

According to Regulation (EC) No 1907/2006 (REACH) in combination with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP) the product in the following table

**does not** have to be classified as hazardous.

<b>Catalogue Number:</b>	<b>Product Name:</b>
<b>EIA-1562</b>	<b>DHEA-S ELISA</b>

According to Article 31 of Regulation (EC) No 1907/2006 a safety data sheet has to be provided upon request where a mixture **does not** meet the criteria for classification as hazardous but contains a substance in a concentration of  $\geq 1$  % posing human health hazards.

**Therefore the safety data sheet is attached for the single kit component:**

- **Stop Solution**
- **Substrate Solution**

The other single components in these products neither contain

- a substance in a concentration of  $\geq 1$  % posing human health or environmental hazards; nor
- a substance in a concentration  $\geq 0.1$  % that is carcinogenic category 2 or toxic to reproduction category 1A, 1B and 2, skin sensitizer category 1, respiratory sensitizer category 1, or has effects on or via lactation or is persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB)

**Therefore a safety data sheet for the other single components in the kit is not required for these products.**

#### General Precautions:

- The products are for professional laboratory use only.
- Users should have a thorough understanding of the Instructions for Use prior to their use of this kit.
- Good Laboratory Practices (GLP) should be followed to ensure the safe use and disposal of the reagents.
- Never pipet by mouth and avoid contact of reagents and specimens with skin and mucous membranes.
- Do not smoke, eat, drink or apply cosmetics in areas where specimens or kit reagents are handled.
- Wear disposable latex gloves when handling reagents

\* Changes with respect to the previous version:

SDS for Stop Solution updated in Section 8.1

SDS for Substrate Solution replaced



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**Trade name:** *Stop Solution*  
**Product number:** See table on INFORMATION sheet

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

*Trade name:* **Stop Solution**

*Product number:* Valid for ELISA products listed in the table on the INFORMATION sheet.

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

Identified Use: Reagent for in vitro laboratory use. For professional use only.

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

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**1.4 Emergency telephone number**

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(Only available during the following office hours: 8:00 h – 16:30 h (CET))

**SECTION 2: HAZARDS IDENTIFICATION****2.1 Classification of the substance or mixture**

This product **does not meet the criteria for classification** in any hazard class according to Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.

However a safety data sheet is being supplied for it upon request as some kit components contain a substance which presents a health hazard within the meaning of Regulation (EC) No 1272/2008.

**2.2 Label elements**

No labelling required.

Hazard pictogram(s):	None
Signal word(s):	None
Hazard statement(s):	None
Precautionary statement(s):	None

**2.3 Other hazards****Results of PBT and vPvB assessment**

- PBT: Not applicable.
- vPvB: Not applicable.

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS****3.1 Substances**

Not applicable.

**Trade name:** *Stop Solution*  
**Product number:** See table on INFORMATION sheet

### 3.2 Mixtures

#### Description:

Mixture of the substances listed below with non-hazardous additions.

#### Hazardous ingredients:

Substance name	CAS No. (EC No.) [Index No.]	Conc. in the mixture	Classification according to Regulation (EC) No 1272/2008 [CLP], ANNEX VI, Harmonised classification and labelling for certain hazardous substances		
			Hazard class / Hazard categories	Hazard- statement	Specific Concentration Limits
sulphuric acid ... %	7664-93-9 (231-639-5) [016-020-00-8]	< 5.0 %	Skin Corr. 1A	H314	Skin Corr. 1A; H314: C ≥ 15 % Skin Irrit. 2; H315: 5 % ≤ C < 15 % Eye Irrit. 2; H319: 5 % ≤ C < 15 %

Full text of H-phrases: see section 16

## SECTION 4: FIRST AID MEASURES

### 4.1 Description of first aid measures

General information: If symptoms persist or in case of doubt, seek medical advice.  
 Following inhalation: Supply fresh air; consult doctor in case of complaints.  
 Following skin contact: Remove contaminated clothes and shoes.  
 Clean with water and soap. If possible, also wash with polyethylene glycol 400.  
 Cover wound with a sterile dressing.  
 If skin irritation continues, consult a doctor.  
 Following eye contact: Protect unharmed eye.  
 Rinse opened eye for several minutes under running water.  
 Call a doctor immediately.  
 Following swallowing: Rinse mouth with water.  
 Spit liquid out again.  
 Drink lots of water and provide fresh air. Call a doctor immediately.  
 Never give anything by mouth to an unconscious person

### 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

Symptomatic treatment.

## SECTION 5: FIREFIGHTING MEASURES

### 5.1 Extinguishing media

#### Suitable extinguishing agents:

The product is not combustible and does not support any combustion.  
 Use fire fighting measures suiting the environment.

#### For safety reasons unsuitable extinguishing agents:

No data available

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

In case of fire, the following can be released:

Sulphur oxides (SO<sub>x</sub>)  
 Poisonous gases/vapours

### 5.3 Advice for firefighters

**Protective equipment:** Wear self-contained respiratory protective device.

**Trade name:** *Stop Solution*  
**Product number:** See table on INFORMATION sheet

## SECTION 6: ACCIDENTAL RELEASE MEASURES

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

Wear protective clothing.  
Avoid any product contact.

### 6.2 Environmental precautions

Do not allow product to reach sewage system or any water course.  
Do not allow to penetrate the ground/soil.

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

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Rinse residues with water.  
Make sure to recycle or dispose of in suitable receptacles.

### 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.

## SECTION 7: HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.  
Avoid contact with eyes and skin.  
Keep the working area dry and clean.

**Information about protection against explosions and fires:** Observe the general rules of industrial fire protection.

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

#### Storage:

#### Requirements to be met by storerooms and receptacles:

Store container tightly sealed at a cool and dry place with sufficient ventilation.

#### Information about storage in one common storage facility:

Store away from foodstuffs.  
Refer to national regulations for storing hazardous chemicals.

#### Further information about storage conditions:

Store as directed in the relevant instruction for use.

### 7.3 Specific end use(s)

Use only in accordance with the Instructions for Use supplied with the ELISA kit.

Trade name: **Stop Solution**  
 Product number: See table on INFORMATION sheet

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

 Following information is available for the *substance* listed in section 3.2

<b>Substance:</b> sulphuric acid					
<b>CAS No.:</b> 7664-93-9					
	<b>Limit value - Eight hours</b>		<b>Limit value - Short term</b>		
<b>Country</b>	<b>ppm</b>	<b>mg/m<sup>3</sup></b>	<b>ppm</b>	<b>mg/m<sup>3</sup></b>	<b>Legal basis</b>
European Union		<b>0.05 (1)(2)</b>			Directive 2009/161/EU
Italy		0,05 (1)(2)			
France		<i>0,05 thoracic fraction</i>		3	
Germany (AGS)		0,1 inhalable aerosol		0,1 inhalable aerosol (1)	TRGS 900
Germany (DFG)		0,1 (1)		0,1 (1)(2)	
Spain		0,05		3	
USA - NIOSH		1			
USA - OSHA		1			
<b>Remarks</b>					
European Union	1) Thoracic fraction (2) When selecting an appropriate exposure monitoring method, account should be taken of potential limitations and interferences that may arise in the presence of other sulphur compounds. Bold-type: Indicative Occupational Exposure Limit Value (IOELV) ~ (for references see „ <a href="https://www.dguv.de/ifa/gestis/gestis-internationale-grenzwerte-fuer-chemische-substanzen-limit-values-for-chemical-agents/bibliography/index.jsp">https://www.dguv.de/ifa/gestis/gestis-internationale-grenzwerte-fuer-chemische-substanzen-limit-values-for-chemical-agents/bibliography/index.jsp</a> “)				
France	<i>Italics type: Indicative statutory limit values</i>				
Germany (AGS)	(1) 15 minutes average value				
Germany (DFG)	(1) 15 minutes average value (2) A momentary value of 0,2 mg/m <sup>3</sup> should not be exceeded				

Source: Based on GESTIS International Limit values Database, June 2020

**8.2 Exposure controls**
**Personal protective equipment:**
**General protective and hygienic measures:**

The usual precautionary measures should be adhered to when handling chemicals.

Provide eye bath and emergency shower.

**Respiratory Protection:**

Not required under normal use.

**Hand Protection:**

Protective gloves complying with EN 374 (nitrile rubber, Latex gloves).

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

The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.

**Eye Protection:**

Safety glasses

**Skin Protection:**

Protective work clothing, lab coat

Trade name: **Stop Solution**  
Product number: See table on INFORMATION sheet

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Appearance:	form:	liquid
	colour	colourless
Odour:		odourless
Odour threshold:		not determined
pH:		1.0
Melting point/freezing point:		not determined
Initial boiling point and boiling range:		not determined
Flash point:		not determined
Flammability (solid, gaseous):		Not applicable
Ignition temperature:		
Decomposition temperature:		Not determined
Self ignition temperature:		Product is not self-igniting.
Danger of explosion:		Product does not present an explosion hazard.
Explosion limits:		
Lower:		Not applicable
Upper:		Not applicable
Oxidizing properties:		No data available
Vapour pressure:		Not determined
Density:		Not determined
Relative density:		Not determined
Vapour density:		Not determined
Evaporation rate:		Not determined
Solubility in / Miscibility with		
Water:		Fully miscible
Partition coefficient (n-octanol/water):		Not determined
Viscosity:		Not determined

### 9.2 Other information

No further relevant information available.

## SECTION 10: STABILITY AND REACTIVITY

### 10.1 Reactivity

No further relevant information available

### 10.2 Chemical stability

**Thermal decomposition / conditions to be avoided:** No decomposition if used and stored according to specifications

### 10.3 Possibility of hazardous reactions

Corrosive effect on metals

### 10.4 Conditions to avoid

Heat

### 10.5 Incompatible materials

Metals

### 10.6 Hazardous decomposition products

No hazardous decomposition products if instructions for storage and handling are followed.

**Trade name:** *Stop Solution*  
**Product number:** See table on INFORMATION sheet

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Acute toxicity

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

#### LD/LC 50 values that are relevant for classification:

##### 7664-93-9 sulphuric acid

Oral LD50 2140 mg/kg (rat)

Inhalative LC50/4 h 0.375 mg/L (rat)

(aerosol)

Although the LC50 values from the inhalation toxicity study theoretically trigger Classification with 'Toxic by inhalation', classification is not proposed. The effects of sulphuric acid following inhalation are entirely due to local irritation of the respiratory tract: there is no evidence for the systemic toxicity of sulphuric acid in any study as effects are limited to the site of contact. Classification for acute inhalation toxicity is not considered to be appropriate.

Skin corrosion/irritation May cause irritation to the skin.

Serious eye damage/irritation May cause irritation to the eyes.

Respiratory or skin sensitisation Based on available data, the classification criteria are not met.

#### Additional toxicological information:

After swallowing: irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract

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

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

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

STOT-single exposure Based on available data, the classification criteria are not met.

STOT-repeated exposure Based on available data, the classification criteria are not met.

Aspiration hazard No data available

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1 Toxicity

#### Aquatic toxicity:

7664-93-9 sulphuric acid

EC50/48h (static) > 100 mg/L (*Daphnia magna*) (OECD Guideline 202)

LC50/72h (static) > 100 mg/L (*Desmodesmus subspicatus*) (OECD Guideline 201)

LC50/96h (static) > 16 < 28 mg/L (*Lepomis macrochirus*)

### 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

Not applicable

### 12.6 Other adverse effects

No further relevant information available

**Trade name:** *Stop Solution*  
**Product number:** See table on INFORMATION sheet

**SECTION 13: DISPOSAL CONSIDERATIONS**
**13.1 Waste treatment methods**
**Recommendation:**

Must be recycled or disposed of according to the regulations. Waste has to be classified according to the European Waste

Catalogue based on the identification of the waste generating source.

Smaller quantities can be disposed of with household waste.

**European waste catalogue:**

- 16 00 00 WASTES NOT OTHERWISE SPECIFIED IN THE LIST
- 16 05 00 gases in pressure containers and discarded chemicals
- 16 05 06\* laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals
- 15 00 00 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED
- 15 01 00 packaging (including separately collected municipal packaging waste)
- 15 01 02 plastic packaging

**Uncleaned packagings:**
**Recommendation:**

Disposal must be made according to official regulations.

Packagings that cannot be cleaned are to be disposed of in the same manner as the product.

**Recommended cleansing agent:** Water; if necessary, with cleansing agents

**SECTION 14: TRANSPORT INFORMATION**

<b>14.1 UN No.</b>	ADR, ADN, IMDG, IATA	Void
<b>14.2 UN Proper shipping name</b>	ADR, ADN, IMDG, IATA	Void
<b>14.3 Transport hazard class(es)</b>	ADR, ADN, IMDG, IATA	Void
<b>14.4 Packing group</b>	ADR, IMDG, IATA	Void
<b>14.5 Environmental hazards</b>	Not applicable	
<b>14.6 Special precautions for user</b>	Not applicable.	
<b>14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.	

**Trade name:** *Stop Solution*  
**Product number:** See table on INFORMATION sheet

**SECTION 15: REGULATORY INFORMATION**

This Safety Data Sheet is according to Commission Regulation (EU) 2015/830 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
Directive 2012/18/EU

Named dangerous substances - ANNEX I Not listed.

National regulations

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

Further information: None of the ingredients is listed.

**15.2 Chemical safety assessment**

A Chemical Safety Assessment has not been carried out.

**SECTION 16: OTHER INFORMATION**
Changes with respect to the previous version:

Updated table in Section 8.1

"H code" used in this safety data sheet

As mentioned in section 3 of the safety data sheet (not relevant for labelling of the product)

H314	Causes severe skin burns and eye damage.
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Abbreviations

AGS	Ausschuss für Gefahrstoffe
DFG	Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG (MAK-Kommission)
LC50	Lethal concentration, 50 percent
LD50	Lethal dose, 50 percent
NIOSH	National Institute for Occupational Safety and Health of USA
OSHA	Occupational Safety and Health Administration of USA
TRGS	Technische Regeln für Gefahrstoffe
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

**Trade name:** *Substrate Solution*  
**Product number:** See table on INFORMATION sheet

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

Trade name: *Substrate Solution*

Product number: Valid for ELISA products listed in the table on the INFORMATION sheet.

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

Substrate solution as part of an ELISA kit.

**Uses advised against**

None identified.

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

DRG Instruments GmbH  
Frauenbergstraße 18  
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**1.4 Emergency telephone number**

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

This mixture is **not** classified as hazardous in accordance with Regulation (EC) No. 1272/2008.

**2.2 Label elements****Regulation (EC) No. 1272/2008**

No labelling required.

Hazard pictogram(s): None  
Signal word(s): None  
Hazard statement(s): None  
Precautionary statement(s): None

**2.3 Other hazards**

No information available.

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS****3.1 Substances**

Not applicable.

**Trade name:** *Substrate Solution*  
**Product number:** See table on INFORMATION sheet

### 3.2 Mixtures

#### Hazardous ingredients:

Substance name	CAS No. (EC No.) [Index No.] "REACH No."	Concentration in the mixture	Classification according to Regulation (EC) No 1272/2008 [CLP] (related to the concentrated form)	
			Hazard class / Hazard categories	Hazard- statement
2-Pyrrolidone	616-45-5 (210-483-1) [ - ] "01-2119475471-37"	5 - < 10 %	Eye Irrit. 2;	H319

Full text of H-phrases: see section 16

## SECTION 4: FIRST AID MEASURES

### 4.1 Description of first aid measures

#### General information

When in doubt or if symptoms are observed, get medical advice.

#### After inhalation

Provide fresh air.

#### After contact with skin

Wash with plenty of water. Take off contaminated clothing and wash it before reuse.

#### After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water.

#### After ingestion

IF SWALLOWED: rinse mouth.

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

No information available.

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

Treat symptomatically.

## SECTION 5: FIREFIGHTING MEASURES

### 5.1 Extinguishing media

#### Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.

Suitable extinguishing media: Water mist, Water spray, Dry extinguishing powder, Carbon dioxide (CO<sub>2</sub>)

#### Unsuitable extinguishing media

None identified.

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

In case of fire can be released: Carbon dioxide (CO<sub>2</sub>) Carbon monoxide

### 5.3 Advice for firefighters

In case of fire: Wear self-contained breathing apparatus. Co-ordinate fire-fighting measures to the fire surroundings.

#### Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

**Trade name:** *Substrate Solution*  
**Product number:** See table on INFORMATION sheet

## SECTION 6: ACCIDENTAL RELEASE MEASURES

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

Use personal protection equipment.

### 6.2 Environmental precautions

Do not allow to enter surface water or drains.

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

Wipe up with absorbent material (eg. cloth, fleece). Wash with plenty of water.

### 6.4 Reference to other sections

Safe handling: see section 7.

Personal protection equipment: see section 8.

Disposal: see section 13.

## SECTION 7: HANDLING AND STORAGE

### 7.1 Precautions for safe handling

#### Advice on safe handling

No special measures are necessary.

#### Advice on protection against fire and explosion

No special fire protection measures are necessary.

#### Further information on handling

Use only in accordance to the manual.

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

#### Requirements for storage rooms and vessels

Keep container tightly closed. Keep cool. Protect from sunlight.

#### Hints on joint storage

Do not store together with: Oxidizing agent

#### Further information on storage condition

Observe directions on the label.

Storage temperature of 2 °C - 8 °C.

### 7.3 Specific end use(s)

Use only in accordance to the manual.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

#### DNEL/DMEL values

CAS No	Substance			
DNEL type	Exposure route	Effect	Value	
616-45-5	2-Pyrrolidone			
Worker DNEL, long-term	inhalation	systemic	29,62 mg/m <sup>3</sup>	
Worker DNEL, long-term	dermal	systemic	4,2 mg/kg bw/day	

#### Additional advice on limit values

To date, no national critical limit values exist.

**Trade name:** *Substrate Solution*  
**Product number:** See table on INFORMATION sheet

## 8.2 Exposure controls

### Protective and hygiene measures

Take off contaminated clothing. Wash hands before breaks and after work. When using do not eat, drink, smoke, sniff.

### Eye/face protection

Eye protection: not required.

### Hand protection

Chemical protective gloves must meet the requirements of European standard EN 374. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. The following materials are suitable for protective gloves (permeation time > 480 min):

NBR (Nitrile rubber);  $\geq 0.11$  mm thickness

Take recovery periods for skin regeneration.

### Skin protection

Use of protective clothing. The type of personal protection equipment has to be chosen based on the concentration and amount of the dangerous substance at the workplace.

### Respiratory protection

Respiratory protection not required. If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn. Use only respiratory protection equipment with CE-symbol including four digit test number.

### Environmental exposure controls

Do not allow to enter into surface water or drains.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Physical state:	liquid
Colour:	colourless - pale yellow
pH-Value (at 20 °C):	3.5 - 4.0
<b>Changes in the physical state</b>	
Melting point:	not determined
Initial boiling point and boiling range:	100 °C
<b>Flammability</b>	
Solid:	not applicable
Gas:	not applicable
<b>Explosive properties</b>	
Lower explosion limits:	The product is not: Explosive.
Upper explosion limits:	not determined
<b>Auto-ignition temperature</b>	
Solid:	not applicable
Gas:	not applicable
Decomposition temperature:	not determined
<b>Oxidizing properties</b>	
Vapour pressure:	not determined
Density (at 20 °C):	1.0101 g/cm <sup>3</sup>
Water solubility:	not determined
<b>Solubility in other solvents n</b>	
Partition coefficient n-octanol/water:	not determined
Relative vapour density:	not determined
Evaporation rate:	not determined

**Trade name:** *Substrate Solution*  
**Product number:** See table on INFORMATION sheet

## 9.2 Other information

Solid content: not determined

## SECTION 10: STABILITY AND REACTIVITY

### 10.1 Reactivity

No hazardous reaction when handled and stored according to provisions.

### 10.2 Chemical stability

The product is stable under storage at normal ambient temperatures.

### 10.3 Possibility of hazardous reactions

No known hazardous reactions.

### 10.4 Conditions to avoid

Light-sensitive. Keep away from heat. Stable under recommended storage and handling conditions.

### 10.5 Incompatible materials

Avoid contact with strong oxidizing agents and metals.

### 10.6 Hazardous decomposition products

No known hazardous decomposition products.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Acute toxicity

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

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
616-45-5	2-Pyrrolidone				
	oral	LD50 > 2000 mg/kg	Rat	ECHA	OECD 401

#### Irritation and corrosivity

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

#### Sensitising effects

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

#### Carcinogenic/mutagenic/toxic effects for reproduction

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

#### STOT-single exposure

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

#### STOT-repeated exposure

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

#### Aspiration hazard

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

#### Additional information on tests

The mixture is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].

**Trade name:** *Substrate Solution*  
**Product number:** See table on INFORMATION sheet

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1 Toxicity

The product is not: Ecotoxic.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
616-45-5	2-Pyrrolidone					
	Acute fish toxicity	LC50 4600 mg/L	96 h	Brachydanio rerio (zebra-fish)	ECHA	OECD 203

### 12.2 Persistence and degradability

The product has not been tested.

### 12.3 Bioaccumulative potential

The product has not been tested.

CAS No	Chemical name	Log Pow
616-45-5	2-Pyrrolidone	-0,71

### 12.4 Mobility in soil

The product has not been tested.

### 12.5 Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

### 12.6 Other adverse effects

No information available.

#### Further information

Avoid release to the environment. There are no data available on the mixture itself.

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

#### Disposal recommendations

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

#### List of Wastes Code - residues/unused products

160509 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08

#### List of Wastes Code - used product

160509 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08

#### List of Wastes Code - contaminated packaging

150102 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); plastic packaging

#### Contaminated packaging

Wash with plenty of water. Completely emptied packages can be recycled.

**Trade name:** *Substrate Solution*  
**Product number:** See table on INFORMATION sheet

**SECTION 14: TRANSPORT INFORMATION**

	Land transport Land transport (ADR/RID)	Inland waterway Inland waterways transport (ADN)	Sea transport Marine transport (IMDG)	Air transport (ICAO- Air transport (ICAO-TI/ IATA-DGR)
<b>14.1 UN No.</b>				
<b>14.2 UN Proper shipping name</b>	No dangerous good in sense of this transport regulation.	No dangerous good in sense of this transport regulation.	No dangerous good in sense of this transport regulation.	No dangerous good in sense of this transport regulation.
<b>14.3 Transport hazard class(es)</b>				
<b>14.4 Packing group</b>				

**14.5 Environmental hazards** No  
**14.6 Special precautions for user** No dangerous good in sense of this transport regulation.  
**14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** No dangerous good in sense of this transport regulation.

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

Information according to 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

**National regulatory information**

Water hazard class (D): 1 - slightly hazardous to water

**15.2 Chemical safety assessment**

Chemical safety assessments for substances in this mixture were not carried out.

**Trade name:** *Substrate Solution*  
**Product number:** See table on INFORMATION sheet

## SECTION 16: OTHER INFORMATION

### Changes with respect to the previous version:

Composition of Substrate Solution has changed, all chapters were reviewed.

### "H code" used in this safety data sheet

As mentioned in section 3 of the safety data sheet (not relevant for labelling of the product)

H319	Causes serious eye irritation.
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### Abbreviations and acronyms

CLP:	Classification, labelling and Packaging
REACH:	Registration, Evaluation and Authorization of Chemicals
GHS:	Globally Harmonised System of Classification, Labelling and Packaging of Chemicals
UN:	United Nations
CAS:	Chemical Abstracts Service
DNEL:	Derived No Effect Level
DMEL:	Derived Minimal Effect Level
PNEC:	Predicted No Effect Concentration
ATE:	Acute toxicity estimate
LC50:	Lethal concentration, 50%
LD50:	Lethal dose, 50%
LL50:	Lethal loading, 50%
EL50:	Effect loading, 50%
EC50:	Effective Concentration 50%
ErC50:	Effective Concentration 50%, growth rate
NOEC:	No Observed Effect Concentration
BCF:	Bio-concentration factor
PBT:	persistent, bioaccumulative, toxic
vPvB:	very persistent, very bioaccumulative
ADR:	Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID:	Regulations concerning the international carriage of dangerous goods by rail
ADN:	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures)
IMDG:	International Maritime Code for Dangerous Goods
EmS:	Emergency Schedules
MFAG:	Medical First Aid Guide
IATA:	International Air Transport Association
ICAO:	International Civil Aviation Organization
MARPOL:	International Convention for the Prevention of Marine Pollution from Ships
IBC:	Intermediate Bulk Container
SVHC:	Substance of Very High Concern

For abbreviations and acronyms, see table at <http://abbrev.esdscom.eu>

### **Further Information**

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)