

**SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING****1.1 Product identifier**

Product Name: HUMAN D-DIMER ELISA  
Catalogue Number: RBL013R

**Components:**

Antibody Coated Microtiter Plate  
Biotin-labelled Antibody  
Streptavidin-HRP Conjugate  
Master Standard  
Quality Control A (human serum, lyophilized)  
Quality Control B (human serum, lyophilized)  
Dilution Buffer  
Wash Buffer 15x conc.  
Substrate Solution  
STOP Solution

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

Relevant Uses: Analytical tool. For research use only.  
Uses advised against: All uses not specified in this section or in section 7.3

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

BioVendor - Laboratorní medicína a.s.  
Karásek 1767/1  
621 00 Brno  
Czech Republic  
Identification number: 63471507

Tel: +420 549 124 185  
E-mail: info@biovendor.com

**1.4 Emergency telephone number**

Toxicology information centre, Na Bojišti 1, 128 21 Prague, Czech Republic,  
Tel: +420 224 919 293 or +420 224 915 402 (non-stop service).

**SECTION 2 HAZARDS IDENTIFICATION****2.1 Classification of the substance or mixture****CLP Regulation (EC) No 1272/2008.**

Classification according to Regulation (EC) No 1272/2008 [GHS/CLP] or 29 CFR 1910.1200 [OSHA]

Eye Dam. 2: Serious eye damage, Category 2, H319  
Skin Irrit. 2: Skin irritation, Category 2, H315

**2.2 Label elements**

CLP Regulation (EC) No 1272/2008.



**Hazard statements:**

Eye Dam. 2: H319 - Causes serious eye irritation.  
Skin Irrit. 2: H315 - Causes skin irritation.  
Repr. 1B: H360D - May damage the unborn child.

**Precautionary statements:**

P201: Obtain special instructions before use.  
P202: Do not handle until all safety precautions have been read and understood.  
P264: Wash skin thoroughly after handling.  
P280: Wear protective gloves/protective clothing/eye protection/protective footwear.  
P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.  
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P501: Dispose of contents/container in accordance with regulations on hazardous waste or packaging and packaging waste respectively.  
Substances that contribute to the classification  
Sulfuric acid (STOP solution), 2-Pyrrolidone (Substrate solution)

**2.3 Other hazards**

Product fails to meet PBT/vPvB criteria.  
Endocrine-disrupting properties: The product fails to meet the criteria.

**SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS****3.1 Substance**

Not applicable

**3.2 Mixtures**

Aqueous mixture composed of conservatives, tensoactives (detergents) and acid.

**Components:**

In accordance with Annex II of Regulation (EC) No 1907/2006 (point 3), the product contains:

| Component  | Classification                                |  | Concentration |
|--|---|--|---------------|
| CAS: 7664-93-9<br>EC: 231-639-5<br>Index: 016-020-00-8<br>REACH: N/A (mixture) | Sulfuric acid <sup>1</sup><br>Self-classified | Eye Irrit. 2: H319,<br>Skin Irrit. 2: H315,<br>H225 - Danger | < 2%          |
| CAS: 616-45-5<br>EC: 210-483-1<br>Index: N/A<br>REACH: N/A                     | 2-Pyrrolidone <sup>1</sup><br>Self-classified | Repr. 1B: H360,<br>Eye Irrit. 2: H319                        | < 3%          |

<sup>1</sup> Substances presenting a health or environmental hazard which meet criteria laid down in Regulation (EU) No. 2020/878

To obtain more information on the hazards of the substances consult sections 11, 12 and 16.

**SECTION 4 FIRST AID MEASURES****4.1 Description of first aid measures**

The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the SDS of this product.

**By inhalation:**

This product is not classified as hazardous through inhalation. However, in case of intoxication symptoms it is recommended to remove the person affected from the area of exposure, provide clean air and keep at rest. Request medical attention if symptoms persist.

**By skin contact:**

Remove contaminated clothing and footwear, rinse skin or shower the person affected if appropriate with plenty of cold water and neutral soap. In serious cases see a doctor. If the product causes burns or freezing, clothing should not be removed as this could worsen the injury caused if it is stuck to the skin. If blisters form on the skin, these should never be burst as this will increase the risk of infection.

**By eye contact:**

Rinse eyes thoroughly with lukewarm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, in which case this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.

**By ingestion/aspiration:**

Do not induce vomiting, but if it does happen keep the head down to avoid aspiration. Keep the person affected at rest. Rinse out the mouth and throat, as they may have been affected during ingestion.

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

Acute and delayed effects are indicated in sections 2 and 11.

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

Not applicable

**SECTION 5 FIREFIGHTING MEASURES****5.1 Extinguishing media****Suitable extinguishing media:**

If possible, use polyvalent powder fire extinguishers (ABC powder), alternatively use foam or carbon dioxide extinguishers (CO<sub>2</sub>).

**Unsuitable extinguishing media:**

IT IS RECOMMENDED NOT to use full jet water as an extinguishing agent.

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

As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

**5.3 Advice for firefighters**

Depending on the magnitude of the fire it may be necessary to use full protective clothing and self-contained breathing apparatus (SCBA). Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit, ...) in accordance with Directive 89/654/EC.

**Additional provisions:**

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Eliminate all sources of ignition. In case of fire, cool the storage containers and tanks for products susceptible to combustion, explosion or BLEVE because of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

#### 5.4 Further information

None

### **SECTION 6 ACCIDENTAL RELEASE MEASURES**

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

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

Isolate leaks if there is no additional risk for the people performing this task. Evacuate the area and keep out those without protection. Personal protection equipment must be used against potential contact with the spilt product (See section 8).

Above all prevent the formation of any vapour-air flammable mixtures, through either ventilation or the use of an inert medium. Remove any source of ignition. Eliminate electrostatic charges by interconnecting all the conductive surfaces on which static electricity could form and ensuring that all surfaces are connected to the ground.

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

Wear protective equipment. Keep unprotected persons away. See section 8.

#### 6.2 Environmental precautions

This product is not classified as hazardous to the environment. Keep product away from drains, surface, and underground water.

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

It is recommended:

Absorb the spillage using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. For any concern related to disposal consult section 13.

#### 6.4 Reference to other sections

See sections 8 and 13.

### **SECTION 7 HANDLING AND STORAGE**

#### 7.1 Precautions for safe handling

##### **General precautions for safe use**

Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.

##### **Technical recommendations for the prevention of fires and explosions**

Transfer in well ventilated areas, preferably through localized extraction. Fully control sources of ignition (mobile phones, sparks,...) and ventilate during cleaning operations. Avoid the existence of dangerous atmospheres inside containers, applying inertization systems where possible. Transfer at a slow speed to avoid the creation of electrostatic charges. Against the possibility of electrostatic charges: ensure a perfect equipotential connection, always use groundings, do not wear work clothes made of acrylic fibres, preferably wearing cotton clothing and conductive footwear. Comply with the essential security requirements for equipment and systems defined in Directive 2014/34/EC (ATEX 100) and with the minimum requirements for protecting the security and health of workers under the selection criteria of Directive 1999/92/EC (ATEX 137). Consult section 10 for conditions and materials that should be avoided.

##### **Technical recommendations on general occupational hygiene**

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

##### **Technical recommendations to prevent environmental risks**

It is recommended to have absorbent material available at proximity to the product (See subsection 6.3)

**7.2 Conditions for safe storage, including any incompatibilities**
**Technical measures for storage**

Store in a cool, dry, well-ventilated location

**General conditions for storage**

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

**7.3 Specific end use(s)**

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

**SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION**
**8.1 Control parameters**

Substances whose occupational exposure limits must be monitored in the workplace (European OEL, not country-specific legislation):

There are no applicable occupational exposure limits for the substances contained in the product.

**DNEL (Workers)**

| Identification                                   | Short exposure |                | Long exposure                      |                         |
|--|----------------|----------------|------------------------------------|-------------------------|
|  | Systemic       | Local          | Systemic                           | Local                   |
| Sulfuric acid<br>CAS: 7664-93-9<br>EC: 231-639-5 | Oral           | Not applicable | Not applicable                     | Not applicable          |
|  | Eyes           | Not applicable | High hazard - no threshold derived | Not applicable          |
|  | Dermal         | Not applicable | High hazard - no threshold derived | Not applicable          |
|  | Inhalation     | Not applicable | 0.1 mg/m <sup>3</sup>              | Not applicable          |
| 2-Pyrrolidone<br>CAS: 616-45-5<br>EC: 210-483-1  | Oral           | Not applicable | Not applicable                     | Not applicable          |
|  | Dermal         | Not applicable | Not applicable                     | 4.2 mg/kg bw/day        |
|  | Inhalation     | Not applicable | Not applicable                     | 29.62 mg/m <sup>3</sup> |

**DNEL (General population)**

| Identification                                   | Short exposure |                | Long exposure                      |                   |
|--|----------------|----------------|------------------------------------|-------------------|
|  | Systemic       | Local          | Systemic                           | Local             |
| Sulfuric acid<br>CAS: 7664-93-9<br>EC: 231-639-5 | Oral           | Not applicable | Not applicable                     | Not applicable    |
|  | Eyes           | Not applicable | High hazard - no threshold derived | Not applicable    |
|  | Dermal         | Not applicable | High hazard - no threshold derived | Not applicable    |
|  | Inhalation     | Not applicable | High hazard - no threshold derived | Not applicable    |
| 2-Pyrrolidone<br>CAS: 616-45-5<br>EC: 210-483-1  | Oral           | Not applicable | Not applicable                     | 0.67 mg/kg bw/day |
|  | Dermal         | Not applicable | Not applicable                     | 0.67 mg/kg bw/day |

|  |                   |                |                |                         |                |
|--|-------------------|----------------|----------------|-------------------------|----------------|
|  | <b>Inhalation</b> | Not applicable | Not applicable | 1.985 mg/m <sup>3</sup> | Not applicable |
|--|-------------------|----------------|----------------|-------------------------|----------------|

**PNEC**

| Identification                                   |                     |                    |                        |                         |
|--|---------------------|--------------------|------------------------|-------------------------|
| Sulfuric acid<br>CAS: 7664-93-9<br>EC: 231-639-5 | <b>STP</b>          | Not applicable     | Fresh water            | Not applicable          |
|  | <b>Soil</b>         | Not applicable     | Marine water           | Not applicable          |
|  | <b>Intermittent</b> | Not applicable     | Sediment (Fresh water) | Not applicable          |
|  | <b>Oral</b>         | Not applicable     | Sediment Marine water) | Not applicable          |
| 2-Pyrrolidone<br>CAS: 616-45-5<br>EC: 210-483-1  | <b>STP</b>          | 10 mg/L            | Fresh water            | 0.5 mg/L                |
|  | <b>Soil</b>         | 0.14 mg/kg soil dw | Marine water           | 0.05 mg/L               |
|  | <b>Intermittent</b> | Not applicable     | Sediment (Fresh water) | 2.17 mg/kg sediment dw  |
|  | <b>Oral</b>         | Not applicable     | Sediment Marine water) | 0.217 mg/kg sediment dw |

**8.2 Exposure controls**
**Individual protection measures, such as personal protective equipment**

As a preventative measure it is recommended to use basic Personal Protective Equipment, with the corresponding <>CE marking>> in accordance with Regulation (EU) 2016/425. For more information on Personal Protective Equipment (storage, use, cleaning, maintenance, class of protection, ...) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1. All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

**Respiratory protection**

The use of protection equipment will be necessary if a mist forms or if the occupational exposure limits are exceeded.

**Specific protection for the hands**

| Pictogram  | PPE   | Labelling  | CEN Standard                   | Remarks |
|--|---|------------|--------------------------------|---------|
| <br>Mandatory hand protection | Disposable protective gloves (Material: Latex (natural rubber), Breakthrough time: > 480 min, Thickness: 0.21 mm) | PPE Cat. 3 | EN 455<br>EN 420<br>EN ISO 374 |         |

As the product is a mixture of several substances, the resistance of the glove material cannot be calculated in advance with total reliability and has therefore to be checked prior to the application.

**Eye and face protection**

| Pictogram   | PPE  | Labelling  | CEN Standard                    | Remarks |
|---|--|------------|---------------------------------|---------|
| <br>Mandatory eye protection | Panoramic glasses against splashes/projections | PPE Cat. 2 | EN 166:2002<br>EN ISO 4007:2018 |         |

**Body protection**

| Pictogram | PPE                  | Labelling  | CEN Standard      | Remarks |
|-----------|----------------------|------------|-------------------|---------|
|           | Working clothing     | PPE Cat.1  |                   |         |
|           | Anti-slip work shoes | PPE Cat. 2 | EN ISO 20347:2012 |         |

**Additional emergency measures**

| Emergency measure   | Standards                                    | Emergency measure  | Standards                                   |
|---|--|--|---|
| <br>Emergency shower | ANSI Z358-1 ISO 3864-1:2011, ISO 3864-4:2011 | <br>Eye wash station | DIN 12 899 ISO 3864-1:2011, ISO 3864-4:2011 |

**Environmental exposure controls:**

In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. For additional information see subsection 7.1.D

**SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES**
**9.1 Information on basic physical and chemical properties**
**Appearance:**

|                          |                 |
|--------------------------|-----------------|
| Physical state at 20 °C: | Liquid          |
| Appearance:              | Translucent     |
| Colour:                  | None            |
| Odour:                   | None            |
| Odour threshold:         | Not applicable* |

**Volatility:**

|  |                |
|--|----------------|
| Boiling point at atmospheric pressure: | Not available* |
| Vapour pressure at 20 °C:              | Not available* |
| Vapour pressure at 50 °C:              | Not available* |
| Evaporation rate at 20 °C:             | Not available* |

**Product description:**

|                               |                 |
|-------------------------------|-----------------|
| Density at 20 °C:             | Not available*  |
| Relative density at 20 °C:    | Not available * |
| Dynamic viscosity at 20 °C:   | Not available*  |
| Kinematic viscosity at 20 °C: | Not available * |
| Kinematic viscosity at 40 °C: | Not available * |

|  |                      |
|--|----------------------|
| Concentration:                               | Not applicable*      |
| pH:  | Not available*       |
| Vapour density at 20 °C:                     | Not available *      |
| Partition coefficient n-octanol/water 20 °C: | Not available *      |
| Solubility in water at 20 °C:                | Not available *      |
| Solubility properties:                       | Highly water-soluble |
| Decomposition temperature:                   | Not available *      |
| Melting point/freezing point:                | Not available *      |
| <b>Flammability:</b>                         |                      |
| Flash Point:                                 | Not applicable *     |
| Flammability (solid, gas):                   | Not applicable *     |
| Autoignition temperature:                    | Not applicable*      |
| Lower flammability limit:                    | Not available        |
| Upper flammability limit:                    | Not available        |
| <b>Particle characteristics:</b>             |                      |
| Median equivalent diameter:                  | Not available        |

## 9.2 Other information

### Information with regard to physical hazard classes:

|  |                  |
|--|------------------|
| Explosive properties:  | Not applicable * |
| Oxidising properties:  | Not applicable * |
| Corrosive to metals:   | Not available *  |
| Heat of combustion:  | Not applicable * |
| Aerosols-total percentage (by mass) of flammable components: | Not applicable * |

### Other safety characteristics:

|                           |                  |
|---------------------------|------------------|
| Surface tension at 20 °C: | Not applicable * |
| Refraction index:         | Not applicable * |

\*Not relevant due to the nature of the product, not providing proper information of its hazards.

## SECTION 10 STABILITY AND REACTIVITY

### 10.1 Reactivity

No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7.

### 10.2 Chemical stability

Chemically stable under the indicated conditions of storage, handling, and use.

### 10.3 Possibility of hazardous reactions

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

### 10.4 Conditions to avoid

Applicable for handling and storage at room temperature:

| Shock and friction | Contact with air | Increase in temperature | Sunlight            | Humidity            |
|--------------------|------------------|-------------------------|---------------------|---------------------|
| Not applicable     | Not applicable   | Not applicable          | Avoid direct impact | Avoid direct impact |

**10.5 Incompatible materials\*\***

| Acids                | Water                | Oxidising materials  | Combustible materials | Others               |
|----------------------|----------------------|----------------------|-----------------------|----------------------|
| Avoid direct impact* | Avoid direct impact* | Avoid direct impact* | Avoid direct impact*  | Avoid direct impact* |

\* Potential loss of function due to the contact

**10.6 Hazardous decomposition products**

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products.

**SECTION 11 TOXICOLOGICAL INFORMATION**
**11.1 Information on toxicological effects**

Dangerous health implications:

In case of exposure that is repetitive, prolonged or at concentrations higher than the recommended occupational exposure limits, adverse effects on health may result, depending on the means of exposure:

**Ingestion (acute effect):**

- Acute toxicity: Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous for consumption. For more information see section 3.
- Corrosivity/Irritability: The consumption can cause irritation in the throat, abdominal pain, nausea and vomiting.

**Inhalation (acute effect):**

- Acute toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for inhalation. For more information see section 3.
- Corrosivity/Irritability: Based on available data, the classification criteria are not met. However, it contains substances classified as hazardous for inhalation. For more information see section 3.

**Contact with the skin and the eyes (acute effect):**

- Contact with the skin: Produces skin inflammation.
- Contact with the eyes: Produces serious eye damage after contact.

**CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):**

- Carcinogenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for the effects mentioned. For more information see section 3.
- Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
- Reproductive toxicity: Based on available data, the classification criteria are met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

**Sensitizing effects:**

- Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous with sensitising effects. For more information see section 3.
- Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

**Specific target organ toxicity (STOT) - single exposure:**

Based on available data, the classification criteria are not met. However, it contains substances classified as hazardous for inhalation. For more information see section 3.

**Specific target organ toxicity (STOT)-repeated exposure:**

- Specific target organ toxicity (STOT)-repeated exposure: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

**HUMAN D-DIMER ELISA**

- Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

**Aspiration hazard:**

Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

**Other information:**

Not applicable

**Specific toxicology information on the substances:**

| Identification                                   | Acute toxicity  |                           | Genus  |
|--|-----------------|---------------------------|--------|
| Sulfuric acid<br>CAS: 7664-93-9<br>EC: 231-639-5 | LD50 oral       | 2 140 mg/kg bw            | Rat    |
|  | LD50 dermal     | No data available         |        |
|  | LC50 inhalation | 375 mg/m <sup>3</sup> air | Rat    |
| 2-Pyrrolidone<br>CAS: 616-45-5<br>EC: 210-483-1  | LD50 oral       | > 2 000 mg/kg bw          | Rat    |
|  | LD50 dermal     | > 2 000 mg/kg bw          | Rabbit |
|  | LC50 inhalation | Not toxic by inhalation   | Rat    |

**Acute toxicity estimation (ATE mix):**

| ATE mix    |                       | Ingredient(s) of unknown toxicity |
|------------|-----------------------|-----------------------------------|
| Oral       | 41074 mg/kg           | 0%                                |
| Dermal     | > 2 000 mg/kg         | N/A                               |
| Inhalation | 375 mg/m <sup>3</sup> | N/A                               |

**11.2 Additional Information**
**Endocrine disrupting properties**

The product fails to meet the criteria.

**Other information**

Not applicable

**SECTION 12 ECOLOGICAL INFORMATION**
**12.1 Toxicity**
**Acute toxicity:**

| Identification                                   | Concentration |                       | Species                 | Genus      |
|--|---------------|-----------------------|-------------------------|------------|
| Sulfuric acid<br>CAS: 7664-93-9<br>EC: 231-639-5 | LC50          | > 16 - < 28 mg/L      | Lepomis macrochirus     | Fish       |
|  | EC50          | > 100 mg/L            | Daphnia magna           | Crustacean |
|  | EC50          | > 100 mg/L            | Desmodesmus subspicatus | Algae      |
| 2-Pyrrolidone<br>CAS: 616-45-5<br>EC: 210-483-1  | LC50          | > 4 600 - 10 000 mg/L | Danio rerio             | Fish       |
|  | EC50          | 500 mg/L              | Daphnia magna           | Crustacean |
|  | EC10          | 22.2 mg/L             | Desmodesmus subspicatus | Algae      |

**Chronic toxicity:**

| Identification                                   | Concentration |             | Species                     | Genus      |
|--|---------------|-------------|-----------------------------|------------|
| Sulfuric acid<br>CAS: 7664-93-9<br>EC: 231-639-5 | NOEC          | 0.31 mg/L   | Salvelinus fontinalis       | Fish       |
|  | NOEC          | 0.15 mg/L   | Tanytarsus dissimilis       | Crustacean |
| 2-Pyrrolidone<br>CAS: 616-45-5<br>EC: 210-483-1  | ChV*          | 0.499 mg/L  | Fish, species not specified | Fish       |
|  | ChV*          | 44.927 mg/L | Daphnia sp.                 | Crustacean |

\*Chronic value

**12.2 Persistence and degradability**
**Substance-specific information:**

| Identification                                   | Degradability |                    | Biodegradability |                     |
|--|---------------|--------------------|------------------|---------------------|
| Sulfuric acid<br>CAS: 7664-93-9<br>EC: 231-639-5 | BOD5          | Data not available | Concentration    | Data not available  |
|  | COD           | Data not available | Period           | Data not available  |
|  | BOD5/COD      | Data not available | % Biodegradable  | Data not available  |
| 2-Pyrrolidone<br>CAS: 616-45-5<br>EC: 210-483-1  | BOD5          | ca. 44.9           | Concentration    | 1.7 mg/kg soil d.w. |
|  | COD           | Data not available | Period           | 21d                 |
|  | BOD5/COD      | Data not available | % Biodegradable  | 90%                 |

**12.3 Bioaccumulative potential**

No experimental data are available. According to REACH regulation, Annex IX, section 9.3.2., column 2, no study regarding bioaccumulation needs to be conducted if the substance has a low potential for bioaccumulation.

**12.4 Mobility in soil**

| Identification                                   | Adsorption/desorption |                    | Volatility |   |
|--|-----------------------|--------------------|------------|---|
| Sulfuric acid<br>CAS: 7664-93-9<br>EC: 231-639-5 | Koc                   | Data not available | Henry      | Data not available                              |
|  | Conclusion            | Data not available | Dry soil   | Data not available                              |
|  | Surface tension       | Data not available | Moist soil | Data not available                              |
| 2-Pyrrolidone<br>CAS: 616-45-5<br>EC: 210-483-1  | Koc                   | 7.377 L/kg         | Henry      | 1.46 e-003 Pa*m <sup>3</sup> *mol <sup>-1</sup> |
|  | Conclusion            | Very low           | Dry soil   | Data not available                              |
|  | Surface tension       | N/A                | Moist soil | Data not available                              |

**12.5 Results of PBT and vPvB assessment**

Product fails to meet PBT/vPvB criteria.

**12.6 Endocrine disrupting properties**

Endocrine-disrupting properties: The product fails to meet the criteria.

**12.7 Other adverse effects**

Not described

**SECTION 13 DISPOSAL CONSIDERATIONS****13.1 Disposal methods**

| Code     | Description                                | Waste class (Regulation (EU) No. 1357/2014) |
|----------|--|---|
| 20 01 29 | detergents containing hazardous substances | Dangerous                                   |

**Type of waste (Regulation (EU) No 1357/2014):**

HP4 Irritant — skin irritation and eye damage

HP10 Toxic for reproduction – developmental toxicity in the offspring

**Waste management (disposal and evaluation):**

Consult the authorized waste service manager on the assessment and disposal operations in accordance with Annex 1 and Annex 2 (Directive 2008/98/EC). As under 15 01 (2014/955/EC) of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. Waste should not be disposed of into drains. See paragraph 6.2.

**Regulations related to waste management:**

In accordance with Annex II of Regulation (EC) No 1907/2006 (REACH) the community or state provisions related to waste management are stated

Community legislation: Directive 2008/98/EC, 2014/955/EU, Regulation (EU) No 1357/2014

**13.2 Contaminated packaging**

Not described

**13.3 Special precautions**

Not described

**SECTION 14 TRANSPORT INFORMATION****14.1 UN number**

Not classified

**14.2 UN proper shipping name**

N/A

**14.3 Transport hazard class(es)**

N/A

**14.4 Packaging group**

N/A

**14.5 Environmental hazards**

No

**14.6 Special precautions for user**

Special regulations: N/A

Tunnel restriction code: N/A

Physico-Chemical properties: see section 9

Limited quantities: N/A

**14.7 Maritime transport in bulk according to IMO instruments:**

N/A

**SECTION 15 REGULATORY INFORMATION****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Not applicable. Regulation (EC) No 1005/2009, about substances that deplete the ozone layer: Not applicable.

**Regulation (EC) No 648/2004 on detergents:**

In accordance with this regulation the product complies with the following:

The tensoactives contained in this mixture comply with the biodegradability criteria stipulated in Regulation (EC) n°648/2004 on detergents. The information to prove this is available to the relevant authorities of the Member States and will be shown to them by direct request or the request of a detergent manufacturer.

**15.2 Chemical Safety Assessment**

The supplier has not carried out evaluation of chemical safety.

**SECTION 16 OTHER INFORMATION****Legislation related to safety data sheets:**

The SDS shall be supplied in an official language of the country where the product is placed on the market. This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) No 1907/2006(COMMISSION REGULATION (EU) 2020/878).

**Texts of the legislative phrases mentioned in section 2:**

H318: Causes serious eye damage.

H315: Causes skin irritation.

H360D - May damage the unborn child.

**Texts of the legislative phrases mentioned in section 3:**

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3.

**CLP Regulation (EC) No 1272/2008:**

Eye Dam. 1: H318 - Causes serious eye damage.

Eye Irrit. 2: H319 - Causes serious eye irritation.

Skin Irrit. 2: H315 - Causes skin irritation.

H360D - May damage the unborn child.

**Classification procedure:**

Eye Dam. 1: Calculation method

Skin Irrit. 2: Calculation method

**Advice related to training:**

Training is recommended to prevent industrial risks for staff using this product and to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

**Principal bibliographical sources:**

<http://echa.europa.eu>

<http://eur-lex.europa.eu>

**Abbreviations and acronyms:**

ADR: European agreement concerning the international carriage of dangerous goods by road

IMDG: International maritime dangerous goods code

IATA: International Air Transport Association

ICAO: International Civil Aviation Organisation

COD: Chemical Oxygen Demand

BOD5: 5day biochemical oxygen demand

BCF: Bioconcentration factor

LD50: Lethal Dose 50

LC50: Lethal Concentration 50

EC50: Effective concentration 50

LogPOW: Octanolwater partition coefficient

Koc: Partition coefficient of organic carbon

UFI: unique formula identifier

IARC: International Agency for Research on Cancer