



# Safety Data Sheet

Cat. # 786-125

OrgoSol-PROTEIN-Concentrate™

Size: For 5ml Protein





# SEED

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830  
Revision date: 5/11/2017 Version: 1.1

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

#### 1.1. Product identifier

|                 |  |
|-----------------|--|
| Product form    | : Mixture  |
| Product name    | : SEED   |
| EC-No.          | : 232-686-4  |
| CAS-No.         | : 9005-84-9  |
| Product code    | : 099S   |
| Type of product | : Pure substance   |
| Formula         | : (C6H10O5) <sub>n</sub>   |
| Synonyms        | : alpha-amylodextrin / amyloextrin / amylogen / dextrin, amylo / kordek / potato starch / soluble starch / stabilose AO / stabilose K / starch from potatoes / starch soluble / zulkovsky starch |
| Product group   | : Trade product  |
| BIG No          | : 30550  |

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

##### 1.2.1. Relevant identified uses

Use of the substance/mixture : Paper production: thickener

##### 1.2.2. Uses advised against

No additional information available

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

Geno Technology, Inc./ G-Biosciences  
9800 Page Avenue  
63132-1429 Saint Louis - United States  
T 800-628-7730 - F 314-991-1504  
[technical@GBiosciences.com](mailto:technical@GBiosciences.com) - [www.GBiosciences.com](http://www.GBiosciences.com)

#### 1.4. Emergency telephone number

Emergency number : Chemtrec **1-800-424-9300** (USA/Canada), **+1-703-527-3887** (Intl)

### SECTION 2: Hazards identification

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

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

Not classified

##### Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

#### 2.2. Label elements

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

No labelling applicable

#### 2.3. Other hazards

No additional information available

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

| Name            | Product identifier                        | %    | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|-----------------|---|------|---|
| Deionized water | (CAS-No.) 7732-18-5                       | > 98 | Not classified  |
| Starch          | (CAS-No.) 9005-84-9<br>(EC-No.) 232-686-4 | < 2  | Not classified  |

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### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

|                                       |   |
|---------------------------------------|---|
| First-aid measures general            | : If you feel unwell, seek medical advice.  |
| First-aid measures after inhalation   | : Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.   |
| First-aid measures after skin contact | : Rinse with water. Soap may be used. Take victim to a doctor if irritation persists.   |
| First-aid measures after eye contact  | : Rinse with water. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists.   |
| First-aid measures after ingestion    | : Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Call Poison Information Centre ( <a href="http://www.big.be/antigif.htm">www.big.be/antigif.htm</a> ). Consult a doctor/medical service if you feel unwell. |

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

|                                   |  |
|-----------------------------------|--|
| Symptoms/effects after inhalation | : AFTER INHALATION OF DUST/MIST: Coughing. |
|-----------------------------------|--|

#### 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   | : Quick-acting ABC powder extinguisher. Class A foam extinguisher. Water (quick-acting extinguisher, reel). Water. Class A foam. |
| Unsuitable extinguishing media | : Quick-acting BC powder extinguisher. Quick-acting CO2 extinguisher.  |

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

|  |  |
|--|--|
| Fire hazard                                      | : DIRECT FIRE HAZARD: Non-flammable. INDIRECT FIRE HAZARD: Reactions involving a fire hazard: see "Reactivity Hazard".       |
| Explosion hazard                                 | : DIRECT EXPLOSION HAZARD: Fine dust is explosive with air. INDIRECT EXPLOSION HAZARD: Dust cloud can be ignited by a spark. |
| Hazardous decomposition products in case of fire | : Toxic fumes may be released.   |

#### 5.3. Advice for firefighters

|                                |  |
|--------------------------------|--|
| Precautionary measures fire    | : Exposure to fire/heat: keep upwind. Exposure to fire/heat: have neighbourhood close doors and windows. |
| Firefighting instructions      | : No specific fire-fighting instructions required.   |
| Protection during firefighting | : Heat/fire exposure: compressed air/oxygen apparatus.   |

### SECTION 6: Accidental release measures

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

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

|                                  |  |
|----------------------------------|--|
| Protective equipment             | : Gloves. Protective clothing. Dust cloud production: compressed air/oxygen apparatus.   |
| Emergency procedures             | : Mark the danger area. Prevent dust cloud formation, e.g. by wetting. No naked flames. Wash contaminated clothes.   |
| Measures in case of dust release | : In case of dust production: keep upwind. Dust production: have neighbourhood close doors and windows. In case of dust production: stop engines and no smoking. In case of dust production: no naked flames or sparks. Dust: spark-/explosionproof appliances/lighting equipment. |

##### 6.1.2. For emergency responders

|                      |   |
|----------------------|---|
| Protective equipment | : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection". |
|----------------------|---|

#### 6.2. Environmental precautions

Avoid release to the environment.

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

|                         |   |
|-------------------------|---|
| For containment         | : Contain released product, pump into suitable containers. Plug the leak, cut off the supply. Knock down/dilute dust cloud with water spray. Provide equipment/receptacles with earthing. Powdered form: no compressed air for pumping over spills. |
| Methods for cleaning up | : Prevent dust cloud formation. Scoop solid spill into closing containers. Powdered: do not use compressed air for pumping over spills. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.            |
| Other information       | : Dispose of materials or solid residues at an authorized site.   |

#### 6.4. Reference to other sections

For further information refer to section 13.

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according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

|                               |  |
|-------------------------------|--|
| Precautions for safe handling | : Avoid raising dust. Keep away from naked flames/heat. Take precautions against electrostatic charges. In finely divided state: use spark-/explosionproof appliances. Finely divided: keep away from ignition sources/sparks. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Clean contaminated clothing. Thoroughly clean/dry the installation before use. Powdered form: no compressed air for pumping over. Keep container tightly closed. |
| Hygiene measures              | : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.  |

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

|                              |   |
|------------------------------|---|
| Storage conditions           | : Store in a well-ventilated place. Keep cool.  |
| Storage temperature          | : RT  |
| Heat and ignition sources    | : KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.   |
| Information on mixed storage | : KEEP SUBSTANCE AWAY FROM: oxidizing agents.   |
| Storage area                 | : Store in a dry area. Keep container in a well-ventilated place. Provide the tank with earthing. Meet the legal requirements.          |
| Special rules on packaging   | : SPECIAL REQUIREMENTS: closing. clean. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers. |

#### 7.3. Specific end use(s)

No additional information available

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### SEED (9005-84-9)

##### United Kingdom - Occupational Exposure Limits

|                              |   |
|------------------------------|---|
| WEL TWA (mg/m <sup>3</sup> ) | 10 mg/m <sup>3</sup><br>4 mg/m <sup>3</sup> |
|------------------------------|---|

##### Starch (9005-84-9)

##### United Kingdom - Occupational Exposure Limits

|                              |   |
|------------------------------|---|
| WEL TWA (mg/m <sup>3</sup> ) | 10 mg/m <sup>3</sup><br>4 mg/m <sup>3</sup> |
|------------------------------|---|

#### 8.2. Exposure controls

##### Appropriate engineering controls:

Ensure good ventilation of the work station.

##### Hand protection:

Gloves

##### Eye protection:

Safety glasses. In case of dust production: protective goggles

##### Skin and body protection:

Protective clothing

##### Respiratory protection:

Dust production: dust mask with filter type P1

##### Environmental exposure controls:

Avoid release to the environment.

### SECTION 9: Physical and chemical properties

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

|                 |                            |
|-----------------|----------------------------|
| Physical state  | : Solid                    |
| Appearance      | : Solid. Amorphous powder. |
| Molecular mass  | : 162.14 g/mol             |
| Colour          | : White.                   |
| Odour           | : Odourless.               |
| Odour threshold | : No data available        |

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|  |  |
|--|--|
| pH   | : 4 - 7.5 (2 %)  |
| Relative evaporation rate (butylacetate=1) | : No data available  |
| Melting point                              | : No data available  |
| Freezing point                             | : Not applicable   |
| Boiling point                              | : No data available  |
| Flash point                                | : Not applicable   |
| Auto-ignition temperature                  | : > 380 °C   |
| Decomposition temperature                  | : No data available  |
| Flammability (solid, gas)                  | : Non flammable.   |
| Vapour pressure                            | : No data available  |
| Relative vapour density at 20 °C           | : Not applicable   |
| Relative density                           | : 1.5  |
| Density                                    | : 1500 kg/m <sup>3</sup>   |
| Solubility                                 | : Moderately soluble in water. Substance sinks in water.<br>Water: 5 g/100ml (90 °C) |
| Log Pow                                    | : No data available  |
| Viscosity, kinematic                       | : No data available  |
| Viscosity, dynamic                         | : No data available  |
| Explosive properties                       | : No data available  |
| Oxidising properties                       | : No data available  |
| Explosive limits                           | : Not applicable   |

### 9.2. Other information

VOC content : 0 %

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Reacts with (strong) oxidizers: (increased) risk of fire.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Hazardous decomposition products.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

|                                   |                  |
|-----------------------------------|------------------|
| Acute toxicity (oral)             | : Not classified |
| Acute toxicity (dermal)           | : Not classified |
| Acute toxicity (inhalation)       | : Not classified |
| Skin corrosion/irritation         | : Not classified |
| Serious eye damage/irritation     | : Not classified |
| Respiratory or skin sensitisation | : Not classified |
| Germ cell mutagenicity            | : Not classified |
| Carcinogenicity                   | : Not classified |
| Reproductive toxicity             | : Not classified |
| STOT-single exposure              | : Not classified |
| STOT-repeated exposure            | : Not classified |
| Aspiration hazard                 | : Not classified |

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008.

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|                          |   |
|--------------------------|---|
| Ecology - air            | : Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009). |
| Ecology - water          | : Mild water pollutant (surface water).   |
| Acute aquatic toxicity   | : Not classified  |
| Chronic aquatic toxicity | : Not classified  |

### 12.2. Persistence and degradability

| SEED (9005-84-9)              |                                    |
|-------------------------------|------------------------------------|
| Persistence and degradability | Readily biodegradable in water.    |
| ThOD                          | 1.18 g O <sub>2</sub> /g substance |

### Starch (9005-84-9)

|                               |                                    |
|-------------------------------|------------------------------------|
| Persistence and degradability | Readily biodegradable in water.    |
| ThOD                          | 1.18 g O <sub>2</sub> /g substance |

### 12.3. Bioaccumulative potential

No additional information available

### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

|  |   |
|--|---|
| Waste treatment methods                    | : Waste treatment methods.  |
| Product/Packaging disposal recommendations | : Remove waste in accordance with local and/or national regulations. May be discharged to wastewater treatment installation.                              |
| Additional information                     | : Can be considered as non hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997. |
| European List of Waste (LoW) code          | : 02 03 99 - wastes not otherwise specified   |

## SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

### 14.1. UN number

|               |                 |
|---------------|-----------------|
| UN-No. (ADR)  | : Not regulated |
| UN-No. (IMDG) | : Not regulated |
| UN-No. (IATA) | : Not regulated |
| UN-No. (ADN)  | : Not regulated |
| UN-No. (RID)  | : Not regulated |

### 14.2. UN proper shipping name

|                             |                 |
|-----------------------------|-----------------|
| Proper Shipping Name (ADR)  | : Not regulated |
| Proper Shipping Name (IMDG) | : Not regulated |
| Proper Shipping Name (IATA) | : Not regulated |
| Proper Shipping Name (ADN)  | : Not regulated |
| Proper Shipping Name (RID)  | : Not regulated |

### 14.3. Transport hazard class(es)

#### ADR

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

#### IMDG

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

#### IATA

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

#### ADN

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

#### RID

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

### 14.4. Packing group

Packing group (ADR) : Not regulated

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|                      |                 |
|----------------------|-----------------|
| Packing group (IMDG) | : Not regulated |
| Packing group (IATA) | : Not regulated |
| Packing group (ADN)  | : Not regulated |
| Packing group (RID)  | : Not regulated |

### 14.5. Environmental hazards

|                               |  |
|-------------------------------|--|
| Dangerous for the environment | : No                                     |
| Marine pollutant              | : No                                     |
| Other information             | : No supplementary information available |

### 14.6. Special precautions for user

#### Overland transport

Not regulated

#### Transport by sea

Not regulated

#### Air transport

Not regulated

#### Inland waterway transport

Not regulated

#### Rail transport

Not regulated

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

Not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

Substance(s) are not subject to Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC.

VOC content : 0 %

#### 15.1.2. National regulations

No additional information available

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## SECTION 16: Other information

Safety Data Sheet applicable for regions : GB - United Kingdom

SDS EU (REACH Annex II)

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*



# OrgoSol Buffer

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according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830  
Revision date: 5/11/2017 Version: 1.3

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

#### 1.1. Product identifier

Product form : Mixture  
Product name : OrgoSol Buffer  
Product code : 283O  
Product group : Blend  
BIG No : 10001

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

##### 1.2.1. Relevant identified uses

Main use category : Research purposes

##### 1.2.2. Uses advised against

No additional information available

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

Geno Technology, Inc./ G-Biosciences  
9800 Page Avenue  
63132-1429 Saint Louis - United States  
T 800-628-7730 - F 314-991-1504  
[technical@GBiosciences.com](mailto:technical@GBiosciences.com) - [www.GBiosciences.com](http://www.GBiosciences.com)

#### 1.4. Emergency telephone number

Emergency number : Chemtrec **1-800-424-9300** (USA/Canada), **+1-703-527-3887** (Intl)

| Country        | Organisation/Company  | Address   | Emergency number | Comment |
|----------------|---|---|------------------|---------|
| United Kingdom | National Poisons Information Service (Belfast Centre)<br>Royal Victoria Hospital                                | Grosvenor Road<br>BT12 6BA Belfast                          | 0344 892 0111    |         |
| United Kingdom | National Poisons Information Service (Birmingham Centre)<br>City Hospital                                       | Dudley Road<br>B18 7QH Birmingham                           | 0344 892 0111    |         |
| United Kingdom | National Poisons Information Service (Cardiff Centre)<br>Gwenwyn Ward, Llandough Hospital                       | Penarth<br>CF64 2XX Cardiff                                 | 0344 892 0111    |         |
| United Kingdom | National Poisons Information Service Edinburgh<br>Royal Infirmary of Edinburgh                                  | Little France Crescent<br>EH16 4SA Edinburgh                | 0344 892 0111    |         |
| United Kingdom | Guy's & St Thomas' Poisons Unit<br>Medical Toxicology Unit,<br>Guy's & St Thomas' Hospital Trust                | Avonley Road<br>SE14 5ER London                             | +44 20 7188 7188 |         |
| United Kingdom | National Poisons Information Service (Newcastle Centre)<br>Regional Drugs and Therapeutics Centre, Wolfson Unit | Claremont Place<br>Newcastle-upon-Tyne<br>NE1 4LP Newcastle | 0344 892 0111    |         |

### SECTION 2: Hazards identification

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

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

Flammable liquids, Category 2 H225  
Serious eye damage/eye irritation, Category 2 H319  
Specific target organ toxicity — Single exposure, Category 3, Narcosis H336  
Full text of H statements : see section 16

##### Adverse physicochemical, human health and environmental effects

Highly flammable liquid and vapour. May cause drowsiness or dizziness. Causes serious eye irritation.



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### 2.2. Label elements

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

Hazard pictograms (CLP)



GHS02

GHS07

CLP Signal word

: Danger

Hazardous ingredients

: acetone; chloroform

Hazard statements (CLP)

: H225 - Highly flammable liquid and vapour.  
H319 - Causes serious eye irritation.  
H336 - May cause drowsiness or dizziness.

Precautionary statements (CLP)

: P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P233 - Keep container tightly closed.  
P240 - Ground and bond container and receiving equipment.  
P241 - Use explosion-proof equipment.  
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.  
P264 - Wash hands, forearms and face thoroughly after handling.  
P271 - Use only outdoors or in a well-ventilated area.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P312 - Call a POISON CENTRE or doctor if you feel unwell.  
P337+P313 - If eye irritation persists: Get medical advice/attention.  
P370+P378 - In case of fire: Use media other than water to extinguish.  
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.  
P403+P235 - Store in a well-ventilated place. Keep cool.  
P405 - Store locked up.  
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

### 2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

| Name  | Product identifier   | %      | Classification according to Regulation (EC) No. 1272/2008 [CLP]  |
|---|--|--------|--|
| acetone                                       | (CAS-No.) 67-64-1<br>(EC-No.) 200-662-2<br>(EC Index-No.) 606-001-00-8   | >= 80  | Flam. Liq. 2, H225<br>Eye Irrit. 2, H319<br>STOT SE 3, H336  |
| Iso-amyl Alcohol                              | (CAS-No.) 123-51-3<br>(EC-No.) 204-633-5<br>(EC Index-No.) 603-006-00-7  | < 0.05 | Flam. Liq. 3, H226<br>Acute Tox. 4 (Inhalation), H332<br>STOT SE 3, H335   |
| chloroform                                    | (CAS-No.) 67-66-3<br>(EC-No.) 200-663-8<br>(EC Index-No.) 602-006-00-4   | < 0.05 | Acute Tox. 4 (Oral), H302<br>Acute Tox. 3 (Inhalation), H331<br>Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>Carc. 2, H351<br>Repr. 2, H361d<br>STOT RE 1, H372<br>Aquatic Acute 1, H400 (M=100) |
| 2-propanol                                    | (CAS-No.) 67-63-0<br>(EC-No.) 200-661-7<br>(EC Index-No.) 603-117-00-0   | < 0.05 | Flam. Liq. 2, H225<br>Eye Irrit. 2, H319<br>STOT SE 3, H336  |
| hydrogen chloride, conc=36%, aqueous solution | (CAS-No.) 7647-01-0<br>(EC-No.) 231-595-7<br>(EC Index-No.) 017-002-01-X | < 0.05 | Skin Corr. 1A, H314<br>STOT SE 3, H335   |

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| Specific concentration limits:                |  |   |
|---|--|---|
| Name  | Product identifier   | Specific concentration limits   |
| hydrogen chloride, conc=36%, aqueous solution | (CAS-No.) 7647-01-0<br>(EC-No.) 231-595-7<br>(EC Index-No.) 017-002-01-X | ( 10 =<C < 25) Eye Irrit. 2, H319<br>( 10 =<C < 25) Skin Irrit. 2, H315<br>( 10 =<C < 100) STOT SE 3, H335<br>( 25 =<C < 100) Skin Corr. 1B, H314 |

Full text of H-statements: see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

|                                       |  |
|---------------------------------------|--|
| First-aid measures general            | : Call a poison center or a doctor if you feel unwell.   |
| First-aid measures after inhalation   | : Remove person to fresh air and keep comfortable for breathing.   |
| First-aid measures after skin contact | : Rinse skin with water/shower. Take off immediately all contaminated clothing.  |
| First-aid measures after eye contact  | : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. |
| First-aid measures after ingestion    | : Call a poison center or a doctor if you feel unwell.   |

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

|                                     |  |
|-------------------------------------|--|
| Symptoms/effects                    | : May cause drowsiness or dizziness.   |
| Symptoms/effects after inhalation   | : EXPOSURE TO HIGH CONCENTRATIONS: Feeling of weakness. Irritation of the respiratory tract. Nausea. Vomiting. Headache. Central nervous system depression. Dizziness. Narcosis. Excited/restless. Drunkenness. Disturbed motor response. Respiratory difficulties. Disturbances of consciousness.                           |
| Symptoms/effects after skin contact | : ON CONTINUOUS EXPOSURE/CONTACT: Dry skin. Cracking of the skin.  |
| Symptoms/effects after eye contact  | : Irritation of the eye tissue.  |
| Symptoms/effects after ingestion    | : Dry/sore throat. Risk of aspiration pneumonia. Symptoms similar to those listed under inhalation. AFTER INGESTION OF HIGH QUANTITIES: Irritation of the gastric/intestinal mucosa. Change in the haemogramme/blood composition. Change in urine output. Affection of the renal tissue. Enlargement/affection of the liver. |
| Chronic symptoms                    | : ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Red skin. Skin rash/inflammation. Dry/sore throat. Headache. Nausea. Feeling of weakness. Loss of weight. Possible inflammation of the respiratory tract.   |

### 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   | : Water spray. Dry powder. Foam. Carbon dioxide.       |
| Unsuitable extinguishing media | : Solid water jet ineffective as extinguishing medium. |

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

|  |  |
|--|--|
| Fire hazard                                      | : Highly flammable liquid and vapour.  |
| Explosion hazard                                 | : DIRECT EXPLOSION HAZARD: Gas/vapour explosive with air within explosion limits. INDIRECT EXPLOSION HAZARD: Heat may cause pressure rise in tanks/drums: explosion risk. may be ignited by sparks. Reactions with explosion hazards: see "Reactivity Hazard". |
| Hazardous decomposition products in case of fire | : Toxic fumes may be released.   |

### 5.3. Advice for firefighters

|                                |   |
|--------------------------------|---|
| Firefighting instructions      | : Cool tanks/drums with water spray/remove them into safety. Physical explosion risk: extinguish/cool from behind cover. Do not move the load if exposed to heat. After cooling: persistent risk of physical explosion. |
| Protection during firefighting | : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.  |

## SECTION 6: Accidental release measures

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

#### 6.1.1. For non-emergency personnel

|                      |   |
|----------------------|---|
| Protective equipment | : Gloves. Protective goggles. Protective clothing. Large spills/in enclosed spaces: compressed air apparatus.   |
| Emergency procedures | : Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes. |

#### 6.1.2. For emergency responders

|                      |   |
|----------------------|---|
| Protective equipment | : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection". |
|----------------------|---|

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### 6.2. Environmental precautions

Avoid release to the environment.

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

|                         |  |
|-------------------------|--|
| For containment         | : Contain released product, pump into suitable containers. Plug the leak, cut off the supply. Dam up the liquid spill. Try to reduce evaporation. Measure the concentration of the explosive gas-air mixture. Dilute/disperse combustible gas/vapour with water curtain. Provide equipment/receptacles with earthing. Do not use compressed air for pumping over spills. |
| Methods for cleaning up | : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.  |
| Other information       | : Dispose of materials or solid residues at an authorized site.  |

### 6.4. Reference to other sections

For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

|                               |  |
|-------------------------------|--|
| Precautions for safe handling | : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapours may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Use only outdoors or in a well-ventilated area. Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes. |
| Hygiene measures              | : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.  |

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

|                              |   |
|------------------------------|---|
| Technical measures           | : Ground/bond container and receiving equipment.  |
| Storage conditions           | : Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.  |
| Storage temperature          | : 15 - 20 °C  |
| Heat and ignition sources    | : KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.   |
| Information on mixed storage | : KEEP SUBSTANCE AWAY FROM: oxidizing agents. reducing agents. (strong) acids. (strong) bases. halogens. amines.  |
| Storage area                 | : Store in a cool area. Keep out of direct sunlight. Store in a dry area. Store in a dark area. Ventilation at floor level. Fireproof storeroom. Provide for an automatic sprinkler system. Provide for a tub to collect spills. Provide the tank with earthing. Meet the legal requirements. |
| Special rules on packaging   | : SPECIAL REQUIREMENTS: closing. with pressure relief valve. clean. opaque. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.   |
| Packaging materials          | : SUITABLE MATERIAL: steel. stainless steel. carbon steel. aluminium. iron. copper. nickel. bronze. glass. MATERIAL TO AVOID: synthetic material.   |

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

| OrgoSol Buffer                                       |                        |
|--|------------------------|
| <b>EU - Occupational Exposure Limits</b>             |                        |
| IOELV TWA (mg/m <sup>3</sup> )                       | 1210 mg/m <sup>3</sup> |
| IOELV TWA (ppm)                                      | 500 ppm                |
| <b>United Kingdom - Occupational Exposure Limits</b> |                        |
| WEL TWA (mg/m <sup>3</sup> )                         | 1210 mg/m <sup>3</sup> |
| WEL TWA (ppm)  | 500 ppm                |
| WEL STEL (mg/m <sup>3</sup> )                        | 3620 mg/m <sup>3</sup> |
| WEL STEL (ppm)                                       | 1500 ppm               |
| <b>chloroform (67-66-3)</b>                          |                        |
| <b>EU - Occupational Exposure Limits</b>             |                        |
| IOELV TWA (mg/m <sup>3</sup> )                       | 10 mg/m <sup>3</sup>   |
| IOELV TWA (ppm)                                      | 2 ppm                  |
| <b>United Kingdom - Occupational Exposure Limits</b> |                        |
| WEL TWA (mg/m <sup>3</sup> )                         | 9.9 mg/m <sup>3</sup>  |

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|  |                        |
|--|------------------------|
| WEL TWA (ppm)  | 2 ppm                  |
| <b>Iso-amyl Alcohol (123-51-3)</b>                   |                        |
| <b>United Kingdom - Occupational Exposure Limits</b> |                        |
| WEL TWA (mg/m <sup>3</sup> )                         | 366 mg/m <sup>3</sup>  |
| WEL TWA (ppm)  | 100 ppm                |
| WEL STEL (mg/m <sup>3</sup> )                        | 458 mg/m <sup>3</sup>  |
| WEL STEL (ppm)                                       | 125 ppm                |
| <b>acetone (67-64-1)</b>                             |                        |
| <b>EU - Occupational Exposure Limits</b>             |                        |
| IOELV TWA (mg/m <sup>3</sup> )                       | 1210 mg/m <sup>3</sup> |
| IOELV TWA (ppm)                                      | 500 ppm                |
| <b>United Kingdom - Occupational Exposure Limits</b> |                        |
| WEL TWA (mg/m <sup>3</sup> )                         | 1210 mg/m <sup>3</sup> |
| WEL TWA (ppm)  | 500 ppm                |
| WEL STEL (mg/m <sup>3</sup> )                        | 3620 mg/m <sup>3</sup> |
| WEL STEL (ppm)                                       | 1500 ppm               |
| <b>2-propanol (67-63-0)</b>                          |                        |
| <b>United Kingdom - Occupational Exposure Limits</b> |                        |
| WEL TWA (mg/m <sup>3</sup> )                         | 999 mg/m <sup>3</sup>  |
| WEL TWA (ppm)  | 400 ppm                |
| WEL STEL (mg/m <sup>3</sup> )                        | 1250 mg/m <sup>3</sup> |
| WEL STEL (ppm)                                       | 500 ppm                |
| <b>OrgoSol Buffer</b>                                |                        |
| <b>DNEL/DMEL (Workers)</b>                           |                        |
| Acute - local effects, inhalation                    | 2420 mg/m <sup>3</sup> |
| Long-term - systemic effects, dermal                 | 186 mg/kg bw/day       |
| Long-term - systemic effects, inhalation             | 1210 mg/m <sup>3</sup> |
| <b>DNEL/DMEL (General population)</b>                |                        |
| Long-term - systemic effects, oral                   | 62 mg/kg bw/day        |
| Long-term - systemic effects, inhalation             | 200 mg/m <sup>3</sup>  |
| Long-term - systemic effects, dermal                 | 62 mg/kg bw/day        |
| <b>PNEC (Water)</b>                                  |                        |
| PNEC aqua (freshwater)                               | 10.6 mg/l              |
| PNEC aqua (marine water)                             | 1.06 mg/l              |
| <b>PNEC (Sediment)</b>                               |                        |
| PNEC sediment (freshwater)                           | 30.4 mg/kg dwt         |
| PNEC sediment (marine water)                         | 3.04 mg/kg dwt         |
| <b>PNEC (Soil)</b>                                   |                        |
| PNEC soil  | 29.5 mg/kg dwt         |
| <b>PNEC (STP)</b>                                    |                        |
| PNEC sewage treatment plant                          | 100 mg/l               |

### 8.2. Exposure controls

#### Appropriate engineering controls:

Ensure good ventilation of the work station.

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|   |
|---|
| <b>Materials for protective clothing:</b>   |
| GIVE GOOD RESISTANCE: butyl rubber. tetrafluoroethylene. GIVE LESS RESISTANCE: chlorosulfonated polyethylene. natural rubber. neoprene. polyurethane. PVA. styrene-butadiene rubber. GIVE POOR RESISTANCE: nitrile rubber. polyethylene. PVC. viton. nitrile rubber/PVC |
| <b>Hand protection:</b>   |
| Gloves  |
| <b>Eye protection:</b>  |
| Safety glasses  |
| <b>Skin and body protection:</b>  |
| Head/neck protection. Protective clothing   |
| <b>Respiratory protection:</b>  |
| Wear gas mask with filter type A if conc. in air > exposure limit   |

### Environmental exposure controls:

Avoid release to the environment.

## SECTION 9: Physical and chemical properties

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

|   |   |
|---|---|
| Physical state                                | : Liquid  |
| Appearance                                    | : Liquid.   |
| Colour  | : Colourless.   |
| Odour   | : Aromatic odour. Sweet odour. Fruity odour.  |
| Odour threshold                               | : No data available   |
| pH  | : No data available   |
| Relative evaporation rate (butylacetate=1)    | : No data available   |
| Melting point                                 | : -95 °C  |
| Freezing point                                | : No data available   |
| Boiling point                                 | : 56 °C   |
| Flash point                                   | : -17 °C (Closed cup)   |
| Critical temperature                          | : 235 °C  |
| Auto-ignition temperature                     | : 465 °C  |
| Decomposition temperature                     | : No data available   |
| Flammability (solid, gas)                     | : Not applicable  |
| Vapour pressure                               | : 247 hPa (20 °C)   |
| Vapour pressure at 50 °C                      | : 828 hPa   |
| Critical pressure                             | : 47010 hPa   |
| Relative vapour density at 20 °C              | : 2   |
| Relative density                              | : 0.79  |
| Relative density of saturated gas/air mixture | : 1.2   |
| Density                                       | : 786 kg/m <sup>3</sup>   |
| Solubility                                    | : Soluble in water. Soluble in ethanol. Soluble in ether. Soluble in dimethyl ether. Soluble in petroleum spirit. Soluble in chloroform. Soluble in dimethylformamide. Soluble in oils/fats.<br>Water: complete<br>Ethanol: complete<br>Ether: complete |
| Log Pow                                       | : -0.24 (Test data)   |
| Viscosity, kinematic                          | : 0.417 mm <sup>2</sup> /s  |
| Viscosity, dynamic                            | : No data available   |
| Explosive properties                          | : No data available   |
| Oxidising properties                          | : No data available   |
| Explosive limits                              | : 2 - 12.8 vol %<br>60 - 310 g/m <sup>3</sup>   |
| Lower explosive limit (LEL)                   | : 2 vol %   |
| Upper explosive limit (UEL)                   | : 12.8 vol %  |

### 9.2. Other information

|                       |                        |
|-----------------------|------------------------|
| Specific conductivity | : 6000000 pS/m (25 °C) |
|-----------------------|------------------------|

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|                          |  |
|--------------------------|--|
| Saturation concentration | : 589 g/m <sup>3</sup>   |
| VOC content              | : 100 %  |
| Other properties         | : Gas/vapour heavier than air at 20°C. Clear. Highly volatile. Neutral reaction. |

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

Violent to explosive reaction with many compounds. Prolonged storage: on exposure to light: release of harmful gases/vapours.

#### 10.2. Chemical stability

Unstable on exposure to light.

#### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

#### 10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

#### 10.5. Incompatible materials

No additional information available

#### 10.6. Hazardous decomposition products

Hazardous decomposition products.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

|                             |                  |
|-----------------------------|------------------|
| Acute toxicity (oral)       | : Not classified |
| Acute toxicity (dermal)     | : Not classified |
| Acute toxicity (inhalation) | : Not classified |

| OrgoSol Buffer             |   |
|----------------------------|---|
| LD50 oral rat              | 5800 mg/kg (Equivalent or similar to OECD 401, Rat, Female, Experimental value, Oral)     |
| LD50 dermal rabbit         | 20000 mg/kg (Equivalent or similar to OECD 402, Rabbit, Male, Experimental value, Dermal) |
| LC50 inhalation rat (mg/l) | 76 mg/l (Other, 4 h, Rat, Female, Experimental value, Inhalation (vapours))               |
| ATE CLP (vapours)          | 76 mg/l/4h  |
| ATE CLP (dust,mist)        | 76 mg/l/4h  |

#### chloroform (67-66-3)

|                    |   |
|--------------------|---|
| LD50 oral rat      | 908 mg/kg bodyweight (OECD 401: Acute Oral Toxicity, Rat, Male, Experimental value, Oral) |
| LD50 dermal rabbit | > 3980 mg/kg bodyweight (24 h, Rabbit, No reliable data available, Dermal)                |

#### acetone (67-64-1)

|                            |   |
|----------------------------|---|
| LD50 oral rat              | 5800 mg/kg (Equivalent or similar to OECD 401, Rat, Female, Experimental value, Oral)     |
| LD50 dermal rabbit         | 20000 mg/kg (Equivalent or similar to OECD 402, Rabbit, Male, Experimental value, Dermal) |
| LC50 inhalation rat (mg/l) | 76 mg/l (Other, 4 h, Rat, Female, Experimental value, Inhalation (vapours))               |

#### 2-propanol (67-63-0)

|                           |   |
|---------------------------|---|
| LD50 oral rat             | 5840 mg/kg bodyweight (Equivalent or similar to OECD 401, Rat, Experimental value, Oral, 14 day(s))                           |
| LD50 dermal rabbit        | 16400 ml/kg (Equivalent or similar to OECD 402, 24 h, Rabbit, Experimental value, Dermal, 14 day(s))                          |
| LC50 inhalation rat (ppm) | > 10000 ppm (Equivalent or similar to OECD 403, 6 h, Rat, Male / female, Experimental value, Inhalation (vapours), 14 day(s)) |

|                                   |                                  |
|-----------------------------------|----------------------------------|
| Skin corrosion/irritation         | : Not classified                 |
| Serious eye damage/irritation     | : Causes serious eye irritation. |
| Respiratory or skin sensitisation | : Not classified                 |
| Germ cell mutagenicity            | : Not classified                 |
| Carcinogenicity                   | : Not classified                 |
| Reproductive toxicity             | : Not classified                 |

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STOT-single exposure : May cause drowsiness or dizziness.

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

| OrgoSol Buffer                                      |  |
|---|--|
| Viscosity, kinematic                                | 0.417 mm <sup>2</sup> /s   |
| Potential adverse human health effects and symptoms | : Odour tolerance may develop. Non-toxic if swallowed (LD50 oral, rat > 5000 mg/kg). Repeated exposure may cause skin dryness or cracking. Non-toxic in contact with skin (LD50 skin > 5000 mg/kg). May cause drowsiness or dizziness. Non-toxic by inhalation (LC50 inh, rat > 50 mg/l/4h). Slightly irritant to respiratory organs. Causes serious eye irritation. |

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008.

Ecology - air : Not included in the list of substances which may contribute to the greenhouse effect (IPCC). Not included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014). Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).

Ecology - water : Not harmful to crustacea. Not harmful to fishes. Inhibition of activated sludge. Not harmful to algae. Not harmful to plankton.

Acute aquatic toxicity : Not classified

Chronic aquatic toxicity : Not classified

| OrgoSol Buffer     |   |
|--------------------|---|
| LC50 fish 1        | 5540 mg/l (EU Method C.1, 96 h, <i>Salmo gairdneri</i> , Static system, Fresh water, Experimental value, Nominal concentration) |
| EC50 96h algae (1) | > 7000 mg/l ( <i>Selenastrum capricornutum</i> , Static system, Fresh water, Experimental value, Nominal concentration)         |

### hydrogen chloride, conc=36%, aqueous solution (7647-01-0)

|                |   |
|----------------|---|
| LC50 fish 1    | 282 mg/l (96 h, <i>Gambusia affinis</i> , Pure substance) |
| EC50 Daphnia 1 | < 56 mg/l (72 h, <i>Daphnia magna</i> , Pure substance)   |

### chloroform (67-66-3)

|               |   |
|---------------|---|
| LC50 fish 1   | 0.0024 mg/l (LC50; ASTM; 96 h; <i>Oncorhynchus mykiss</i> ; Flow-through system; Fresh water; Experimental value) |
| ErC50 (algae) | 13.3 mg/l (Other, 72 h, <i>Chlamydomonas reinhardtii</i> , Static system, Fresh water, Experimental value)        |

### Iso-amyl Alcohol (123-51-3)

|                    |   |
|--------------------|---|
| LC50 fish 1        | 700 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, <i>Salmo gairdneri</i> , Static system, Fresh water, Experimental value) |
| EC50 Daphnia 1     | 255 mg/l (DIN 38412-11, 48 h, <i>Daphnia magna</i> , Static system, Fresh water, Experimental value)                          |
| EC50 72h algae (1) | > 500 mg/l (DIN 38412-9, <i>Scenedesmus subspicatus</i> , Static system, Fresh water, Experimental value, Growth rate)        |

### acetone (67-64-1)

|                    |   |
|--------------------|---|
| LC50 fish 1        | 5540 mg/l (EU Method C.1, 96 h, <i>Salmo gairdneri</i> , Static system, Fresh water, Experimental value, Nominal concentration) |
| EC50 96h algae (1) | > 7000 mg/l ( <i>Selenastrum capricornutum</i> , Static system, Fresh water, Experimental value, Nominal concentration)         |

### 2-propanol (67-63-0)

|             |  |
|-------------|--|
| LC50 fish 1 | 9640 - 10000 mg/l (Equivalent or similar to OECD 203, 96 h, <i>Pimephales promelas</i> , Flow-through system, Fresh water, Experimental value, Lethal) |
|-------------|--|

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### 12.2. Persistence and degradability

| OrgoSol Buffer                  |  |
|---------------------------------|--|
| Persistence and degradability   | Readily biodegradable in water. Biodegradable in the soil. Biodegradable in the soil under anaerobic conditions. No (test)data on mobility of the substance available. |
| Biochemical oxygen demand (BOD) | 1.43 g O <sub>2</sub> /g substance   |
| Chemical oxygen demand (COD)    | 1.92 g O <sub>2</sub> /g substance   |
| ThOD                            | 2.2 g O <sub>2</sub> /g substance  |
| BOD (% of ThOD)                 | 0.872 (20 day(s), Literature study)  |

### hydrogen chloride, conc=36%, aqueous solution (7647-01-0)

|                               |                                   |
|-------------------------------|-----------------------------------|
| Persistence and degradability | Biodegradability: not applicable. |
| Chemical oxygen demand (COD)  | Not applicable                    |
| ThOD                          | Not applicable                    |
| BOD (% of ThOD)               | Not applicable                    |

### chloroform (67-66-3)

|                               |   |
|-------------------------------|---|
| Persistence and degradability | Non degradable in the soil. Not readily biodegradable in water. |
| ThOD                          | 0.33 - 1.35 g O <sub>2</sub> /g substance                       |
| BOD (% of ThOD)               | 0.015 - 0.06  |

### Iso-amyl Alcohol (123-51-3)

|                                 |                                    |
|---------------------------------|------------------------------------|
| Persistence and degradability   | Readily biodegradable in water.    |
| Biochemical oxygen demand (BOD) | 1.6 g O <sub>2</sub> /g substance  |
| Chemical oxygen demand (COD)    | 2.44 g O <sub>2</sub> /g substance |
| ThOD                            | 2.74 g O <sub>2</sub> /g substance |
| BOD (% of ThOD)                 | 0.59                               |

### acetone (67-64-1)

|                                 |  |
|---------------------------------|--|
| Persistence and degradability   | Biodegradable in the soil. Biodegradable in the soil under anaerobic conditions. Readily biodegradable in water. |
| Biochemical oxygen demand (BOD) | 1.43 g O <sub>2</sub> /g substance   |
| Chemical oxygen demand (COD)    | 1.92 g O <sub>2</sub> /g substance   |
| ThOD                            | 2.2 g O <sub>2</sub> /g substance  |
| BOD (% of ThOD)                 | 0.872 (20 day(s), Literature study)  |

### 2-propanol (67-63-0)

|                                 |  |
|---------------------------------|--|
| Persistence and degradability   | Biodegradable in the soil. Biodegradable in the soil under anaerobic conditions. Readily biodegradable in water. |
| Biochemical oxygen demand (BOD) | 1.19 g O <sub>2</sub> /g substance   |
| Chemical oxygen demand (COD)    | 2.23 g O <sub>2</sub> /g substance   |
| ThOD                            | 2.4 g O <sub>2</sub> /g substance  |

### 12.3. Bioaccumulative potential

| OrgoSol Buffer                |                              |
|-------------------------------|------------------------------|
| BCF fish 1                    | 0.69 (Pisces)                |
| BCF other aquatic organisms 1 | 3 (BCFWIN, Calculated value) |
| Log Pow                       | -0.24 (Test data)            |
| Bioaccumulative potential     | Not bioaccumulative.         |



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| <b>hydrogen chloride, conc=36%, aqueous solution (7647-01-0)</b> |  |
|--|--|
| Log Pow  | 0.25 (QSAR)                                      |
| Bioaccumulative potential  | Low potential for bioaccumulation (Log Kow < 4). |

| <b>chloroform (67-66-3)</b> |   |
|-----------------------------|---|
| BCF fish 1                  | 4.1 - 13 (OECD 305: Bioconcentration: Flow-Through Fish Test, 42 day(s), Cyprinus carpio, Flow-through system, Fresh water, Experimental value) |
| Log Pow                     | 1.97 (Experimental value, 20 °C)  |
| Bioaccumulative potential   | Low potential for bioaccumulation (BCF < 500).  |

| <b>Iso-amyl Alcohol (123-51-3)</b> |  |
|------------------------------------|--|
| Log Pow                            | 1.35 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method) |
| Bioaccumulative potential          | Low potential for bioaccumulation (Log Kow < 4).   |

| <b>acetone (67-64-1)</b>      |                              |
|-------------------------------|------------------------------|
| BCF fish 1                    | 0.69 (Pisces)                |
| BCF other aquatic organisms 1 | 3 (BCFWIN, Calculated value) |
| Log Pow                       | -0.24 (Test data)            |
| Bioaccumulative potential     | Not bioaccumulative.         |

| <b>2-propanol (67-63-0)</b> |  |
|-----------------------------|--|
| Log Pow                     | 0.05 (Weight of evidence approach, 25 °C)        |
| Bioaccumulative potential   | Low potential for bioaccumulation (Log Kow < 4). |

### 12.4. Mobility in soil

| <b>OrgoSol Buffer</b> |   |
|-----------------------|---|
| Surface tension       | 0.0237 N/m  |
| Ecology - soil        | No (test)data on mobility of the substance available. |

| <b>hydrogen chloride, conc=36%, aqueous solution (7647-01-0)</b> |  |
|--|--|
| Ecology - soil   | No (test)data on mobility of the components available. May be harmful to plant growth, blooming and fruit formation. |

| <b>chloroform (67-66-3)</b> |   |
|-----------------------------|---|
| Surface tension             | 0.0271 N/m (20 °C)  |
| Log Koc                     | 1.8 - 2.6 (log Koc, Other, Experimental value)  |
| Ecology - soil              | Low potential for adsorption in soil. May be harmful to plant growth, blooming and fruit formation. |

| <b>Iso-amyl Alcohol (123-51-3)</b> |   |
|------------------------------------|---|
| Surface tension                    | 0.024 N/m (20 °C)                       |
| Log Koc                            | 0.73 (log Koc, SRC PCKOCWIN v2.0, QSAR) |
| Ecology - soil                     | Highly mobile in soil.                  |

| <b>acetone (67-64-1)</b> |   |
|--------------------------|---|
| Surface tension          | 0.0237 N/m  |
| Ecology - soil           | No (test)data on mobility of the substance available. |

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|                             |  |
|-----------------------------|--|
| <b>2-propanol (67-63-0)</b> |  |
| Surface tension             | 0.021 N/m (25 °C)  |
| Log Koc                     | 0.185 - 0.541 (log Koc, SRC PCKOCWIN v2.0, Calculated value) |
| Ecology - soil              | Highly mobile in soil.                                       |

### 12.5. Results of PBT and vPvB assessment

|  |   |
|--|---|
| <b>OrgoSol Buffer</b>  |   |
| This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII  |   |
| This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII |   |
| <b>Component</b>   |   |
| acetone (67-64-1)  | This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII<br>This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII |

### 12.6. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

|  |  |
|--|--|
| Waste treatment methods                    | : Waste treatment methods.   |
| Product/Packaging disposal recommendations | : Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Recycle by distillation. Remove to an authorized waste incinerator for solvents with energy recovery. Do not discharge into drains or the environment. |
| Additional information                     | : Flammable vapours may accumulate in the container.   |
| European List of Waste (LoW) code          | : 15 01 10* - packaging containing residues of or contaminated by dangerous substances<br>07 01 04* - other organic solvents, washing liquids and mother liquors   |

## SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

### 14.1. UN number

|               |                 |
|---------------|-----------------|
| UN-No. (ADR)  | : Not regulated |
| UN-No. (IMDG) | : Not regulated |
| UN-No. (IATA) | : Not regulated |
| UN-No. (ADN)  | : UN 1090       |
| UN-No. (RID)  | : Not regulated |

### 14.2. UN proper shipping name

|                                      |                          |
|--------------------------------------|--------------------------|
| Proper Shipping Name (ADR)           | : Not regulated          |
| Proper Shipping Name (IMDG)          | : Not regulated          |
| Proper Shipping Name (IATA)          | : Not regulated          |
| Proper Shipping Name (ADN)           | : Acetone                |
| Proper Shipping Name (RID)           | : Not regulated          |
| Transport document description (ADN) | : UN 1090 Acetone, 3, II |

### 14.3. Transport hazard class(es)

|                                   |                 |
|-----------------------------------|-----------------|
| <b>ADR</b>                        |                 |
| Transport hazard class(es) (ADR)  | : Not regulated |
| <b>IMDG</b>                       |                 |
| Transport hazard class(es) (IMDG) | : Not regulated |
| <b>IATA</b>                       |                 |
| Transport hazard class(es) (IATA) | : Not regulated |
| <b>ADN</b>                        |                 |
| Transport hazard class(es) (ADN)  | : 3             |
| Danger labels (ADN)               | : 3             |

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### RID

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

### 14.4. Packing group

Packing group (ADR) : Not regulated

Packing group (IMDG) : Not regulated

Packing group (IATA) : Not regulated

Packing group (ADN) : II

Packing group (RID) : Not regulated

### 14.5. Environmental hazards

Dangerous for the environment : No

Marine pollutant : No

Other information : No supplementary information available

### 14.6. Special precautions for user

#### Overland transport

Not regulated

#### Transport by sea

Not regulated

#### Air transport

Not regulated

#### Inland waterway transport

Classification code (ADN) : F1

Carriage permitted (ADN) : T

#### Rail transport

Not regulated

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

Not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006:

| Reference code | Applicable on   |
|----------------|---|
| 3.             | Iso-amyl Alcohol ; hydrogen chloride, conc=36%, aqueous solution ; chloroform ; acetone |
| 3(a)           | Iso-amyl Alcohol ; acetone  |
| 3(b)           | Iso-amyl Alcohol ; hydrogen chloride, conc=36%, aqueous solution ; chloroform ; acetone |
| 32.            | chloroform  |
| 40.            | Iso-amyl Alcohol ; acetone  |

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

Substance(s) are not subject to Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC.

VOC content : 100 %

#### 15.1.2. National regulations

No additional information available

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

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### SECTION 16: Other information

| Full text of H- and EUH-statements: |  |
|-------------------------------------|--|
| Acute Tox. 3 (Inhalation)           | Acute toxicity (inhal.), Category 3  |
| Acute Tox. 4 (Inhalation)           | Acute toxicity (inhal.), Category 4  |
| Acute Tox. 4 (Oral)                 | Acute toxicity (oral), Category 4  |
| Aquatic Acute 1                     | Hazardous to the aquatic environment — Acute Hazard, Category 1                            |
| Carc. 2                             | Carcinogenicity, Category 2  |
| Eye Irrit. 2                        | Serious eye damage/eye irritation, Category 2  |
| Flam. Liq. 2                        | Flammable liquids, Category 2  |
| Flam. Liq. 3                        | Flammable liquids, Category 3  |
| Repr. 2                             | Reproductive toxicity, Category 2  |
| Skin Corr. 1A                       | Skin corrosion/irritation, Category 1A   |
| Skin Corr. 1B                       | Skin corrosion/irritation, Category 1B   |
| Skin Irrit. 2                       | Skin corrosion/irritation, Category 2  |
| STOT RE 1                           | Specific target organ toxicity — Repeated exposure, Category 1                             |
| STOT SE 3                           | Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation |
| STOT SE 3                           | Specific target organ toxicity — Single exposure, Category 3, Narcosis                     |
| H225                                | Highly flammable liquid and vapour.  |
| H226                                | Flammable liquid and vapour.   |
| H302                                | Harmful if swallowed.  |
| H314                                | Causes severe skin burns and eye damage.   |
| H315                                | Causes skin irritation.  |
| H319                                | Causes serious eye irritation.   |
| H331                                | Toxic if inhaled.  |
| H332                                | Harmful if inhaled.  |
| H335                                | May cause respiratory irritation.  |
| H336                                | May cause drowsiness or dizziness.   |
| H351                                | Suspected of causing cancer.   |
| H361d                               | Suspected of damaging the unborn child.  |
| H372                                | Causes damage to organs through prolonged or repeated exposure.                            |
| H400                                | Very toxic to aquatic life.  |

Safety Data Sheet applicable for regions

: GB - United Kingdom

SDS EU (REACH Annex II)

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*