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

   **Product identifier**
   Substance name: ADMA Fast - ELISA
   Article number: [R E F] EA202/96

   **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:**
   DLD Diagnostika GmbH

   **Address**
   Adlerhorst 15
   22459 Hamburg
   Germany

   **Information contact**
   E-Mail: contact@dld-diagnostika.de
   Internet: 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

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

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microtiterstrips</td>
<td>Polystyrol-Microwell plate coated with specific antigen</td>
</tr>
<tr>
<td>Standards</td>
<td>Diluted antigen</td>
</tr>
<tr>
<td>Controls</td>
<td>Diluted antigen</td>
</tr>
<tr>
<td>Equalizing Reagent</td>
<td>Protein, lyophilized</td>
</tr>
<tr>
<td>Acylation Reagent</td>
<td>Acylation reagent, lyophilized</td>
</tr>
<tr>
<td>Antiserum</td>
<td>Diluted specific antiserum (rabbit), neutral buffer solution, stabilized</td>
</tr>
<tr>
<td>Reaction Plate</td>
<td>Polypropylene-Microwell plate</td>
</tr>
<tr>
<td>Wash Buffer</td>
<td>Diluted buffer solution with detergent, neutral, concentrate</td>
</tr>
<tr>
<td>Stop Solution</td>
<td>0.3 mol/l sulphuric acid</td>
</tr>
<tr>
<td>Foil</td>
<td>/</td>
</tr>
</tbody>
</table>

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: CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
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.

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
8. **Exposure controls/personal protection**

Occupational exposure limit sulphuric acid:
Inhalable fraction: 0.1 mg/m$^3$

**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.

---

9. **Physical and chemical properties**

<table>
<thead>
<tr>
<th>Microtiterstrips</th>
<th>Polystyrol-Microtiterplate in foil packet.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standards</td>
<td>Colorless liquid.</td>
</tr>
<tr>
<td>Control</td>
<td>Colorless liquid.</td>
</tr>
<tr>
<td>Equalizing Reagent</td>
<td>Powder</td>
</tr>
<tr>
<td>Acylation Reagent</td>
<td>Powder</td>
</tr>
<tr>
<td>Antiserum</td>
<td>Colored, neutral liquid</td>
</tr>
<tr>
<td>Reaction Plate</td>
<td>Polypropylene-Microtiterplate in foil packet.</td>
</tr>
<tr>
<td>Wash Buffer</td>
<td>Colorless, neutral liquid</td>
</tr>
<tr>
<td>Stop Solution</td>
<td>Colorless, acidic liquid, pH &lt; 1.</td>
</tr>
<tr>
<td>Foil</td>
<td>Adhesive foil in foil packet.</td>
</tr>
</tbody>
</table>

---

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.
11. **Toxicological information**

   Used according to intended use no toxicological reactions known.

12. **Ecological information**

   Used according to intended use no ecological reactions known.

13. **Disposal considerations**

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

14. **Transport information**

   This product is not subject to official transport regulations

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**
   
   /

   **Chemical Safety Assessment**
   
   A Chemical Safety Assessment has not been carried out.

16. **Other information**

   **Indication of changes**
   
   Entire Revision

   **Key literature references and sources for data**
   


   **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.
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
Adlerhorst 15
22459 Hamburg
Germany
Information contact
E-Mail: contact@dld-diagnostika.de
Internet: www.dld-diagnostika.de

1.4 Emergency Telephone Number
Tel +49 (0) 40 555 87 10
2. **Hazard identification**

2.1 **Classification of the substance or mixture**
Classification according to Regulation (EC) No 1272/2008 [CLP]:
Flam. Liq. 3  H226

2.2 **Label elements**

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

**Hazard pictograms / Signal word:**

![Warning / GHS02](image)

**Hazard-determining components of labelling**

**Hazard statements:**

H226: Flammable liquid and vapour.

**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)**

2.3 **Other hazards**

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

3.1 **Substances**
   This product is a mixture.

3.2 **Mixture**
   Substance: DMSO
   EG-Nr.: 200-664-3   CAS-Nr.: 67-68-5
   Content: 50 - 100%
   Classification according to (EG) Nr. 1272/2008:
   No hazardous product.

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.

5. **Firefighting measures**

5.1 **Extinguishing media**
   Suitable:
   CO2, 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.
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.

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.
8. Exposure controls/personal protection

8.1 Control parameters

8.1.1 Components with workplace control parameters

<table>
<thead>
<tr>
<th>Limit Value Type (AGW) Germany</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substance: DMSO, CAS-Nr.: 67-68-5</td>
</tr>
<tr>
<td>Source: AGW</td>
</tr>
<tr>
<td>Value: 160 mg/m³, TGRS, exposure limit in air at workplace</td>
</tr>
</tbody>
</table>

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: Yellow

- **Odour**:
  - No data available

- **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**

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**

  Incompatible with various plastics and metals.

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**
DMSO CAS-Nr.: 67-68-5:
LD50 Oral – rat – 14,500 mg/kg
LD50 Dermal – rat – 40,000 mg/kg

**Irritation**
Skin: No data available.
Eye: No data available.
Inhalation: No data available.

**Corrosivity**
No data available.

**Sensitisation**
No data available.

**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.

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.
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.

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


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

1.1 Product identifier
Substance name: Acylation Buffer

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
Internet: 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

1.4 Emergency Telephone Number
Tel +49 (0) 40 555 87 10
2. **Hazard 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):**

/ 

2.3 **Other hazards**

/
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

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.

5. Firefighting measures

5.1 Extinguishing media
Suitable:
CO2, 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 (NOx), Carbon monoxide and carbon dioxide.

5.3 Advice for fire-fighters
Protective equipment: Mount respiratory protective device.
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.

---

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.
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

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

9.2 Other safety information

/ 

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 alcali.

10.6 Hazardous decomposition products
Nitrogen oxides (NOx), 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**
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.

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.
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.

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


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.
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
Internet: 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

1.4 Emergency Telephone Number
Tel +49 (0) 40 555 87 10
2. **Hazard 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**
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:
   CO2, 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 (NOx), Carbon monoxide and carbon dioxide.

5.3 Advice for fire-fighters
   Protective equipment: Mount respiratory protective device.
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.

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.
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$^3$ inhalable fraction
Exposure peak limit: 0.4 mg/m$^3$ 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 cannot 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

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

9.2 Other safety information

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 (NOx), 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.

---

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.
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.

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


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.
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
   Internet: 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

1.4 **Emergency Telephone Number**

   Tel +49 (0) 40 555 87 10
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 + P331  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**

   /
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.

5. Firefighting measures

5.1 Extinguishing media
Suitable:
CO2, 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 (NOx), Carbon monoxide and carbon dioxide.

5.3 Advice for fire-fighters
Protective equipment: Mount respiratory protective device.
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.

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 prevented**
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

<table>
<thead>
<tr>
<th>Substance</th>
<th>Limit Value Type (AGW) Germany</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-Methyl-2-Pyrrolidone</td>
<td>Source: TRGS 900</td>
</tr>
<tr>
<td>CAS-Nr.: 872-50-4</td>
<td>Source: TRGS 903</td>
</tr>
<tr>
<td>Value: 82 mg/m³</td>
<td>BGW-Value: End of shift: 150 mg/m³ Urine (5-Hydroxy-N-Methyl-2-Pyrrolidone)</td>
</tr>
</tbody>
</table>

8.2 Exposure controls

8.2.1 Appropriate engineering controls

Consider general hygiene and safety practice.
Pregnant women: Strictly avoid inhalation and skin contact.

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.

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: 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

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.

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.
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.

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


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.