking is prohibited in working areas.

- Wash hands after handling.

- Remove contaminated clothing and protective equipment before entering any food handling areas.

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

#### **Information about storage conditions**

No special requirements.

#### **Requirements for storage rooms and vessels**

No special requirements.

Keep receptacle tightly sealed.

Storage class: /

### **7.3 Specific end uses**

No further relevant information available.

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## **8. Exposure controls/personal protection**

### **8.1 Control parameters**

#### **8.1.1 Components with workplace control parameters**

##### **Limit Value Type (AGW) Germany**

Not required.

### **8.2 Exposure controls**

#### **8.2.1 Appropriate engineering controls**

Ensuring good ventilation.

This can be achieved by local suction or general exhaust air.

#### **8.2.2 Personal protective equipment**

##### **Eye / Face protection**

Tightly sealed goggles.

##### **Skin protection**

###### **Protective Gloves**

###### **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. The quality of the protective gloves must be chosen as a function of the specific working place concentration and quantity of hazardous substances.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

The exact break through time: Call the manufacturer of the protective gloves and this has to be observed.

###### **Other skin protection measures**

Lab coat.

##### **Respiratory protection**

Not required.

##### **Thermal hazards**

No special requirements.

#### **8.2.3 Environmental exposure controls**

See sections 6 und 7.

---

## **9. Physical and chemical properties**

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

Appearance	
- Form:	Liquid
- Colour:	Yellow
Odour:	Odourless
Odour Threshold:	No data available
pH:	8.8 – 9.4
Melting point/freezing point:	No data available
Initial boiling point and boiling range:	No data available
Flash point:	No data available
Evaporation rate:	No data available
Flammability (solid, gas):	No data available
Upper/lower flammability or explosive limits:	No data available
Vapour pressure:	No data available
Vapour density:	No data available
Relative density:	No data available
Water solubility:	completely miscible
Partition coefficient: n-octanol/water:	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity:	No data available
Explosive properties:	No data available
Oxidizing properties:	No data available

### **9.2 Other safety information**

/

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## **10. Stability and reactivity**

### **10.1 Reactivity**

No data available.

### **10.2 Chemical stability**

No decomposition if used according to specifications.

### **10.3 Possibility of hazardous reactions**

No data available.

### **10.4 Conditions to avoid**

No data available.

### **10.5 Incompatible materials**

Avoid contact with: strong oxidizers, strong acids, strong alkali.

### **10.6 Hazardous decomposition products**

Nitrogen oxides (NO<sub>x</sub>), Carbon monoxide and carbon dioxide

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## **11. Toxicological information**

### **11.1 Information on toxicological effects**

#### **Substance**

This product is a mixture.

#### **Mixture**

No data available for this mixture.

#### **Acute toxicity**

No data available.

#### **Irritation**

**Skin:** Irritant to skin and mucous membranes.

**Eye:** Irritating effect.

#### **Corrosivity**

No corrosive effect known.

#### **Sensitisation**

No sensitizing effects known.

#### **Repeated dose toxicity**

No data available.

#### **Carcinogenicity**

IARC: No component of this product present at a level greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

#### **Mutagenicity**

No data available.

#### **Toxicity for reproduction**

No data available.

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

No data available.

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

No data available.

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## **12. Ecological information**

### **12.1 Toxicity**

No further relevant information available.

### **12.2 Persistence and degradability**

The product is easily biodegradable

### **12.3 Bioaccumulative potential**

No further relevant information available.

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#### **12.4 Mobility in soil**

No further relevant information available.

#### **12.5 Results of PBT and vPvB assessment**

No further relevant information available.

#### **12.6 Other adverse effects**

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

---

### **13. Disposal considerations**

#### **13.1 Waste treatment methods**

Dispose of waste according to applicable local, state, and federal regulations.

##### **Contaminated packaging**

Dispose of packaging according to applicable local, state, and federal regulations.

##### **Waste codes**

Confirm precise waste code with the disposer.

##### **Special precautions**

No further relevant information available.

---

### **14. Transport information**

#### **14.1 UN number**

/

#### **14.2 UN proper shipping name**

##### **ADR/RID**

No dangerous good in sense of this transport regulation.

##### **IMDG-Code / ICAO-TI / IATA-DGR**

No dangerous good in sense of this transport regulation.

#### **14.3 Transport hazard class(es)**

No dangerous good in sense of this transport regulation.

#### **14.4 Packaging group**

Material with low danger.

#### **14.5 Environmental hazards**

ADR/RID / IMDG-Code / ICAO-TI / IATA-DGR:  yes /  no

Marine Pollutant:  yes /  no

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

See sections 6 -8.

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

Not applicable.

## 15. Regulatory information

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

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

#### National Regulations

##### Water hazard class

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.

#### Further relevant regulations

/

### 15.2 Chemical Safety Assessment

A Chemical Safety Assessment has not been carried out.

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## 16. Other information

### Indication of changes

Entire Revision

### Abbreviations and acronyms

*PBT: persistent, bioaccumulative, toxic substance (REACH)*

*vPvB: very persistent, very bioaccumulative substance (REACH)*

*REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals*

*CLP: Regulation on classification, labelling and packaging of substances and mixtures*

*ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International*

*Carriage of Dangerous Goods by Road)*

*RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the*

*International Transport of Dangerous Goods by Rail)*

*IMDG: International Maritime Code for Dangerous Goods*

*IATA: International Air Transport Association*

*ICAO: International Civil Aviation Organization*

*GHS: Globally Harmonized System of Classification and Labelling of Chemicals*

*EINECS: European Inventory of Existing Commercial Chemical Substances*

*CAS: Chemical Abstracts Service (division of the American Chemical Society)*

*LC50: Lethal concentration, 50 percent*

*LD50: Lethal dose, 50 percent*

### Key literature references and sources for data

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

Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

Directive 1999/45/EC of the European Parliament and of the Council concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations.

### Further Informationen

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. This shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

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**1. Identification of the substance/mixture and of the company/undertaking**

**1.1 Product identifier**

Substance name: Enzyme Conjugate

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

Relevant identified uses:

Reagent / Immunoassay

For in-vitro diagnostic use only. For professional use only.

Uses advised against:

/

**1.3 Details of the supplier of the safety data sheet:**

**Supplier**

DLD Diagnostika GmbH

**Address**

Adlerhorst 15  
22459 Hamburg  
Germany

**Information contact**

E-Mail: [contact@dld-diagnostika.de](mailto:contact@dld-diagnostika.de)

Internet: [www.dld-diagnostika.de](http://www.dld-diagnostika.de)

**Telephone / Fax / E-Mail**

Tel +49 (0) 40 555 87 10 / Fax +49 (0) 40 555 87 111 / [contact@dld-diagnostika.de](mailto:contact@dld-diagnostika.de)

**1.4 Emergency Telephone Number**

Tel +49 (0) 40 555 87 10

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## 2. **Hazards identification**

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

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

Skin sensitisation, Category 1, H317

### 2.2 **Label elements**

#### **Labelling according to Regulation (EC) No 1272/2008 [CLP/GHS]**

##### **Hazard pictograms / Signal words:**



Warning GHS07

##### **Hazard-determining components of labelling**

Substance: CMIT/MIT: Contains Isothiazole; CAS-No.: 55965-84-9 EC Index-No.: 613-167-00-5

##### **Hazard statements:**

H317 May causes an allergic skin reaction..

##### **Precautionary statements**

P261 Avoid breathing mist, vapors..

P264 Wash hands thoroughly after handling.

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

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

P333 + P313 IF SKIN irritation or rash occurs: Get medical advice/attention.

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

P362 + P364 Take off contaminated clothing and wash before reuse.

##### **Supplemental Hazard information (EU):**

EUH208 Contains CMIT/MIT. May produce an allergic reaction.

### 2.3 **Other hazards**

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### **3. Composition/information on ingredients**

#### **3.1 Substances**

This product is a mixture.

#### **3.2 Mixture**

Substance: CMIT/MIT: Contains Isothiazole; CAS-No.: 55965-84-9 EC Index-No.: 613-167-00-5

Content : < 0.0028%

Classification according to (EG) Nr. 1272/2008:

Inhalation: Acute toxicity 3, H331: Toxic if inhaled

Oral: Acute toxicity 3, H301: Toxic if swallowed

Dermal: Acute toxicity 3, H311: Toxic in contact with skin

Aquatic Acute 1, H400: Very toxic to aquatic life

Aquatic Chronic 1, H410: Very toxic to aquatic life with long lasting effects

Skin corrosion 1B, H314: Causes severe skin burns and eye damage

Skin sensitisation 1B, H317: May cause an allergic skin reaction

---

### **4. First aid measures**

#### **4.1 Description of first aid measures**

##### **General informations:**

Get medical attention/advice and show safety data sheet. Remove contaminated clothing.

##### **After inhalation**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. If unconsciousness, bedding and transport in recovery position.

##### **After skin contact**

Immediately rinse with water.

##### **After eye contact**

Rinse opened eye for at least 15 minutes under running water. If possible, remove contact lenses. If symptoms persist, consult a doctor.

##### **After swallowing**

Rinse mouth with water thoroughly. Do not induce vomiting without medical advice.

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

May cause an allergic skin reaction.

May cause irritation.

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

No further relevant information available.

---

### **5. Firefighting measures**

#### **5.1 Extinguishing media**

Suitable:

CO<sub>2</sub>, powder, foam or water spray.

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

In case of fire, the following can be released:

Nitrogen oxides (NO<sub>x</sub>), Carbon monoxide and carbon dioxide.

#### **5.3 Advice for fire-fighters**

**Protective equipment:** Mount respiratory protective device.

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## **6. Accidental release measures**

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

Wear protective clothing.

### **6.2 Environmental precautions**

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

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

Absorb with liquid-binding material.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

### **6.4 Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

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## **7. Handling and storage**

### **7.1 Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Always close receptacle after use.

Prevent formation of aerosols.

#### **Information about fire - and explosion protection:**

Keep respiratory protective device available.

#### **Aerosol and dust generation preventions**

Open and handle receptacle with care.

Always close receptacle after use.

#### **Environmental precautions**

Do not allow to enter sewers/ surface or ground water.

#### **General hygiene measures**

- Eating, drinking or smoking is prohibited in working areas.

- Wash hands after handling.

- Remove contaminated clothing and protective equipment before entering any food handling areas.

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

#### **Information about storage conditions**

No special requirements.

#### **Requirements for storage rooms and vessels**

No special requirements.

Keep receptacle tightly sealed.

Storage class: /

### **7.3 Specific end uses**

No further relevant information available.

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## **8. Exposure controls/personal protection**

### **8.1 Control parameters**

#### **8.1.1 Components with workplace control parameters**

##### **Limit Value Type (AGW) Germany**

Substance: CMIT/MIT: Contains Isothiazole; CAS-No.: 55965-84-9 EC Index-No.: 613-167-00-5

Occupational exposure limit: 0.2 mg/m<sup>3</sup> inhalable fraction

Exposure peak limit: 0.4 mg/m<sup>3</sup> inhalable fraction

### **8.2 Exposure controls**

#### **8.2.1 Appropriate engineering controls**

Ensuring good ventilation.

This can be achieved by local suction or general exhaust air.

#### **8.2.2 Personal protective equipment**

##### **Eye / Face protection**

Tightly sealed goggles.

##### **Skin protection**

###### **Protective Gloves**

###### **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. The quality of the protective gloves must be chosen as a function of the specific working place concentration and quantity of hazardous substances.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

The exact break through time: Call the manufacturer of the protective gloves and this has to be observed.

###### **Other skin protection measures**

Lab coat.

##### **Respiratory protection**

Not required.

##### **Thermal hazards**

No special requirements.

#### **8.2.3 Environmental exposure controls**

See sections 6 und 7.

---

## **9. Physical and chemical properties**

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

Appearance	
- Form:	Liquid
- Colour:	Yellow-brown
Odour:	Odourless
Odour Threshold:	No data available
pH:	Neutral
Melting point/freezing point:	No data available
Initial boiling point and boiling range:	No data available
Flash point:	No data available
Evaporation rate:	No data available
Flammability (solid, gas):	No data available
Upper/lower flammability or explosive limits:	No data available
Vapour pressure:	No data available
Vapour density:	No data available
Relative density:	No data available
Water solubility:	completely miscible
Partition coefficient: n-octanol/water:	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity:	No data available
Explosive properties:	No data available
Oxidizing properties:	No data available

### **9.2 Other safety information**

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## **10. Stability and reactivity**

### **10.1 Reactivity**

No data available.

### **10.2 Chemical stability**

No decomposition if used according to specifications.

### **10.3 Possibility of hazardous reactions**

No data available.

### **10.4 Conditions to avoid**

No data available.

### **10.5 Incompatible materials**

No data available.

### **10.6 Hazardous decomposition products**

Nitrogen oxides (NO<sub>x</sub>), Carbon monoxide and carbon dioxide

## **11. Toxicological information**

### **11.1 Information on toxicological effects**

**Substance**

This product is a mixture.

**Mixture**

No data available for this mixture.

**Acute toxicity**

Not classified.

**Irritation**

**Skin:** Not classified.

**Eye:** Not classified.

**Corrosivity**

No corrosive effect known.

**Sensitisation**

May cause an allergic skin reaction.

**Repeated dose toxicity**

Not classified..

**Carcinogenicity**

Not classified.

**Mutagenicity**

Not classified.

**Toxicity for reproduction**

Not classified.

**Specific target organ toxicity - single exposure**

No data available.

**Specific target organ toxicity - repeated exposure**

No data available.

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## **12. Ecological information**

### **12.1 Toxicity**

No further relevant information available.

### **12.2 Persistence and degradability**

No further relevant information available.

### **12.3 Bioaccumulative potential**

No further relevant information available.

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### **12.4 Mobility in soil**

No further relevant information available.

### **12.5 Results of PBT and vPvB assessment**

No further relevant information available.

### **12.6 Other adverse effects**

Water hazard class 3 (German Regulation) (Self-assessment): severe hazard for water.

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

---

## **13. Disposal considerations**

### **13.1 Waste treatment methods**

Dispose of waste according to applicable local, state, and federal regulations.

#### **Contaminated packaging**

Dispose of packaging according to applicable local, state, and federal regulations.

#### **Waste codes**

Confirm precise waste code with the disposer.

#### **Special precautions**

No further relevant information available.

---

## **14. Transport information**

### **14.1 UN number**

/

### **14.2 UN proper shipping name**

#### **ADR/RID**

No dangerous good in sense of this transport regulation.

#### **IMDG-Code / ICAO-TI / IATA-DGR**

No dangerous good in sense of this transport regulation.

### **14.3 Transport hazard class(es)**

No dangerous good in sense of this transport regulation.

### **14.4 Packaging group**

Material with low danger.

### **14.5 Environmental hazards**

ADR/RID / IMDG-Code / ICAO-TI / IATA-DGR:  yes /  no

Marine Pollutant:  yes /  no

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

See sections 6 -8.

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

Not applicable.

## **15. Regulatory information**

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

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

#### **National Regulations**

##### **Water hazard class**

Water hazard class 3 (German Regulation) (Self-assessment): severe hazard for water.

#### **Further relevant regulations**

/

### **15.2 Chemical Safety Assessment**

A Chemical Safety Assessment has not been carried out.

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## **16. Other information**

### **Indication of changes**

Entire Revision

### **Abbreviations and acronyms**

*PBT: persistent, bioaccumulative, toxic substance (REACH)*

*vPvB: very persistent, very bioaccumulative substance (REACH)*

*REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals*

*CLP: Regulation on classification, labelling and packaging of substances and mixtures*

*ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International*

*Carriage of Dangerous Goods by Road)*

*RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the*

*International Transport of Dangerous Goods by Rail)*

*IMDG: International Maritime Code for Dangerous Goods*

*IATA: International Air Transport Association*

*ICAO: International Civil Aviation Organization*

*GHS: Globally Harmonized System of Classification and Labelling of Chemicals*

*EINECS: European Inventory of Existing Commercial Chemical Substances*

*CAS: Chemical Abstracts Service (division of the American Chemical Society)*

*LC50: Lethal concentration, 50 percent*

*LD50: Lethal dose, 50 percent*

### **Key literature references and sources for data**

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

Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

Directive 1999/45/EC of the European Parliament and of the Council concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations.

### **Further Informationen**

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. This shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.



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**1. Identification of the substance/mixture and of the company/undertaking**

**1.1 Product identifier**

Substance name: Substrate

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

Relevant identified uses:

Reagent / Immunoassay

For in-vitro diagnostic use only. For professional use only.

Uses advised against:

/

**1.3 Details of the supplier of the safety data sheet:**

**Supplier**

DLD Diagnostika GmbH

**Address**

Adlerhorst 15  
22459 Hamburg  
Germany

**Information contact**

E-Mail: [contact@dld-diagnostika.de](mailto:contact@dld-diagnostika.de)

Internet: [www.dld-diagnostika.de](http://www.dld-diagnostika.de)

**Telephone / Fax / E-Mail**

Tel +49 (0) 40 555 87 10 / Fax +49 (0) 40 555 87 111 / [contact@dld-diagnostika.de](mailto:contact@dld-diagnostika.de)

**1.4 Emergency Telephone Number**

Tel +49 (0) 40 555 87 10

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## 2. Hazards identification

### 2.1 Classification of the substance or mixture

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

Repr 1B; H360D

### 2.2 Label elements

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

Hazard pictograms / Signal words:



Danger GHS08

### Hazard-determining components of labelling

N-Methyl-2-Pyrrolidon

#### Hazard statements:

H360D May damage the unborn child.

#### Precautionary statements

P264	Wash hands thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P302 + P352	IF ON SKIN: wash with plenty of soap and water.
P332 + P313	IF SKIN irritation occurs: Get medical advice/attention.
P337 + P313	IF eye irritation persists: Get medical advice/attention.
P362 + P364	Take off contaminated clothing and wash before reuse

#### Supplemental Hazard information (EU):

/

### 2.3 Other hazards

/

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### **3. Composition/information on ingredients**

#### **3.1 Substances**

This product is a mixture.

#### **3.2 Mixture**

Substance: N-Methyl-2-Pyrrolidon

EINECS: 212-828-1 CAS-Nr. : 872-50-4

Content : < 5%

Classification according to (EG) Nr. 1272/2008:

H315 Cause skin irritation

H319 Cause serious eye irritation

H335 May cause respiratory irritation

H360D May damage the unborn child

---

### **4. First aid measures**

#### **4.1 Description of first aid measures**

##### **General informations:**

Get medical attention/advice and show safety data sheet. Take off contaminated clothing and wash before reuse.

##### **After inhalation**

Supply fresh air. If required, provide artificial respiration. Consult doctor if symptoms persist. If unconsciousness, bedding and transport in recovery position.

##### **After skin contact**

Immediately rinse with water. Take off contaminated clothing. If serious contact doctor.

##### **After eye contact**

Rinse opened eye for at least 15 minutes under running water. If possible, remove contact lenses. If symptoms persist, consult a doctor.

##### **After swallowing**

Rinse mouth with water thoroughly. Do not induce vomiting without medical advice.

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

No further relevant information available.

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

No further relevant information available.

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### **5. Firefighting measures**

#### **5.1 Extinguishing media**

Suitable:

CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

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

In case of fire, the following can be released:

Nitrogen oxides (NO<sub>x</sub>), Carbon monoxide and carbon dioxide.

#### **5.3 Advice for fire-fighters**

**Protective equipment:** Mount respiratory protective device.

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## **6. Accidental release measures**

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

Wear protective clothing.

### **6.2 Environmental precautions**

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

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

Absorb with liquid-binding material.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

### **6.4 Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

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## **7. Handling and storage**

### **7.1 Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Always close receptacle after use.

Prevent formation of aerosols.

#### **Information about fire - and explosion protection:**

Keep respiratory protective device available.

#### **Aerosol and dust generation preventions**

Open and handle receptacle with care.

Always close receptacle after use.

#### **Environmental precautions**

Do not allow to enter sewers/ surface or ground water.

#### **General hygiene measures**

- Eating, drinking or smoking is prohibited in working areas.

- Wash hands after handling.

- Remove contaminated clothing and protective equipment before entering any food handling areas.

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

#### **Information about storage conditions**

No special requirements.

#### **Requirements for storage rooms and vessels**

No special requirements.

Keep receptacle tightly sealed.

Storage class: 12

### **7.3 Specific end uses**

No further relevant information available.

## **8. Exposure controls/personal protection**

### **8.1 Control parameters**

#### **8.1.1 Components with workplace control parameters**

##### **Limit Value Type (AGW) Germany**

Substance:	N-Methyl-2-Pyrrolidon CAS-Nr. : 872-50-4
Source :	TRGS 900
Value :	82 mg/m <sup>3</sup>
Source :	TRGS 903
BGW-Value :	End of shift: 150 mg/m <sup>3</sup> Urine (5-Hydroxy-N-Methyl-2-Pyrrolidon)

### **8.2 Exposure controls**

Consider general hygiene and safety practice.

Pregnant women: Strictly avoid inhalation and skin contact.

#### **8.2.1 Appropriate engineering controls**

Ensuring good ventilation.

This can be achieved by local suction or general exhaust air.

#### **8.2.2 Personal protective equipment**

##### **Eye / Face protection**

Tightly sealed goggles.

##### **Skin protection**

###### **Protective Gloves**

###### **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. The quality of the protective gloves must be chosen as a function of the specific working place concentration and quantity of hazardous substances.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

The exact break through time: Call the manufacturer of the protective gloves and this has to be observed.

###### **Other skin protection measures**

Lab coat.

##### **Respiratory protection**

Respiratory protection: If limit value of working place is exceeded.

##### **Thermal hazards**

No special requirements.

#### **8.2.3 Environmental exposure controls**

See sections 6 und 7.

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## **9. Physical and chemical properties**

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

Appearance	
- Form:	Liquid
- Colour:	Slight blue
Odour:	characteristic
Odour Threshold:	No data available
pH:	3,5 – 3,8
Melting point/freezing point:	No data available
Initial boiling point and boiling range:	App. 100°C
Flash point:	No data available
Evaporation rate:	No data available
Flammability (solid, gas):	No data available
Upper/lower flammability or explosive limits:	No data available
Vapour pressure:	No data available
Vapour density:	No data available
Relative density:	No data available
Water solubility:	completely miscible
Partition coefficient: n-octanol/water:	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity:	No data available
Explosive properties:	Product not explosive
Oxidizing properties:	No data available

### **9.2 Other safety information**

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## **10. Stability and reactivity**

### **10.1 Reactivity**

No data available.

### **10.2 Chemical stability**

Store at 2 - 8°C.

### **10.3 Possibility of hazardous reactions**

No data available.

### **10.4 Conditions to avoid**

No data available.

### **10.5 Incompatible materials**

No data available.

### **10.6 Hazardous decomposition products**

No hazardous decomposition products known.

## **11. Toxicological information**

### **11.1 Information on toxicological effects**

#### **Substance**

This product is a mixture.

#### **Mixture**

No data available for this mixture.

#### **Acute toxicity**

No data available.

#### **Irritation**

No data available.

Skin: Risk of N-Methyl-2-pyrrolidone resorption.

#### **Corrosivity**

No data available.

Skin: Risk of N-Methyl-2-pyrrolidone resorption.

#### **Sensitisation**

No data available.

#### **Repeated dose toxicity**

No data available.

#### **Carcinogenicity**

No data available.

#### **Mutagenicity**

No data available.

#### **Toxicity for reproduction**

Repr 1B; H360D: May damage the unborn child.

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

May cause respiratory irritation.

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

No data available.

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## **12. Ecological information**

### **12.1 Toxicity**

No further relevant information available.

### **12.2 Persistence and degradability**

Easily biologically degradable.

### **12.3 Bioaccumulative potential**

No further relevant information available.

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#### **12.4 Mobility in soil**

No further relevant information available.

#### **12.5 Results of PBT and vPvB assessment**

No further relevant information available.

#### **12.6 Other adverse effects**

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

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### **13. Disposal considerations**

#### **13.1 Waste treatment methods**

Dispose of waste according to applicable local, state, and federal regulations.

##### **Contaminated packaging**

Dispose of packaging according to applicable local, state, and federal regulations.

##### **Waste codes**

Confirm precise waste code with the disposer.

##### **Special precautions**

No further relevant information available.

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### **14. Transport information**

#### **14.1 UN number**

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#### **14.2 UN proper shipping name**

##### **ADR/RID**

No dangerous good in sense of this transport regulation.

##### **IMDG-Code / ICAO-TI / IATA-DGR**

No dangerous good in sense of this transport regulation.

#### **14.3 Transport hazard class(es)**

No dangerous good in sense of this transport regulation.

#### **14.4 Packaging group**

Material with low danger.

#### **14.5 Environmental hazards**

ADR/RID / IMDG-Code / ICAO-TI / IATA-DGR:  yes /  no

Marine Pollutant:  yes /  no

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

See sections 6 -8.

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

Not applicable.



## 15. Regulatory information

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

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

#### National Regulations

##### Water hazard class

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.

#### Further relevant regulations

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### 15.2 Chemical Safety Assessment

A Chemical Safety Assessment has not been carried out.

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## 16. Other information

### Indication of changes

Entire Revision

### Abbreviations and acronyms

*PBT: persistent, bioaccumulative, toxic substance (REACH)*

*vPvB: very persistent, very bioaccumulative substance (REACH)*

*REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals*

*CLP: Regulation on classification, labelling and packaging of substances and mixtures*

*ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International*

*Carriage of Dangerous Goods by Road)*

*RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the*

*International Transport of Dangerous Goods by Rail)*

*IMDG: International Maritime Code for Dangerous Goods*

*IATA: International Air Transport Association*

*ICAO: International Civil Aviation Organization*

*GHS: Globally Harmonized System of Classification and Labelling of Chemicals*

*EINECS: European Inventory of Existing Commercial Chemical Substances*

*CAS: Chemical Abstracts Service (division of the American Chemical Society)*

*LC50: Lethal concentration, 50 percent*

*LD50: Lethal dose, 50 percent*

### Key literature references and sources for data

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

Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

Directive 1999/45/EC of the European Parliament and of the Council concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations.

### Further Informationen

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. This shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.