SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier: KB-03-008 Reagent A

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

Relevant uses: Research use. For professional user only.

Uses advised against: All uses not specified in this section or in section 7.3

1.3 Details of the supplier of the safety data sheet:

BIOQUOCHEM S.L.
Edificio CEEI. Parque Tecnológico de Asturias
33428 Llanera - Asturias - España
Phone.: 985269292
hmuno@bioquochem.com
http://www.bqckit.com

1.4 Emergency telephone number: +34985269292 (9:00-19:00 UTC+1h; M-F)

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:

CLP Regulation (EC) No 1272/2008:
Classification of this product has been carried out in accordance with CLP Regulation (EC) No 1272/2008.

Eye Irrit. 2: Eye irritation, Category 2, H319
Skin Irrit. 2: Skin irritation, Category 2, H315
STOT SE 3: Respiratory tract toxicity, single exposure, Category 3, H335

2.2 Label elements:

CLP Regulation (EC) No 1272/2008:
Warning

Eye Irrit. 2: H319 - Causes serious eye irritation
Skin Irrit. 2: H315 - Causes skin irritation
STOT SE 3: H335 - May cause respiratory irritation

Precautionary statements:

P264: Wash thoroughly after handling
P271: Use only outdoors or in a well-ventilated area
P280: Wear protective gloves/protective clothing/eye protection/face protection
P302+P352: IF ON SKIN: Wash with plenty of water
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
P403+P233: Store in a well-ventilated place. Keep container tightly closed
P501: Dispose of contents and / or containers in accordance with regulations on hazardous waste or packaging and packaging waste respectively

Substances that contribute to the classification

Hydrochloric acid

2.3 Other hazards:

Product fails to meet PBT/vPvB criteria

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance:
Non-applicable

3.2 Mixture:

Chemical description: Aqueous solution of organic and inorganic compounds, glycol-ethers, surfactants, enzymes and colourants.

Components:
SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS (continued)

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

<table>
<thead>
<tr>
<th>Identification</th>
<th>Chemical name/Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS: Non-applicable</td>
<td>Hydrochloric acid</td>
<td>ATP CLP00</td>
</tr>
<tr>
<td>EC: 231-595-7</td>
<td>Regulation 1272/2008</td>
<td>10 - &lt;25 %</td>
</tr>
<tr>
<td>Index: 017-002-01-X</td>
<td>Skin Corr. 1B: H314; STOT SE 3: H335 - Danger</td>
<td></td>
</tr>
<tr>
<td>REACH 01-211948462-27-XXXX</td>
<td>¹</td>
<td></td>
</tr>
</tbody>
</table>

¹ Substances presenting a health or environmental hazard which meet criteria laid down in Regulation (EU) No. 2015/830

To obtain more information on the risk of the substances consult sections 8, 11, 12, 15 and 16.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures:

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

By inhalation:

Remove the person affected from the area of exposure, provide with fresh air and keep at rest. In serious cases such as cardiorespiratory failure, artificial resuscitation techniques will be necessary (mouth to mouth resuscitation, cardiac massage, oxygen supply, etc.) requiring immediate medical assistance.

By skin contact:

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

By eye contact:

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

By ingestion/aspiration:

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

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

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

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

Non-applicable

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media:

Product is non-flammable under normal conditions of storage, handling and use. In the case of combustion as a result of improper handling, storage or use preferably use polyvalent powder extinguishers (ABC powder), in accordance with the Regulation on fire protection systems. IT IS NOT RECOMMENDED to use tap water as an extinguishing agent.

5.2 Special hazards arising from the substance or mixture:

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

5.3 Advice for firefighters:

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

Additional provisions:

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

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

- CONTINUED ON NEXT PAGE -
SECTION 6: ACCIDENTAL RELEASE MEASURES (continued)

Isolate leaks provided that there is no additional risk for the people performing this task. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Evacuate the area and keep out those who do not have protection.

6.2 Environmental precautions:
This product is not classified as hazardous to the environment. Keep product away from drains, surface and ground water.

6.3 Methods and material for containment and cleaning up:
It is recommended:
Absorb the spillage using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. For any concern related to disposal consult section 13.

6.4 Reference to other sections:
See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

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

B.- Technical recommendations for the prevention of fires and explosions
Product is non-flammable under normal conditions of storage, handling and use. It is recommended to transfer at slow speeds to avoid the generation of electrostatic charges that can affect flammable products. Consult section 10 for information on conditions and materials that should be avoided.

C.- Technical recommendations to prevent ergonomic and toxicological risks
Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

D.- Technical recommendations to prevent environmental risks
It is recommended to have absorbent material available at close proximity to the product (See subsection 6.3)

7.2 Conditions for safe storage, including any incompatibilities:
A.- Technical measures for storage
Minimum Temp.: 5 °C
Maximum Temp.: 30 °C
Maximum time: 6 Months

B.- General conditions for storage
Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

7.3 Specific end use(s):
Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters:
Substances whose occupational exposure limits have to be monitored in the work environment
There are no occupational exposure limits for the substances contained in the product

<table>
<thead>
<tr>
<th>Identification</th>
<th>Short exposure</th>
<th>Long exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Systemic</td>
<td>Local</td>
</tr>
<tr>
<td>Hydrochloric acid</td>
<td>Oral</td>
<td>Non-applicable</td>
</tr>
<tr>
<td>CAS: Non-applicable</td>
<td>Dermal</td>
<td>Non-applicable</td>
</tr>
<tr>
<td>EC: 231-595-7</td>
<td>Inhalation</td>
<td>Non-applicable</td>
</tr>
</tbody>
</table>

DNEL (Workers):

<table>
<thead>
<tr>
<th>Identification</th>
<th>Short exposure</th>
<th>Long exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Systemic</td>
<td>Local</td>
</tr>
<tr>
<td>Hydrochloric acid</td>
<td>Oral</td>
<td>Non-applicable</td>
</tr>
<tr>
<td>CAS: Non-applicable</td>
<td>Dermal</td>
<td>Non-applicable</td>
</tr>
<tr>
<td>EC: 231-595-7</td>
<td>Inhalation</td>
<td>Non-applicable</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Identification</th>
<th>Short exposure</th>
<th>Long exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Systemic</td>
<td>Local</td>
</tr>
<tr>
<td>Hydrochloric acid</td>
<td>Oral</td>
<td>Non-applicable</td>
</tr>
<tr>
<td>CAS: Non-applicable</td>
<td>Dermal</td>
<td>Non-applicable</td>
</tr>
<tr>
<td>EC: 231-595-7</td>
<td>Inhalation</td>
<td>Non-applicable</td>
</tr>
</tbody>
</table>

DNEL (General population):
Non-applicable

PNEC:
### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

<table>
<thead>
<tr>
<th>Identification</th>
<th>STP</th>
<th>Fresh water</th>
<th>Oral</th>
<th>Sediment (Marine water)</th>
<th>Sediment (Fresh water)</th>
<th>Soil</th>
<th>Marine water</th>
<th>Non-applicable</th>
<th>Non-applicable</th>
<th>Non-applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrochloric acid</td>
<td>0,036 mg/L</td>
<td>Non-applicable</td>
<td>0,036 mg/L</td>
<td>Non-applicable</td>
<td>Non-applicable</td>
<td>0,045 mg/L</td>
<td>0,036 mg/L</td>
<td>Non-applicable</td>
<td>Non-applicable</td>
<td>Non-applicable</td>
</tr>
<tr>
<td>CAS: Non-applicable</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EC: 231-595-7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### 8.2 Exposure controls:

A. - General security and hygiene measures in the workplace

As a preventative measure it is recommended to use basic Personal Protective Equipment, with the corresponding <<CE marking>> in accordance with Directive 89/686/EC. For more information on Personal Protective Equipment (storage, use, cleaning, maintenance, class of protection,…) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1.

All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

B. - Respiratory protection

<table>
<thead>
<tr>
<th>Pictogram</th>
<th>PPE</th>
<th>Labelling</th>
<th>CEN Standard</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td><a href="image">Mandatory respiratory tract protection</a></td>
<td>Filter mask for gases and vapours</td>
<td>EN 405:2001+A1:2009</td>
<td>Replace when there is a taste or smell of the contaminant inside the face mask. If the contaminant comes with warnings it is recommended to use isolation equipment.</td>
<td></td>
</tr>
</tbody>
</table>

#### C. - Specific protection for the hands

<table>
<thead>
<tr>
<th>Pictogram</th>
<th>PPE</th>
<th>Labelling</th>
<th>CEN Standard</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td><a href="image">Mandatory hand protection</a></td>
<td>Protective gloves against minor risks</td>
<td>EN 405:2001+A1:2009</td>
<td>Replace gloves in case of any sign of damage. For prolonged periods of exposure to the product for professional users/industrials, we recommend using CE III gloves in line with standards EN 420 and EN 374.</td>
<td></td>
</tr>
</tbody>
</table>

"As the product is a mixture of several substances, the resistance of the glove material can not be predicted in advance with total reliability and has therefore to be checked prior to the application"

D. - Ocular and facial protection

<table>
<thead>
<tr>
<th>Pictogram</th>
<th>PPE</th>
<th>Labelling</th>
<th>CEN Standard</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td><a href="image">Mandatory face protection</a></td>
<td>Panoramic glasses against splash/projections.</td>
<td>EN 166:2001 EN ISO 4007:2012</td>
<td>Clean daily and disinfect periodically according to the manufacturer’s instructions. Use if there is a risk of splashing.</td>
<td></td>
</tr>
</tbody>
</table>

E. - Body protection

<table>
<thead>
<tr>
<th>Pictogram</th>
<th>PPE</th>
<th>Labelling</th>
<th>CEN Standard</th>
<th>Remarks</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Pictogram</th>
<th>PPE</th>
<th>Labelling</th>
<th>CEN Standard</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td><a href="image">Anti-slip work shoes</a></td>
<td>Anti-slip work shoes</td>
<td>EN ISO 20347:2012</td>
<td>Replace before any evidence of deterioration. For periods of prolonged exposure to the product for professional/industrial users CE III is recommended, in accordance with the regulations in EN ISO 20345 y EN 13832-1</td>
<td></td>
</tr>
</tbody>
</table>

F. - Additional emergency measures

<table>
<thead>
<tr>
<th>Emergency measure</th>
<th>Standards</th>
<th>Emergency measure</th>
<th>Standards</th>
</tr>
</thead>
</table>

#### Environmental exposure controls:

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

#### Volatile organic compounds:
SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

With regard to Directive 2010/75/EU, this product has the following characteristics:

- V.O.C. (Supply): 0 % weight
- V.O.C. density at 20 °C: 0 kg/m³ (0 g/L)
- Average carbon number: Non-applicable
- Average molecular weight: Non-applicable

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

For complete information see the product datasheet.

Appearance:
- Physical state at 20 °C: Liquid
- Appearance: Not available
- Colour: Not available
- Odour: Not available
- Odour threshold: Non-applicable *

Vapour pressure at 20 °C: Non-applicable *
Vapour pressure at 50 °C: <300000 Pa (300 kPa)
Evaporation rate at 20 °C: Non-applicable *

Product description:
- Density at 20 °C: 1113 kg/m³
- Relative density at 20 °C: 1.113
- Dynamic viscosity at 20 °C: Non-applicable *
- Kinematic viscosity at 20 °C: Non-applicable *
- Kinematic viscosity at 40 °C: Non-applicable *
- Concentration: Non-applicable *
- pH: Non-applicable *
- Vapour density at 20 °C: Non-applicable *
- Partition coefficient n-octanol/water 20 °C: Non-applicable *
- Solubility in water at 20 °C: Non-applicable *
- Solubility properties: Non-applicable *
- Decomposition temperature: Non-applicable *
- Melting point/freezing point: Non-applicable *
- Explosive properties: Non-applicable *
- Oxidising properties: Non-applicable *

Flammability:
- Flash Point: Non Flammable (>60 °C)
- Flammability (solid, gas): Non-applicable *
- Autoignition temperature: Non-applicable *
- Lower flammability limit: Non-applicable *
- Upper flammability limit: Non-applicable *

Explosive:
- Lower explosive limit: Non-applicable *

*Not relevant due to the nature of the product, not providing information property of its hazards.
**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper explosive limit</td>
<td>Non-applicable *</td>
</tr>
<tr>
<td>Surface tension at 20 °C</td>
<td>Non-applicable *</td>
</tr>
<tr>
<td>Refraction index</td>
<td>Non-applicable *</td>
</tr>
</tbody>
</table>

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

**SECTION 10: STABILITY AND REACTIVITY**

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

10.2 **Chemical stability:**
Chemically stable under the conditions of storage, handling and use.

10.3 **Possibility of hazardous reactions:**
Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

10.4 **Conditions to avoid:**
Applicable for handling and storage at room temperature:

<table>
<thead>
<tr>
<th>Condition</th>
<th>Reactivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shock and friction</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Contact with air</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Increase in temperature</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Sunlight</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Humidity</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

10.5 **Incompatible materials:**

<table>
<thead>
<tr>
<th>Incompatible with acid</th>
<th>Water</th>
<th>Combustive materials</th>
<th>Combustible materials</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acids</td>
<td>Water</td>
<td>Combustive materials</td>
<td>Combustible materials</td>
<td>Others</td>
</tr>
<tr>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Precaution</td>
<td>Not applicable</td>
<td>Avoid alkalies or strong bases</td>
</tr>
</tbody>
</table>

10.6 **Hazardous decomposition products:**
See subsection 10.5, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO2), carbon monoxide and other organic compounds.

**SECTION 11: TOXICOLOGICAL INFORMATION**

11.1 **Information on toxicological effects:**
The experimental information related to the toxicological properties of the product itself is not available.

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

A- **Ingestion (acute effect):**
- Acute toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for consumption. For more information see section 3.
- Corrosivity/Irritability: The consumption of a considerable dose can cause irritation in the throat, abdominal pain, nausea and vomiting.

B- **Inhalation (acute effect):**
- Acute toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for inhalation. For more information see section 3.
- Corrosivity/Irritability: Causes irritation in respiratory passages, which is normally reversible and limited to the upper respiratory passages.

C- **Contact with the skin and the eyes (acute effect):**
- Contact with the skin: Produces skin inflammation.
- Contact with the eyes: Produces eye damage after contact.

D- **CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):**
- Carcinogenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for the effects mentioned. For more information see section 3.
- Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
- Reproductive toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
### SECTION 11: TOXICOLOGICAL INFORMATION (continued)

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

**F- Specific target organ toxicity (STOT) - single exposure:**
Causes irritation in respiratory passages, which is normally reversible and limited to the upper respiratory passages.

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

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

**Other information:**
Non-applicable

**Specific toxicology information on the substances:**
Not available

### SECTION 12: ECOLOGICAL INFORMATION

The experimental information related to the eco-toxicological properties of the product itself is not available

**12.1 Toxicity:**
Not available

**12.2 Persistence and degradability:**
Not available

**12.3 Bioaccumulative potential:**
Not available

**12.4 Mobility in soil:**
Not available

**12.5 Results of PBT and vPvB assessment:**
Product fails to meet PBT/vPvB criteria

**12.6 Other adverse effects:**
Not described

### SECTION 13: DISPOSAL CONSIDERATIONS

**13.1 Waste treatment methods:**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Waste class (Regulation (EU) No 1357/2014)</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 05 06*</td>
<td>Laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals</td>
<td>Dangerous</td>
</tr>
</tbody>
</table>

**Type of waste (Regulation (EU) No 1357/2014):**
HP8 Corrosive

**Waste management (disposal and evaluation):**
Consult the authorized waste service manager on the assessment and disposal operations in accordance with Annex 1 and Annex 2 (Directive 2008/98/EC). As under 15 01 (2014/955/EC) of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. We do not recommended disposal down the drain. See paragraph 6.2.
SECTION 13: DISPOSAL CONSIDERATIONS (continued)

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

SECTION 14: TRANSPORT INFORMATION

This product is not regulated for transport (ADR/RID, IMDG, IATA)

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:
Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Non-applicable
Substances included in Annex XIV of REACH (*Authorisation List*) and sunset date: Non-applicable
Regulation (EC) No 1005/2009, about substances that deplete the ozone layer: Non-applicable
Article 95, REGULATION (EU) No 528/2012: Hydrochloric acid (Product-type 2)
REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Non-applicable

Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII REACH, etc ...):
Non-applicable

Specific provisions in terms of protecting people or the environment:
It is recommended to use the information included in this safety data sheet as a basis for conducting workplace-specific risk assessments in order to establish the necessary risk prevention measures for the handling, use, storage and disposal of this product.

Other legislation:
The product could be affected by sectorial legislation

15.2 Chemical safety assessment:
The supplier has not carried out evaluation of chemical safety.

SECTION 16: OTHER INFORMATION

Legislation related to safety data sheets:
This safety data sheet has been designed in accordance with ANNEX II Guide to the compilation of safety data sheets of Regulation (EC) No 1907/2006 (Regulation (EC) No 2015/830)

Modifications related to the previous Safety Data Sheet which concerns the ways of managing risks.:
Non-applicable

Texts of the legislative phrases mentioned in section 2:
H315: Causes skin irritation
H335: May cause respiratory irritation
H319: Causes serious eye irritation

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

CLP Regulation (EC) No 1272/2008:
Skin Corr. 1B: H314 - Causes severe skin burns and eye damage
STOT SE 3: H335 - May cause respiratory irritation

Classification procedure:
Skin Irrit. 2: Calculation method
STOT SE 3: Calculation method
Eye Irrit. 2: Calculation method

Advice related to training:
Minimal training is recommended in order to prevent industrial risks for staff using this product and to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

Principal bibliographical sources:

- CONTINUED ON NEXT PAGE -

Page 8/9
Abbreviations and acronyms:
ADR: European agreement concerning the international carriage of dangerous goods by road
IMDG: International maritime dangerous goods code
IATA: International Air Transport Association
ICAO: International Civil Aviation Organisation
COD: Chemical Oxygen Demand
BOD5: 5-day biochemical oxygen demand
BCF: Bioconcentration factor
LD50: Lethal Dose 50
LC50: Lethal Concentration 50
EC50: Effective concentration 50
Log-POW: Octanol–water partition coefficient
Koc: Partition coefficient of organic carbon
**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

1.1 **Product identifier:** KB-03-008 Reagent B

   CAS: Non-applicable
   EC: 231-595-7
   Index: 017-002-01-X
   REACH: 01-2119484862-27-XXXX

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

   Relevant uses: Research use. For professional user only.

   Uses advised against: All uses not specified in this section or in section 7.3

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

   BIOQUOCHEM S.L.
   Edificio CEEI. Parque Tecnológico de Asturias
   33428 Llanera - Asturias - España
   Phone.: 985269292
   hmunoz@bioquochem.com
   http://www.bqckit.com

1.4 **Emergency telephone number:** +34985269292 (9:00-19:00 UTC+1h; M-F)

**SECTION 2: HAZARDS IDENTIFICATION**

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

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

   Classification of this product has been carried out in accordance with CLP Regulation (EC) No 1272/2008.
   Skin Corr. 1B: Skin corrosion, Category 1B, H314
   STOT SE 3: Respiratory tract toxicity, single exposure, Category 3, H335

2.2 **Label elements:**

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

   Danger

   **Hazard statements:**

   Skin Corr. 1B: H314 - Causes severe skin burns and eye damage
   STOT SE 3: H335 - May cause respiratory irritation

   **Precautionary statements:**

   P271: Use only outdoors or in a well-ventilated area
   P280: Wear protective gloves/protective clothing/eye protection/face protection
   P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
   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
   P310: Immediately call a poison center/doctor
   P403+P233: Store in a well-ventilated place. Keep container tightly closed
   P501: Dispose of contents and/or containers in accordance with regulations on hazardous waste or packaging and packaging waste respectively

2.3 **Other hazards:**

   Product fails to meet PBT/vPvB criteria

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

3.1 **Substance:**

   **Chemical description:** Aqueous solution of organic and inorganic compounds, glycol-ethers, surfactants, enzymes and colourants.

   **Components:**

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

<table>
<thead>
<tr>
<th>Identification</th>
<th>Chemical name/Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS: Non-applicable</td>
<td>Hydrochloric acid</td>
<td>ATP CLP00</td>
</tr>
<tr>
<td>EC: 251-595-7</td>
<td>ATP</td>
<td>100 %</td>
</tr>
<tr>
<td>Index: 017-002-01-X</td>
<td>Regulation 1272/2008</td>
<td>Skin Corr. 1B: H314; STOT SE 3: H335 - Danger</td>
</tr>
</tbody>
</table>

To obtain more information on the risk of the substances consult sections 8, 11, 12, 15 and 16.

### 3.2 Mixture:

Non-applicable

### SECTION 4: FIRST AID MEASURES

#### 4.1 Description of first aid measures:

Request medical assistance immediately, showing the SDS of this product.

**By inhalation:**

Remove the person affected from the area of exposure, provide with fresh air and keep at rest. In serious cases such as cardiorespiratory failure, artificial resuscitation techniques will be necessary (mouth to mouth resuscitation, cardiac massage, oxygen supply, etc.) requiring immediate medical assistance.

**By skin contact:**

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

**By eye contact:**

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

**By ingestion/aspiration:**

Request immediate medical assistance, showing the SDS of this product.

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

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

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

Non-applicable

### SECTION 5: FIREFIGHTING MEASURES

#### 5.1 Extinguishing media:

Product is non-flammable under normal conditions of storage, handling and use. In the case of combustion as a result of improper handling, storage or use preferably use polyvalent powder extinguishers (ABC powder), in accordance with the Regulation on fire protection systems. IT IS NOT RECOMMENDED to use tap water as an extinguishing agent.

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

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

#### 5.3 Advice for firefighters:

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

**Additional provisions:**

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

- CONTINUED ON NEXT PAGE -
SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:
Isolate leaks provided that there is no additional risk for the people performing this task. Personal protection equipment must be used against potential contact with the spill product (See section 8). Evacuate the area and keep out those who do not have protection.

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

6.3 Methods and material for containment and cleaning up:
It is recommended:
Absorb the spillage using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. For any concern related to disposal consult section 13.

6.4 Reference to other sections:
See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:
A.- Precautions for safe manipulation
Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.
B.- Technical recommendations for the prevention of fires and explosions
Product is non-flammable under normal conditions of storage, handling and use. It is recommended to transfer at slow speeds to avoid the generation of electrostatic charges that can affect flammable products. Consult section 10 for information on conditions and materials that should be avoided.
C.- Technical recommendations to prevent ergonomic and toxicological risks
Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.
D.- Technical recommendations to prevent environmental risks
It is recommended to have absorbent material available at close proximity to the product (See subsection 6.3)

7.2 Conditions for safe storage, including any incompatibilities:
A.- Technical measures for storage
Minimum Temp.: 5 °C
Maximum Temp.: 30 °C
Maximum time: 6 Months
B.- General conditions for storage
Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

7.3 Specific end use(s):
Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters:
Substances whose occupational exposure limits have to be monitored in the work environment
There are no occupational exposure limits for the substances contained in the product

DNEL (Workers):

<table>
<thead>
<tr>
<th>Identification</th>
<th>Short exposure</th>
<th>Long exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Systemic</td>
<td>Local</td>
</tr>
<tr>
<td>Hydrochloric acid</td>
<td>Oral</td>
<td>Non-applicable</td>
</tr>
<tr>
<td>CAS: Non-applicable</td>
<td>Dermal</td>
<td>Non-applicable</td>
</tr>
<tr>
<td>EC: 231-595-7</td>
<td>Inhalation</td>
<td>Non-applicable</td>
</tr>
</tbody>
</table>

DNEL (General population):
Non-applicable
## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

### PNEC:

<table>
<thead>
<tr>
<th>Identification</th>
<th>STP</th>
<th>Sediment (Marine water)</th>
<th>Sediment (Fresh water)</th>
<th>Marine water</th>
<th>Oral</th>
<th>Soil</th>
<th>Non-applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrochloric acid</td>
<td>0.036 mg/L</td>
<td></td>
<td></td>
<td></td>
<td>0.036 mg/L</td>
<td>Non-applicable</td>
<td></td>
</tr>
<tr>
<td>CAS: Non-applicable</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Non-applicable</td>
</tr>
<tr>
<td>EC: 231-595-7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Non-applicable</td>
</tr>
</tbody>
</table>

### 8.2 Exposure controls:

#### A. General security and hygiene measures in the work place

As a preventative measure it is recommended to use basic Personal Protective Equipment, with the corresponding <<CE marking>> in accordance with Directive 89/686/EC. For more information on Personal Protective Equipment (storage, use, cleaning, maintenance, class of protection, …) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1.

All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

#### B. Respiratory protection

<table>
<thead>
<tr>
<th>Pictogram</th>
<th>PPE</th>
<th>Labelling</th>
<th>CEN Standard</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Filter mask for gases and vapours</td>
<td>EN 405:2001+A1:2009</td>
<td>Replace when there is a taste or smell of the contaminant inside the face mask. If the contaminant comes with warnings it is recommended to use isolation equipment.</td>
<td></td>
</tr>
</tbody>
</table>

#### C. Specific protection for the hands

<table>
<thead>
<tr>
<th>Pictogram</th>
<th>PPE</th>
<th>Labelling</th>
<th>CEN Standard</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NON-disposable chemical protective gloves</td>
<td>EN 374-1:2003, EN 374-3:2003/AC:2006, EN 420:2003+A1:2009</td>
<td>The Breakthrough Time indicated by the manufacturer must exceed the period during which the product is being used. Do not use protective creams after the product has come into contact with skin.</td>
<td></td>
</tr>
</tbody>
</table>

#### D. Ocular and facial protection

<table>
<thead>
<tr>
<th>Pictogram</th>
<th>PPE</th>
<th>Labelling</th>
<th>CEN Standard</th>
<th>Remarks</th>
</tr>
</thead>
</table>

#### E. Body protection

<table>
<thead>
<tr>
<th>Pictogram</th>
<th>PPE</th>
<th>Labelling</th>
<th>CEN Standard</th>
<th>Remarks</th>
</tr>
</thead>
</table>

#### F. Additional emergency measures

<table>
<thead>
<tr>
<th>Emergency measure</th>
<th>Standards</th>
<th>Emergency measure</th>
<th>Standards</th>
</tr>
</thead>
</table>

### Environmental exposure controls:

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

### Volatile organic compounds:
### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

With regard to Directive 2010/75/EU, this product has the following characteristics:

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>V.O.C. (Supply)</td>
<td>0 % weight</td>
</tr>
<tr>
<td>V.O.C. density at 20 °C</td>
<td>0 kg/m³ (0 g/L)</td>
</tr>
<tr>
<td>Average carbon number</td>
<td>Non-applicable</td>
</tr>
<tr>
<td>Average molecular weight</td>
<td>Non-applicable</td>
</tr>
</tbody>
</table>

### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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

For complete information see the product datasheet.

**Appearance:**
- Physical state at 20 °C: Liquid
- Appearance: Not available
- Colour: Not available
- Odour: Not available
- Odour threshold: Non-applicable *

**Vapour pressure at 20 °C:** Non-applicable *
- Vapour pressure at 50 °C: <300000 Pa (300 kPa)
- Evaporation rate at 20 °C: Non-applicable *

**Density at 20 °C:** 1650 kg/m³
- Relative density at 20 °C: 1.65
- Dynamic viscosity at 20 °C: Non-applicable *
- Kinematic viscosity at 20 °C: Non-applicable *
- Kinematic viscosity at 40 °C: Non-applicable *
- Concentration: Non-applicable *
- pH: Non-applicable *
- Vapour density at 20 °C: Non-applicable *
- Partition coefficient n-octanol/water 20 °C: Non-applicable *
- Solubility in water at 20 °C: Non-applicable *
- Solubility properties: Non-applicable *
- Decomposition temperature: Non-applicable *
- Melting point/freezing point: Non-applicable *
- Explosive properties: Non-applicable *
- Oxidising properties: Non-applicable *

**Flash Point:** Non Flammable (>60 °C)

**Flammability (solid, gas):** Non-applicable *

**Autoignition temperature:** Non-applicable *

**Lower flammability limit:** Non-applicable *

**Upper flammability limit:** Non-applicable *

**Explosive:**
- Lower explosive limit: Non-applicable *

*Not relevant due to the nature of the product, not providing information property of its hazards.*
SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)

<table>
<thead>
<tr>
<th>9.2 Other information:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper explosive limit:</td>
<td>Non-applicable *</td>
</tr>
<tr>
<td>Surface tension at 20 ºC:</td>
<td>Non-applicable *</td>
</tr>
<tr>
<td>Refraction index:</td>
<td>Non-applicable *</td>
</tr>
</tbody>
</table>

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

SECTION 10: STABILITY AND REACTIVITY

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

10.2 Chemical stability:
Chemically stable under the conditions of storage, handling and use.

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

10.4 Conditions to avoid:
Applicable for handling and storage at room temperature:

<table>
<thead>
<tr>
<th>Shock and friction</th>
<th>Contact with air</th>
<th>Increase in temperature</th>
<th>Sunlight</th>
<th>Humidity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

10.5 Incompatible materials:

<table>
<thead>
<tr>
<th>Acids</th>
<th>Water</th>
<th>Combustive materials</th>
<th>Combustible materials</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Precaution</td>
<td>Not applicable</td>
<td>Avoid alkalies or strong bases</td>
</tr>
</tbody>
</table>

10.6 Hazardous decomposition products:
See subsection 10.5, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO2), carbon monoxide and other organic compounds.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:
The experimental information related to the toxicological properties of the product itself is not available.

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

A- Ingestion (acute effect):
- Acute toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for consumption. For more information see section 3.
- Corrosivity/Irritability: Corrosive product, if it is swallowed causes burns destroying the tissues. For more information about secondary effects from skin contact see section 2.

B- Inhalation (acute effect):
- Acute toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for inhalation. For more information see section 3.
- Corrosivity/Irritability: Prolonged inhalation of the product is corrosive to mucous membranes and the upper respiratory tract.

C- Contact with the skin and the eyes (acute effect):
- Contact with the skin: Above all, skin contact may occur as fabrics of all thicknesses can be destroyed, resulting in burns. For more information on the secondary effects see section 2.
- Contact with the eyes: Produces serious eye damage after contact.

D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):
- Carcinogenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for the effects mentioned. For more information see section 3.
- Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
- Reproductive toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
SECTION 11: TOXICOLOGICAL INFORMATION (continued)

E- Sensitizing effects:
  - Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous with sensitising effects. For more information see section 3.
  - Cutaneous: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
F- Specific target organ toxicity (STOT) - single exposure:
  Causes irritation in respiratory passages, which is normally reversible and limited to the upper respiratory passages.
G- Specific target organ toxicity (STOT)-repeated exposure:
  - Specific target organ toxicity (STOT)-repeated exposure: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
  - Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
H- Aspiration hazard:
  Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
Other information:
Non-applicable
Specific toxicology information on the substances:
Not available

SECTION 12: ECOLOGICAL INFORMATION

The experimental information related to the eco-toxicological properties of the product itself is not available

12.1 Toxicity:
Not available

12.2 Persistence and degradability:
Not available

12.3 Bioaccumulative potential:
Not available

12.4 Mobility in soil:
Not available

12.5 Results of PBT and vPvB assessment:
Product fails to meet PBT/vPvB criteria

12.6 Other adverse effects:
Not described

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Waste class (Regulation (EU) No 1357/2014)</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 05 06*</td>
<td>Laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals</td>
<td>Dangerous</td>
</tr>
</tbody>
</table>

Type of waste (Regulation (EU) No 1357/2014):
HP5 Specific Target Organ Toxicity (STOT)/Aspiration Toxicity, HP8 Corrosive

Waste management (disposal and evaluation):
Consult the authorized waste service manager on the assessment and disposal operations in accordance with Annex 1 and Annex 2 (Directive 2008/98/EC). As under 15 01 (2014/955/EC) of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. We do not recommended disposal down the drain. See paragraph 6.2.
SECTION 13: DISPOSAL CONSIDERATIONS (continued)

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

SECTION 14: TRANSPORT INFORMATION

Transport of dangerous goods by land:
With regard to ADR 2017 and RID 2017:

14.1 UN number: UN1789
14.2 UN proper shipping name: HYDROCHLORIC ACID
14.3 Transport hazard class(es): 8
   Labels: 8
14.4 Packing group: II
14.5 Environmental hazards: No
14.6 Special precautions for user
   Special regulations: 520
   Tunnel restriction code: E
   Physico-Chemical properties: see section 9
   Limited quantities: 1 L
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code: Non-applicable

Transport of dangerous goods by sea:
With regard to IMDG 38-16:

14.1 UN number: UN1789
14.2 UN proper shipping name: HYDROCHLORIC ACID
14.3 Transport hazard class(es): 8
   Labels: 8
14.4 Packing group: II
14.5 Environmental hazards: No
14.6 Special precautions for user
   Special regulations: Non-applicable
   EmS Codes: F-A, S-B
   Physico-Chemical properties: see section 9
   Limited quantities: 1 L
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code: Non-applicable

Transport of dangerous goods by air:
With regard to IATA/ICAO 2017:

14.1 UN number: UN1789
14.2 UN proper shipping name: HYDROCHLORIC ACID
14.3 Transport hazard class(es): 8
   Labels: 8
14.4 Packing group: II
14.5 Environmental hazards: No
14.6 Special precautions for user
   Physico-Chemical properties: see section 9
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code: Non-applicable

SECTION 15: REGULATORY INFORMATION

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

- CONTINUED ON NEXT PAGE -
SECTION 15: REGULATORY INFORMATION (continued)

Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Non-applicable
Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Non-applicable
Regulation (EC) No 1005/2009, about substances that deplete the ozone layer: Non-applicable
Article 95, REGULATION (EU) No 528/2012: Hydrochloric acid (Product-type 2)
REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Non-applicable

Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII REACH, etc.….): Non-applicable

Specific provisions in terms of protecting people or the environment:
It is recommended to use the information included in this safety data sheet as a basis for conducting workplace-specific risk assessments in order to establish the necessary risk prevention measures for the handling, use, storage and disposal of this product.

Other legislation:
The product could be affected by sectorial legislation

15.2 Chemical safety assessment:
The supplier has not carried out evaluation of chemical safety.

SECTION 16: OTHER INFORMATION

Legislation related to safety data sheets:
This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) No 1907/2006 (Regulation (EC) No 2015/830)

Modifications related to the previous Safety Data Sheet which concerns the ways of managing risks.: Non-applicable

Texts of the legislative phrases mentioned in section 2:
H314: Causes severe skin burns and eye damage
H335: May cause respiratory irritation

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

CLP Regulation (EC) No 1272/2008:
Skin Corr. 1B: H314 - Causes severe skin burns and eye damage
STOT SE 3: H335 - May cause respiratory irritation

Advice related to training:
Minimal training is recommended in order to prevent industrial risks for staff using this product and to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

Principal bibliographical sources:
http://echa.europa.eu
http://eur-lex.europa.eu

Abbreviations and acronyms:
ADR: European agreement concerning the international carriage of dangerous goods by road
IMDG: International maritime dangerous goods code
IATA: International Air Transport Association
ICAO: International Civil Aviation Organisation
COD: Chemical Oxygen Demand
BOD5: 5-day biochemical oxygen demand
BCF: Bioconcentration factor
LD50: Lethal Dose 50
LC50: Lethal Concentration 50
EC50: Effective concentration 50
Log-POW: Octanol–water partition coefficient
Koc: Partition coefficient of organic carbon

The information contained in this safety data sheet is based on sources, technical knowledge and current legislation at European and state level, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product, it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within our awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.

- END OF SAFETY DATA SHEET -
SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier: KB-03-008 Reagent C

1.2 Relevant identified uses of the substance or mixture and uses advised against:
Relevant uses: Research use. For professional user only.
Uses advised against: All uses not specified in this section or in section 7.3

1.3 Details of the supplier of the safety data sheet:
BIOQUOCHEM S.L.
Edificio CEEI. Parque Tecnológico de Asturias
33428 Llanera - Asturias - ESPaña
Phone: 985269292
hmunoz@bioquochem.com
http://www.bqckit.com

1.4 Emergency telephone number: +34985269292 (9:00-19:00 UTC+1h; M-F)

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:
CLP Regulation (EC) No 1272/2008:
Classification of this product has been carried out in accordance with CLP Regulation (EC) No 1272/2008.
Aquatic Acute 1: Hazardous to the aquatic environment, acute hazard, Category 1, H400
Aquatic Chronic 1: Hazardous to the aquatic environment, long-term hazard, Category 1, H410
Eye Dam. 1: Serious eye damage, Category 1, H318
Skin Corr. 1A: Skin corrosion, Category 1A, H314
STOT SE 3: Respiratory tract toxicity, single exposure, Category 3, H335

2.2 Label elements:
CLP Regulation (EC) No 1272/2008:

Danger

Hazard statements:
Aquatic Chronic 1: H410 - Very toxic to aquatic life with long lasting effects
Skin Corr. 1A: H314 - Causes severe skin burns and eye damage
STOT SE 3: H335 - May cause respiratory irritation

Precautionary statements:
P271: Use only outdoors or in a well-ventilated area
P280: Wear protective gloves/protective clothing/eye protection/face protection
P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
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
P310: Immediately call a poison center/doctor
P403+P233: Store in a well-ventilated place. Keep container tightly closed
P501: Dispose of contents and / or containers in accordance with regulations on hazardous waste or packaging and packaging waste respectively

Substances that contribute to the classification
Trichloroacetic acid

2.3 Other hazards:
Product fails to meet PBT/vPvB criteria

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance:
Non-applicable

3.2 Mixture:

- CONTINUED ON NEXT PAGE -
SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS (continued)

**Chemical description:** Aqueous solution of organic and inorganic compounds, glycol-ethers, surfactants, enzymes and colourants.

**Components:**

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

<table>
<thead>
<tr>
<th>Identification</th>
<th>Chemical name/Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS: 76-03-9</td>
<td>Trichloroacetic acid *</td>
</tr>
<tr>
<td>EC: 200-927-2</td>
<td>Regulation 1272/2008</td>
</tr>
<tr>
<td>Index: 607-004-00-7</td>
<td>Aquatic Acute 1: H400; Aquatic Chronic 1: H410; Skin Corr. 1A: H314 - Danger</td>
</tr>
</tbody>
</table>

* Substances presenting a health or environmental hazard which meet criteria laid down in Regulation (EU) No. 2015/830

To obtain more information on the risk of the substances consult sections 8, 11, 12, 15 and 16.

SECTION 4: FIRST AID MEASURES

**4.1 Description of first aid measures:**

Request medical assistance immediately, showing the SDS of this product.

**By inhalation:**

Remove the person affected from the area of exposure, provide with fresh air and keep at rest. In serious cases such as cardiorespiratory failure, artificial resuscitation techniques will be necessary (mouth to mouth resuscitation, cardiac massage, oxygen supply, etc.) requiring immediate medical assistance.

**By skin contact:**

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

**By eye contact:**

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

**By ingestion/aspiration:**

Request immediate medical assistance, showing the SDS of this product.

**Description of first aid measures:**

4.1

SECTION 5: FIREFIGHTING MEASURES

**5.1 Extinguishing media:**

Product is non-flammable under normal conditions of storage, handling and use. In the case of combustion as a result of improper handling, storage or use preferably use polyvalent powder extinguishers (ABC powder), in accordance with the Regulation on fire protection systems. IT IS NOT RECOMMENDED to use tap water as an extinguishing agent.

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

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

**5.3 Advice for firefighters:**

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

Additional provisions:

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

- CONTINUED ON NEXT PAGE -
SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:
Isolate leaks provided that there is no additional risk for the people performing this task. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Evacuate the area and keep out those who do not have protection.

6.2 Environmental precautions:
Avoid at all cost any type of spillage into an aqueous medium. Contain the product absorbed appropriately in hermetically sealed containers. Notify the relevant authority in case of exposure to the general public or the environment.

6.3 Methods and material for containment and cleaning up:
It is recommended:
Absorb the spillage using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. For any concern related to disposal consult section 13.

6.4 Reference to other sections:
See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:
A.- Precautions for safe manipulation
Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.
B.- Technical recommendations for the prevention of fires and explosions
Product is non-flammable under normal conditions of storage, handling and use. It is recommended to transfer at slow speeds to avoid the generation of electrostatic charges that can affect flammable products. Consult section 10 for information on conditions and materials that should be avoided.
C.- Technical recommendations to prevent ergonomic and toxicological risks
Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.
D.- Technical recommendations to prevent environmental risks
Due to the danger of this product for the environment it is recommended to use it within an area containing contamination control barriers in case of spillage, as well as having absorbent material in close proximity.

7.2 Conditions for safe storage, including any incompatibilities:
A.- Technical measures for storage
Minimum Temp.: 5 ºC
Maximum Temp.: 30 ºC
Maximum time: 6 Months
B.- General conditions for storage
Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

7.3 Specific end use(s):
Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters:
Substances whose occupational exposure limits have to be monitored in the work environment
There are no occupational exposure limits for the substances contained in the product

DNEL (Workers):

<table>
<thead>
<tr>
<th>Identification</th>
<th>Short exposure</th>
<th>Long exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Systemic</td>
<td>Local</td>
</tr>
<tr>
<td>Trichloroacetic acid</td>
<td>Oral</td>
<td>Non-applicable</td>
</tr>
<tr>
<td>CAS: 76-03-9</td>
<td>Dermal</td>
<td>1.41 mg/kg</td>
</tr>
<tr>
<td>EC: 200-927-2</td>
<td>Inhalation</td>
<td>124.3 mg/m³</td>
</tr>
</tbody>
</table>

DNEL (General population):

- CONTINUED ON NEXT PAGE -
### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

<table>
<thead>
<tr>
<th>Identification</th>
<th>Short exposure</th>
<th>Long exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Systemic</td>
<td>Local</td>
</tr>
<tr>
<td>Trichloroacetic acid</td>
<td>Oral</td>
<td>0,705 mg/kg</td>
</tr>
<tr>
<td>CAS: 76-03-9</td>
<td>Dermal</td>
<td>0,705 mg/kg</td>
</tr>
<tr>
<td>EC: 200-927-2</td>
<td>Inhalation</td>
<td>61,3 mg/m³</td>
</tr>
</tbody>
</table>

**PNEC:**

<table>
<thead>
<tr>
<th>Identification</th>
<th>STP</th>
<th>Soil</th>
<th>Intermittent</th>
<th>Oral</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trichloroacetic acid</td>
<td>100 mg/L</td>
<td>0,0046 mg/kg</td>
<td>0,0027 mg/L</td>
<td>23,5 g/kg</td>
</tr>
<tr>
<td>CAS: 76-03-9</td>
<td>Fresh water</td>
<td>Marine water</td>
<td>Sediment (Fresh water)</td>
<td>Sediment (Marine water)</td>
</tr>
</tbody>
</table>

8.2 Exposure controls:

A.- General security and hygiene measures in the work place

As a preventative measure it is recommended to use basic Personal Protective Equipment, with the corresponding <<CE marking>> in accordance with Directive 89/686/EC. For more information on Personal Protective Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1.

All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

B.- Respiratory protection

<table>
<thead>
<tr>
<th>Pictogram</th>
<th>PPE</th>
<th>Labelling</th>
<th>CEN Standard</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mandatory respiratory tract protection</td>
<td>Filter mask for gases and vapours</td>
<td>CE CAT III</td>
<td>EN 405:2001+A1:2009</td>
<td>Replace when there is a taste or smell of the contaminant inside the face mask. If the contaminant comes with warnings it is recommended to use isolation equipment.</td>
</tr>
</tbody>
</table>

C.- Specific protection for the hands

<table>
<thead>
<tr>
<th>Pictogram</th>
<th>PPE</th>
<th>Labelling</th>
<th>CEN Standard</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mandatory hand protection</td>
<td>NON-disposable chemical protective gloves</td>
<td>CE CAT III</td>
<td>EN 374-1:2003, EN 374-3:2003+AC:2006, EN 420:2003+AC:2009</td>
<td>The Breakthrough Time indicated by the manufacturer must exceed the period during which the product is being used. Do not use protective creams after the product has come into contact with skin.</td>
</tr>
</tbody>
</table>

"As the product is a mixture of several substances, the resistance of the glove material can not be predicted in advance with total reliability and has therefore to be checked prior to the application"

D.- Ocular and facial protection

<table>
<thead>
<tr>
<th>Pictogram</th>
<th>PPE</th>
<th>Labelling</th>
<th>CEN Standard</th>
<th>Remarks</th>
</tr>
</thead>
</table>

E.- Body protection

<table>
<thead>
<tr>
<th>Pictogram</th>
<th>PPE</th>
<th>Labelling</th>
<th>CEN Standard</th>
<th>Remarks</th>
</tr>
</thead>
</table>

F.- Additional emergency measures
Environmental exposure controls:
In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. For additional information see subsection 7.1.D

Volatile organic compounds:
With regard to Directive 2010/75/EU, this product has the following characteristics:

- V.O.C. (Supply): 0 % weight
- V.O.C. density at 20 ºC: 0 kg/m³ (0 g/L)
- Average carbon number: Non-applicable
- Average molecular weight: Non-applicable

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**9.1 Information on basic physical and chemical properties:**
For complete information see the product datasheet.

**Appearance:**
- Physical state at 20 ºC: Liquid
- Appearance: Not available
- Colour: Not available
- Odour: Not available
- Odour threshold: Non-applicable *

**Volvatility:**
- Boiling point at atmospheric pressure: Non-applicable *
- Vapour pressure at 20 ºC: Non-applicable *
- Vapour pressure at 50 ºC: <300000 Pa (300 kPa)
- Evaporation rate at 20 ºC: Non-applicable *

**Product description:**
- Density at 20 ºC: 1258 kg/m³
- Relative density at 20 ºC: 1,258
- Dynamic viscosity at 20 ºC: Non-applicable *
- Kinematic viscosity at 20 ºC: Non-applicable *
- Kinematic viscosity at 40 ºC: Non-applicable *
- Concentration: Non-applicable *
- pH: Non-applicable *
- Vapour density at 20 ºC: Non-applicable *
- Partition coefficient n-octanol/water 20 ºC: Non-applicable *
- Solubility in water at 20 ºC: Non-applicable *
- Solubility properties: Non-applicable *
- Decomposition temperature: Non-applicable *
- Melting point/freezing point: Non-applicable *
- Explosive properties: Non-applicable *
- Oxidising properties: Non-applicable *

*Not relevant due to the nature of the product, not providing information property of its hazards.*
SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash Point</td>
<td>Non Flammable (&gt;60 °C)</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Non-applicable *</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>Non-applicable *</td>
</tr>
<tr>
<td>Lower flammability limit</td>
<td>Non-applicable *</td>
</tr>
<tr>
<td>Upper flammability limit</td>
<td>Non-applicable *</td>
</tr>
<tr>
<td>Explosive</td>
<td>Non-applicable *</td>
</tr>
<tr>
<td>Lower explosive limit</td>
<td>Non-applicable *</td>
</tr>
<tr>
<td>Upper explosive limit</td>
<td>Non-applicable *</td>
</tr>
<tr>
<td>Refraction index</td>
<td>Non-applicable *</td>
</tr>
<tr>
<td>Surface tension at 20 °C</td>
<td>Non-applicable *</td>
</tr>
</tbody>
</table>

9.2 Other information:
- *Not relevant due to the nature of the product, not providing information property of its hazards.

SECTION 10: STABILITY AND REACTIVITY

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

10.2 Chemical stability:
Chemically stable under the conditions of storage, handling and use.

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

10.4 Conditions to avoid:
Applicable for handling and storage at room temperature:

<table>
<thead>
<tr>
<th>Condition</th>
<th>Shock and friction</th>
<th>Contact with air</th>
<th>Increase in temperature</th>
<th>Sunlight</th>
<th>Humidity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

10.5 Incompatible materials:

<table>
<thead>
<tr>
<th>Material</th>
<th>Acids</th>
<th>Water</th>
<th>Combustive materials</th>
<th>Combustible materials</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Precaution</td>
<td>Not applicable</td>
<td>Avoid alkaline or strong bases</td>
</tr>
</tbody>
</table>

10.6 Hazardous decomposition products:
See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO2), carbon monoxide and other organic compounds.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:
The experimental information related to the toxicological properties of the product itself is not available

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

A. Ingestion (acute effect):
- Acute toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for consumption. For more information see section 3.
- Corrosivity/Irritability: Corrosive product, if it is swallowed causes burns destroying the tissues. For more information about secondary effects from skin contact see section 2.

B. Inhalation (acute effect):
- Acute toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for inhalation. For more information see section 3.
- Corrosivity/Irritability: Prolonged inhalation of the product is corrosive to mucous membranes and the upper respiratory tract.

- CONTINUED ON NEXT PAGE -
SECTION 11: TOXICOLOGICAL INFORMATION (continued)

C- Contact with the skin and the eyes (acute effect):
   - Contact with the skin: Above all, skin contact may occur as fabrics of all thicknesses can be destroyed, resulting in burns. For more information on the secondary effects see section 2.
   - Contact with the eyes: Produces serious eye damage after contact.
D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):
   - Carcinogenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for the effects mentioned. For more information see section 3.
   - Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
   - Reproductive toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
E- Sensitizing effects:
   - Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous with sensitising effects. For more information see section 3.
   - Cutaneous: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
F- Specific target organ toxicity (STOT) - single exposure:
   Causes irritation in respiratory passages, which is normally reversible and limited to the upper respiratory passages.
G- Specific target organ toxicity (STOT)-repeated exposure:
   - Specific target organ toxicity (STOT)-repeated exposure: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
   - Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
H- Aspiration hazard:
   Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

Other information:
Non-applicable

Specific toxicology information on the substances:

<table>
<thead>
<tr>
<th>Identification</th>
<th>Acute toxicity</th>
<th>Genus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trichloroacetic acid</td>
<td>LD50 oral 3320 mg/kg</td>
<td>Rat</td>
</tr>
<tr>
<td>CAS: 76-03-9</td>
<td>LD50 dermal Non-applicable</td>
<td></td>
</tr>
<tr>
<td>EC: 200-927-2</td>
<td>LC50 inhalation Non-applicable</td>
<td></td>
</tr>
</tbody>
</table>

SECTION 12: ECOLOGICAL INFORMATION

The experimental information related to the eco-toxicological properties of the product itself is not available

12.1 Toxicity:

<table>
<thead>
<tr>
<th>Identification</th>
<th>Acute toxicity</th>
<th>Species</th>
<th>Genus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trichloroacetic acid</td>
<td>LC50 0.1 - 1 mg/L (96 h)</td>
<td>Fish</td>
<td></td>
</tr>
<tr>
<td>CAS: 76-03-9</td>
<td>EC50 0.1 - 1 mg/L</td>
<td>Crustacean</td>
<td></td>
</tr>
<tr>
<td>EC: 200-927-2</td>
<td>EC50 0.1 - 1 mg/L</td>
<td>Algae</td>
<td></td>
</tr>
</tbody>
</table>

12.2 Persistence and degradability:
Not available

12.3 Bioaccumulative potential:
Not available

12.4 Mobility in soil:
Not available

12.5 Results of PBT and vPvB assessment:
Product fails to meet PBT/vPvB criteria

12.6 Other adverse effects:
SECTION 12: ECOLOGICAL INFORMATION (continued)

Not described

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Waste class (Regulation (EU) No 1357/2014)</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 05 06*</td>
<td>Laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals</td>
<td>Dangerous</td>
</tr>
</tbody>
</table>

Type of waste (Regulation (EU) No 1357/2014):
HP14 Ecotoxic, HP4 Irritant — skin irritation and eye damage, HP8 Corrosive

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

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

SECTION 14: TRANSPORT INFORMATION

Transport of dangerous goods by land:
With regard to ADR 2017 and RID 2017:

14.1 UN number: UN1760
14.2 UN proper shipping name: CORROSIVE LIQUID, N.O.S. (Trichloroacetic acid)
14.3 Transport hazard class(es): 8
14.4 Packing group: II
14.5 Environmental hazards: Yes
14.6 Special precautions for user
   Special regulations: 274
   Tunnel restriction code: E
   Physico-Chemical properties: see section 9
   Limited quantities: 1 L
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code: Non-applicable

Transport of dangerous goods by sea:
With regard to IMDG 38-16:

14.1 UN number: UN1760
14.2 UN proper shipping name: CORROSIVE LIQUID, N.O.S. (Trichloroacetic acid)
14.3 Transport hazard class(es): 8
14.4 Packing group: II
14.5 Environmental hazards: Yes
14.6 Special precautions for user
   Special regulations: 274
   EmS Codes: F-A, S-B
   Physico-Chemical properties: see section 9
   Limited quantities: 1 L
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code: Non-applicable

Transport of dangerous goods by air:
SECTION 14: TRANSPORT INFORMATION (continued)

14.1 UN number:
UN1760

14.2 UN proper shipping name:
CORROSIVE LIQUID, N.O.S. (Trichloroacetic acid)

14.3 Transport hazard class(es):
8

14.4 Packing group:
II

14.5 Environmental hazards:
Yes

14.6 Special precautions for user

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:
Non-applicable

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:
Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Non-applicable
Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Non-applicable
Regulation (EC) No 1005/2009, about substances that deplete the ozone layer: Non-applicable
Article 95, REGULATION (EU) No 528/2012: Non-applicable
REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Non-applicable

Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII REACH, etc ...):
Non-applicable

Specific provisions in terms of protecting people or the environment:
It is recommended to use the information included in this safety data sheet as a basis for conducting workplace-specific risk assessments in order to establish the necessary risk prevention measures for the handling, use, storage and disposal of this product.

Other legislation:
The product could be affected by sectorial legislation

15.2 Chemical safety assessment:
The supplier has not carried out evaluation of chemical safety.

SECTION 16: OTHER INFORMATION

Legislation related to safety data sheets:
This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) No 1907/2006 (Regulation (EC) No 2015/830)

Modifications related to the previous Safety Data Sheet which concerns the ways of managing risks.:
Non-applicable

Texts of the legislative phrases mentioned in section 2:
H314: Causes severe skin burns and eye damage
H318: Causes serious eye damage
H400: Very toxic to aquatic life
H410: Very toxic to aquatic life with long lasting effects
H335: May cause respiratory irritation

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

CLP Regulation (EC) No 1272/2008:
Aquatic Acute 1: H400 - Very toxic to aquatic life
Aquatic Chronic 1: H410 - Very toxic to aquatic life with long lasting effects
Skin Corr. 1A: H314 - Causes severe skin burns and eye damage

Classification procedure:

- CONTINUED ON NEXT PAGE -
**SECTION 16: OTHER INFORMATION (continued)**

Skin Corr. 1A: Calculation method  
Eye Dam. 1: Calculation method  
Aquatic Acute 1: Calculation method  
Aquatic Chronic 1: Calculation method  
STOT SE 3: Calculation method  

**Advice related to training:**  
Minimal training is recommended in order to prevent industrial risks for staff using this product and to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

**Principal bibliographical sources:**  
http://echa.europa.eu  
http://eur-lex.europa.eu  

**Abbreviations and acronyms:**  
ADR: European agreement concerning the international carriage of dangerous goods by road  
IMDG: International maritime dangerous goods code  
IATA: International Air Transport Association  
ICAO: International Civil Aviation Organisation  
COD: Chemical Oxygen Demand  
BOD5: 5-day biochemical oxygen demand  
BCF: Bioconcentration factor  
LD50: Lethal Dose 50  
LC50: Lethal Concentration 50  
EC50: Effective concentration 50  
Log-POW: Octanol–water partition coefficient  
Koc: Partition coefficient of organic carbon

The information contained in this safety data sheet is based on sources, technical knowledge and current legislation at European and state level, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product, it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within our awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.
SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier: KB-03-008 Reagent D

Acetone
CAS: 67-64-1
EC: 200-662-2
Index: 606-001-00-8
REACH: 01-2119471330-49-XXXX

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

Relevant uses: Research use. For professional user only.
Uses advised against: All uses not specified in this section or in section 7.3

1.3 Details of the supplier of the safety data sheet:

BIOQUOCHEM S.L.
Edificio CEEI. Parque Tecnológico de Asturias
33428 Llanera - Asturias - ESpaña
Phone.: 985269292
hmunoz@bioquochem.com
http://www.bqckit.com

1.4 Emergency telephone number: +34985269292 (9:00-19:00 UTC+1h; M-F)

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:

CLP Regulation (EC) No 1272/2008:
Classification of this product has been carried out in accordance with CLP Regulation (EC) No 1272/2008.
Eye Irrit. 2: Eye irritation, Category 2, H319
Flam. Liq. 2: Flammable liquids, Category 2, H225
STOT SE 3: Specific toxicity causing drowsiness and dizziness, single exposure, Category 3, H336

2.2 Label elements:

CLP Regulation (EC) No 1272/2008:
Danger

Hazard statements:
Eye Irrit. 2: H319 - Causes serious eye irritation
Flam. Liq. 2: H225 - Highly flammable liquid and vapour
STOT SE 3: H336 - May cause drowsiness or dizziness

Precautionary statements:
P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P280: Wear protective gloves/protective clothing/eye protection/face protection
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing
P335+P315+P365: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P370+P378: In case of fire: Use ABC powder extinguisher to extinguish.
P403+P233: Store in a well-ventilated place. Keep container tightly closed
P403+P235: Store in a well-ventilated place. Keep cool
P501: Dispose of contents and / or containers in accordance with regulations on hazardous waste or packaging and packaging waste respectively

Supplementary information:
EUH066: Repeated exposure may cause skin dryness or cracking

2.3 Other hazards:

Product fails to meet PBT/vPvB criteria

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

CONTINUED ON NEXT PAGE
SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS (continued)

3.1 Substance:

Chemical description: Aqueous solution of organic and inorganic compounds, glycol-ethers, surfactants, enzymes and colourants.

Components:

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

<table>
<thead>
<tr>
<th>Identification</th>
<th>Chemical name/Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS: 67-64-1</td>
<td>Acetone</td>
<td>ATP CLP00</td>
</tr>
<tr>
<td>EC: 200-662-2</td>
<td></td>
<td>100 %</td>
</tr>
<tr>
<td>Index: 606-001-00-8</td>
<td>Eye Irrit. 2: H319; Flam. Liq. 2: H225; STOT SE 3: H336; EUH066 - Danger</td>
<td></td>
</tr>
<tr>
<td>REACH 101-2119471330-49-XXXX</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

To obtain more information on the risk of the substances consult sections 8, 11, 12, 15 and 16.

3.2 Mixture:

Non-applicable

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures:

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

By inhalation:

Remove the person affected from the area of exposure, provide with fresh air and keep at rest. In serious cases such as cardiorespiratory failure, artificial resuscitation techniques will be necessary (mouth to mouth resuscitation, cardiac massage, oxygen supply, etc.) requiring immediate medical assistance.

By skin contact:

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

By eye contact:

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

By ingestion/aspiration:

In case of consumption, seek immediate medical assistance showing the SDS for the product.

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

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

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

Non-applicable

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media:

If possible use polyvalent powder fire extinguishers (ABC powder), alternatively use foam or carbon dioxide extinguishers (CO2). IT IS RECOMMENDED NOT to use tap water as an extinguishing agent.

5.2 Special hazards arising from the substance or mixture:

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

5.3 Advice for firefighters:

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

Additional provisions:

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

- CONTINUED ON NEXT PAGE -
SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:
Isolate leaks provided that there is no additional risk for the people performing this task. Evacuate the area and keep out those without protection. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Above all prevent the formation of any vapour-air flammable mixtures, through either ventilation or the use of an inert medium. Destroy any source of ignition. Eliminate electrostatic charges by interconnecting all the conductive surfaces on which static electricity could form, and also ensuring that all surfaces are connected to the ground.

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

6.3 Methods and material for containment and cleaning up:
It is recommended: Absorb the spillage using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. For any concern related to disposal consult section 13.

6.4 Reference to other sections:
See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:
A.- Precautions for safe manipulation
Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.
B.- Technical recommendations for the prevention of fires and explosions
Transfer in well ventilated areas, preferably through localized extraction. Fully control sources of ignition (mobile phones, sparks,...) and ventilate during cleaning operations. Avoid the existence of dangerous atmospheres inside containers, applying inertization systems where possible. Transfer at a slow speed to avoid the creation of electrostatic charges. Against the possibility of electrostatic charges: ensure a perfect equipotential connection, always use groundings, do not wear work clothes made of acrylic fibres, preferably wearing cotton clothing and conductive footwear. Comply with the essential security requirements for equipment and systems defined in Directive 94/9/EC (ATEX 100) and with the minimum requirements for protecting the security and health of workers under the selection criteria of Directive 1999/92/EC (ATEX 137). Consult section 10 for conditions and materials that should be avoided.
C.- Technical recommendations to prevent ergonomic and toxicological risks
Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.
D.- Technical recommendations to prevent environmental risks
It is recommended to have absorbent material available at close proximity to the product (See subsection 6.3)

7.2 Conditions for safe storage, including any incompatibilities:
A.- Technical measures for storage
Minimum Temp.: 5 ºC
Maximum Temp.: 30 ºC
Maximum time: 6 Months
B.- General conditions for storage
Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

7.3 Specific end use(s):
Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters:
Substances whose occupational exposure limits have to be monitored in the work environment

<table>
<thead>
<tr>
<th>Substance</th>
<th>Identification</th>
<th>Environmental limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone</td>
<td>CAS: 67-64-1</td>
<td>IOELV (8h) 500 ppm</td>
</tr>
<tr>
<td></td>
<td>EC: 200-662-2</td>
<td>IOELV (STEL) 1210 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Year 2017</td>
</tr>
</tbody>
</table>

DNEL (Workers):
### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

<table>
<thead>
<tr>
<th>Identification</th>
<th>Short exposure</th>
<th>Long exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Systemic</td>
<td>Local</td>
</tr>
<tr>
<td>Acetone CAS: 67-64-1 EC: 200-662-2</td>
<td>Oral</td>
<td>Non-applicable</td>
</tr>
<tr>
<td></td>
<td>Dermal</td>
<td>Non-applicable</td>
</tr>
<tr>
<td></td>
<td></td>
<td>186 mg/kg</td>
</tr>
</tbody>
</table>

### DNEL (General population):

<table>
<thead>
<tr>
<th>Identification</th>
<th>Short exposure</th>
<th>Long exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Systemic</td>
<td>Local</td>
</tr>
<tr>
<td>Acetone CAS: 67-64-1 EC: 200-662-2</td>
<td>Oral</td>
<td>Non-applicable</td>
</tr>
<tr>
<td></td>
<td>Dermal</td>
<td>Non-applicable</td>
</tr>
<tr>
<td></td>
<td></td>
<td>62 mg/kg</td>
</tr>
</tbody>
</table>

### PNEC:

<table>
<thead>
<tr>
<th>Identification</th>
<th>Labelling</th>
<th>CEN Standard</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone CAS: 67-64-1 EC: 200-662-2</td>
<td>STP</td>
<td>100 mg/L</td>
<td>Replace when there is a taste or smell of the contaminant inside the face mask. If the contaminant comes with warnings it is recommended to use isolation equipment.</td>
</tr>
<tr>
<td>Soil</td>
<td>Marine water</td>
<td>1,06 mg/L</td>
<td></td>
</tr>
<tr>
<td>Intermittent</td>
<td>Sediment (Fresh water)</td>
<td>30,4 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Oral</td>
<td>Sediment (Marine water)</td>
<td>3,04 mg/kg</td>
<td></td>
</tr>
</tbody>
</table>

### 8.2 Exposure controls:

**A.- General security and hygiene measures in the work place**

As a preventative measure it is recommended to use basic Personal Protective Equipment, with the corresponding <<CE marking>> in accordance with Directive 89/686/EC. For more information on Personal Protective Equipment (storage, use, cleaning, maintenance, class of protection,…) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1.

All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

**B.- Respiratory protection**

<table>
<thead>
<tr>
<th>Pictogram</th>
<th>PPE</th>
<th>Labelling</th>
<th>CEN Standard</th>
<th>Remarks</th>
</tr>
</thead>
</table>

**C.- Specific protection for the hands**

<table>
<thead>
<tr>
<th>Pictogram</th>
<th>PPE</th>
<th>Labelling</th>
<th>CEN Standard</th>
<th>Remarks</th>
</tr>
</thead>
</table>

**D.- Ocular and facial protection**

<table>
<thead>
<tr>
<th>Pictogram</th>
<th>PPE</th>
<th>Labelling</th>
<th>CEN Standard</th>
<th>Remarks</th>
</tr>
</thead>
</table>

**E.- Body protection**

<table>
<thead>
<tr>
<th>Pictogram</th>
<th>PPE</th>
<th>Labelling</th>
<th>CEN Standard</th>
<th>Remarks</th>
</tr>
</thead>
</table>

For professional use only. Clean periodically according to the manufacturer’s instructions.

- CONTINUED ON NEXT PAGE -
### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

<table>
<thead>
<tr>
<th>Pictogram</th>
<th>PPE</th>
<th>Labelling</th>
<th>CEN Standard</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Mandatory foot protection" /></td>
<td>Safety footwear for protection against chemical risk, with antistatic and heat resistant properties</td>
<td>CE CAT III</td>
<td>EN 13287:2008 EN ISO 20345:2011 EN 13832-1:2006</td>
<td>Replace boots at any sign of deterioration.</td>
</tr>
</tbody>
</table>

F.- Additional emergency measures

<table>
<thead>
<tr>
<th>Emergency measure</th>
<th>Standards</th>
<th>Emergency measure</th>
<th>Standards</th>
</tr>
</thead>
</table>

**Environmental exposure controls:**

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

**Volatile organic compounds:**

With regard to Directive 2010/75/EU, this product has the following characteristics:

- **V.O.C. (Supply):** 100 % weight
- **V.O.C. density at 20 °C:** 791,48 kg/m³ (791,48 g/L)
- **Average carbon number:** 3
- **Average molecular weight:** 58,1 g/mol

### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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

For complete information see the product datasheet.

**Appearance:**

- **Physical state at 20 °C:** Liquid
- **Appearance:** Not available
- **Colour:** Not available
- **Odour:** Not available
- **Odour threshold:** Non-applicable *

**Volatility:**

- **Boiling point at atmospheric pressure:** 56 °C
- **Vapour pressure at 20 °C:** 24439 Pa
- **Vapour pressure at 50 °C:** 81233 Pa (81 kPa)
- **Evaporation rate at 20 °C:** Non-applicable *

**Product description:**

- **Density at 20 °C:** 791 kg/m³
- **Relative density at 20 °C:** 0,791
- **Dynamic viscosity at 20 °C:** 0,33 cP
- **Kinematic viscosity at 20 °C:** 0,41 cSt
- **Kinematic viscosity at 40 °C:** Non-applicable *
- **Concentration:** Non-applicable *
- **pH:** Non-applicable *
- **Vapour density at 20 °C:** Non-applicable *
- **Partition coefficient n-octanol/water 20 °C:** Non-applicable *
- **Solubility in water at 20 °C:** Non-applicable *

*Not relevant due to the nature of the product, not providing information property of its hazards.*
SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)

Solubility properties: Non-applicable *
Decomposition temperature: Non-applicable *
Melting point/freezing point: -95 ºC
Explosive properties: Non-applicable *
Oxidising properties: Non-applicable *

**Flammability:**
- Flash Point: -18 ºC
- Flammability (solid, gas): Non-applicable *
- Autoignition temperature: 538 ºC
- Lower flammability limit: 2,6 % Volume
- Upper flammability limit: 12,8 % Volume

**Explosive:**
- Lower explosive limit: Non-applicable *
- Upper explosive limit: Non-applicable *

**9.2 Other information:**
- Surface tension at 20 ºC: Non-applicable *
- Refraction index: Non-applicable *

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

SECTION 10: STABILITY AND REACTIVITY

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

**10.2 Chemical stability:**
Chemically stable under the conditions of storage, handling and use.

**10.3 Possibility of hazardous reactions:**
Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

**10.4 Conditions to avoid:**
Applicable for handling and storage at room temperature:

<table>
<thead>
<tr>
<th>Shock and friction</th>
<th>Contact with air</th>
<th>Increase in temperature</th>
<th>Sunlight</th>
<th>Humidity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Risk of combustion</td>
<td>Avoid direct impact</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

**10.5 Incompatible materials:**

<table>
<thead>
<tr>
<th>Acids</th>
<th>Water</th>
<th>Combustible materials</th>
<th>Combustible materials</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avoid strong acids</td>
<td>Not applicable</td>
<td>Avoid direct impact</td>
<td>Not applicable</td>
<td>Avoid alkalis or strong bases</td>
</tr>
</tbody>
</table>

**10.6 Hazardous decomposition products:**
See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO2), carbon monoxide and other organic compounds.

SECTION 11: TOXICOLOGICAL INFORMATION

**11.1 Information on toxicological effects:**
The experimental information related to the toxicological properties of the product itself is not available.

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

A.- Ingestion (acute effect):

- CONTINUED ON NEXT PAGE -
SECTION 11: TOXICOLOGICAL INFORMATION (continued)

- Acute toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for consumption. For more information see section 3.
- Corrosivity/Irritability: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
B- Inhalation (acute effect):
- Acute toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for inhalation. For more information see section 3.
- Corrosivity/Irritability: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
C- Contact with the skin and the eyes (acute effect):
- Contact with the skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for skin contact. For more information see section 3.
- Contact with the eyes: Produces eye damage after contact.
D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):
- Carcinogenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for the effects mentioned. For more information see section 3.
- Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
- Reproductive toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
E- Sensitizing effects:
- Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous with sensitising effects. For more information see section 3.
- Cutaneous: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
F- Specific target organ toxicity (STOT) - single exposure:
Exposure in high concentration can interfere with the central nervous system causing headache, dizziness, vertigo, nausea, vomiting, confusion, and in serious cases, loss of consciousness.
G- Specific target organ toxicity (STOT) - repeated exposure:
- Specific target organ toxicity (STOT) - repeated exposure: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
- Skin: Repeated exposure may cause skin dryness or cracking
H- Aspiration hazard:
Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

Other information:
Non-applicable

Specific toxicology information on the substances:

<table>
<thead>
<tr>
<th>Identification</th>
<th>Acute toxicity</th>
<th>Genus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone</td>
<td>LD50 oral 5800 mg/kg</td>
<td>Rat</td>
</tr>
<tr>
<td>CAS: 67-64-1</td>
<td>LD50 dermal 7426 mg/kg</td>
<td>Rabbit</td>
</tr>
<tr>
<td>EC: 200-662-2</td>
<td>LC50 inhalation 76 mg/L (4 h)</td>
<td>Rat</td>
</tr>
</tbody>
</table>

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity:

<table>
<thead>
<tr>
<th>Identification</th>
<th>Acute toxicity</th>
<th>Species</th>
<th>Genus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone</td>
<td>EC50 23.5 mg/L (48 h)</td>
<td>Daphnia magna</td>
<td>Crustacean</td>
</tr>
<tr>
<td>CAS: 67-64-1</td>
<td>EC50 3400 mg/L (48 h)</td>
<td>Chlorella pyrenoidosa</td>
<td>Algae</td>
</tr>
</tbody>
</table>

12.2 Persistence and degradability:
### SECTION 12: ECOLOGICAL INFORMATION (continued)

<table>
<thead>
<tr>
<th>Identification</th>
<th>Degradability</th>
<th>Biodegradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone CAS: 67-64-1 EC: 200-662-2</td>
<td>BOD5 Non-applicable</td>
<td>Concentration 100 mg/L</td>
</tr>
<tr>
<td></td>
<td>COD Non-applicable</td>
<td>Period 28 days</td>
</tr>
<tr>
<td></td>
<td>BOD5/COD 0.96</td>
<td>% Biodegradable 96 %</td>
</tr>
</tbody>
</table>

#### 12.3 Bioaccumulative potential:

<table>
<thead>
<tr>
<th>Identification</th>
<th>Bioaccumulation potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone CAS: 67-64-1 EC: 200-662-2</td>
<td>BCF 1</td>
</tr>
<tr>
<td></td>
<td>Pow Log -0.24</td>
</tr>
<tr>
<td></td>
<td>Potential Low</td>
</tr>
</tbody>
</table>

#### 12.4 Mobility in soil:

<table>
<thead>
<tr>
<th>Identification</th>
<th>Absorption/desorption</th>
<th>Volatility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone CAS: 67-64-1 EC: 200-662-2</td>
<td>Koc 1 Henry 2,93 Pa·m³/mol</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Conclusion Very High Dry soil Yes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Surface tension 2,304E-2 N/m (25 °C) Moist soil Yes</td>
<td></td>
</tr>
</tbody>
</table>

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

Product fails to meet PBT/vPvB criteria

#### 12.6 Other adverse effects:

Not described

### SECTION 13: DISPOSAL CONSIDERATIONS

#### 13.1 Waste treatment methods:

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Waste class (Regulation (EU) No 1357/2014)</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 05 06*</td>
<td>Laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals</td>
<td>Dangerous</td>
</tr>
</tbody>
</table>

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

HP3 Flammable, HP4 Irritant — skin irritation and eye damage, HP5 Specific Target Organ Toxicity (STOT)/Aspiration Toxicity

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

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

**Regulations related to waste management:**

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


### SECTION 14: TRANSPORT INFORMATION

**Transport of dangerous goods by land:**

With regard to ADR 2017 and RID 2017:
SECTION 14: TRANSPORT INFORMATION (continued)

14.1 UN number: UN1090
14.2 UN proper shipping name: ACETONE
14.3 Transport hazard class(es): 3
Labels: 3
14.4 Packing group: II
14.5 Environmental hazards: No
14.6 Special precautions for user
   Special regulations: Non-applicable
   Tunnel restriction code: D/E
   Physico-Chemical properties: see section 9
   Limited quantities: 1 L
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:
   Non-applicable

Transport of dangerous goods by sea:

With regard to IMDG 38-16:

14.1 UN number: UN1090
14.2 UN proper shipping name: ACETONE
14.3 Transport hazard class(es): 3
Labels: 3
14.4 Packing group: II
14.5 Environmental hazards: No
14.6 Special precautions for user
   Special regulations: Non-applicable
   EmS Codes: F-E, S-D
   Physico-Chemical properties: see section 9
   Limited quantities: 1 L
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:
   Non-applicable

Transport of dangerous goods by air:

With regard to IATA/ICAO 2017:

14.1 UN number: UN1090
14.2 UN proper shipping name: ACETONE
14.3 Transport hazard class(es): 3
Labels: 3
14.4 Packing group: II
14.5 Environmental hazards: No
14.6 Special precautions for user
   Physico-Chemical properties: see section 9
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:
   Non-applicable

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:
   Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Non-applicable
   Substances included in Annex XIV of REACH (“Authorisation List”) and sunset date: Non-applicable
   Regulation (EC) No 1005/2009, about substances that deplete the ozone layer: Non-applicable
   Article 95, REGULATION (EU) No 528/2012: Non-applicable
   Regulation (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Non-applicable
   Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII REACH, etc ….):
   Specific provisions in terms of protecting people or the environment:
SECTION 15: REGULATORY INFORMATION (continued)

It is recommended to use the information included in this safety data sheet as a basis for conducting workplace-specific risk assessments in order to establish the necessary risk prevention measures for the handling, use, storage and disposal of this product.

**Other legislation:**
The product could be affected by sectorial legislation

**15.2 Chemical safety assessment:**
The supplier has not carried out evaluation of chemical safety.

SECTION 16: OTHER INFORMATION

**Legislation related to safety data sheets:**
This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) No 1907/2006 (Regulation (EC) No 2015/830)

**Modifications related to the previous Safety Data Sheet which concerns the ways of managing risks:**
Non-applicable

**Texts of the legislative phrases mentioned in section 2:**
H225: Highly flammable liquid and vapour
H336: May cause drowsiness or dizziness
H319: Causes serious eye irritation

**Texts of the legislative phrases mentioned in section 3:**
The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3

**CLP Regulation (EC) No 1272/2008:**
Eye Irrit. 2: H319 - Causes serious eye irritation
Flam. Liq. 2: H225 - Highly flammable liquid and vapour
STOT SE 3: H336 - May cause drowsiness or dizziness

**Advice related to training:**
Minimal training is recommended in order to prevent industrial risks for staff using this product and to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

**Principal bibliographical sources:**
http://echa.europa.eu
http://eur-lex.europa.eu

**Abbreviations and acronyms:**
ADR: European agreement concerning the international carriage of dangerous goods by road
IMDG: International maritime dangerous goods code
IATA: International Air Transport Association
ICAO: International Civil Aviation Organisation
COD: Chemical Oxygen Demand
BOD5: 5-day biochemical oxygen demand
BCF: Bioconcentration factor
LD50: Lethal Dose 50
LC50: Lethal Concentration 50
EC50: Effective concentration 50
Log-POW: Octanol–water partition coefficient
Koc: Partition coefficient of organic carbon

The information contained in this safety data sheet is based on sources, technical knowledge and current legislation at European and state level, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product, it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within our awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.
SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier: KB-03-008 Reagent E

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

Relevant uses: Research use. For professional user only.

Uses advised against: All uses not specified in this section or in section 7.3

1.3 Details of the supplier of the safety data sheet:

BIOQUOCHEM S.L.
Edificio CEEI. Parque Tecnológico de Asturias
33428 Llanera - Asturias - ESpaña
Phone: 985269292
hmunoz@bioquochem.com
http://www.bqckit.com

1.4 Emergency telephone number: +34985269292 (9:00-19:00 UTC+1h; M-F)

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:

CLP Regulation (EC) No 1272/2008:

Classification of this product has been carried out in accordance with CLP Regulation (EC) No 1272/2008.

Eye Irrit. 2: Eye irritation, Category 2, H319
Skin Irrit. 2: Skin irritation, Category 2, H315

2.2 Label elements:

CLP Regulation (EC) No 1272/2008:

Warning

Eye Irrit. 2: H319 - Causes serious eye irritation
Skin Irrit. 2: H315 - Causes skin irritation

Precautionary statements:

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

2.3 Other hazards:

Product fails to meet PBT/vPvB criteria

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance:

Non-applicable

3.2 Mixture:

Chemical description: Aqueous solution of organic and inorganic compounds, glycol-ethers, surfactants, enzymes and colourants.

Components:

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

<table>
<thead>
<tr>
<th>Identification</th>
<th>Chemical name/Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS: 50-01-1</td>
<td>guanidinium chloride *</td>
<td>ATP CLP00</td>
</tr>
<tr>
<td>EC: 200-002-3</td>
<td>Index: 607-148-00-0</td>
<td>25 - &lt;50 %</td>
</tr>
<tr>
<td>REACH ID 12119977063.35-XXX</td>
<td>Regulation 1272/2008</td>
<td>Acute Tox. 4: H302; Eye Irrit. 2: H319; Skin Irrit. 2: H315 - Warning</td>
</tr>
</tbody>
</table>

* Substances presenting a health or environmental hazard which meet criteria laid down in Regulation (EU) No. 2015/830

- CONTINUED ON NEXT PAGE -
SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS (continued)

To obtain more information on the risk of the substances consult sections 8, 11, 12, 15 and 16.

SECTION 4: FIRST AID MEASURES

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

By inhalation:
This product does not contain substances classified as hazardous for inhalation, however, in case of symptoms of intoxication remove the person affected from the exposure area and provide with fresh air. Seek medical attention if the symptoms get worse or persist.

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

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

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

4.2 Most important symptoms and effects, both acute and delayed:
Acute and delayed effects are indicated in sections 2 and 11.

4.3 Indication of any immediate medical attention and special treatment needed:
Non-applicable

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media:
Product is non-flammable under normal conditions of storage, handling and use. In the case of combustion as a result of improper handling, storage or use preferably use polyvalent powder extinguishers (ABC powder), in accordance with the Regulation on fire protection systems. IT IS NOT RECOMMENDED to use tap water as an extinguishing agent.

5.2 Special hazards arising from the substance or mixture:
As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

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

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

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:
Isolate leaks provided that there is no additional risk for the people performing this task. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Evacuate the area and keep out those who do not have protection.

6.2 Environmental precautions:
This product is not classified as hazardous to the environment. Keep product away from drains, surface and ground water.

6.3 Methods and material for containment and cleaning up:
It is recommended:
 KB-03-008 Reagent E

SECTION 6: ACCIDENTAL RELEASE MEASURES (continued)

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

6.4 Reference to other sections:
See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:
A.- Precautions for safe manipulation
Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.
B.- Technical recommendations for the prevention of fires and explosions
Product is non-flammable under normal conditions of storage, handling and use. It is recommended to transfer at slow speeds to avoid the generation of electrostatic charges that can affect flammable products. Consult section 10 for information on conditions and materials that should be avoided.
C.- Technical recommendations to prevent ergonomic and toxicological risks
Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.
D.- Technical recommendations to prevent environmental risks
It is recommended to have absorbent material available at close proximity to the product (See subsection 6.3)

7.2 Conditions for safe storage, including any incompatibilities:
A.- Technical measures for storage
Minimum Temp.: 5 ºC
Maximum Temp.: 30 ºC
Maximum time: 6 Months
B.- General conditions for storage
Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

7.3 Specific end use(s):
Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

SECTION 8: EXPOSURE CONTROLS/PERSOAL PROTECTION

8.1 Control parameters:
Substances whose occupational exposure limits have to be monitored in the work environment
There are no occupational exposure limits for the substances contained in the product

DNEL (Workers):
Non-applicable

DNEL (General population):
Non-applicable

PNEC:

<table>
<thead>
<tr>
<th>Identification</th>
<th>STP</th>
<th>Fresh water</th>
<th>0,29 mg/L</th>
</tr>
</thead>
<tbody>
<tr>
<td>guanidinium chloride</td>
<td>7125 mg/L</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAS: 50-01-1</td>
<td>Soil</td>
<td>Marine water</td>
<td>0,029 mg/L</td>
</tr>
<tr>
<td>EC: 200-002-3</td>
<td>Intermittent</td>
<td>Sediment (Fresh water)</td>
<td>1,08 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Oral</td>
<td>Sediment (Marine water)</td>
<td>0,108 mg/kg</td>
</tr>
</tbody>
</table>

8.2 Exposure controls:
A.- General security and hygiene measures in the work place
SECTION 8: EXPOSURE CONTROLS/PERSOANL PROTECTION (continued)

As a preventative measure it is recommended to use basic Personal Protective Equipment, with the corresponding <<CE marking>> in accordance with Directive 89/686/EC. For more information on Personal Protective Equipment (storage, use, cleaning, maintenance, class of protection,…) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1.

All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

B. Respiratory protection

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

C. Specific protection for the hands

<table>
<thead>
<tr>
<th>Pictogram</th>
<th>PPE</th>
<th>Labelling</th>
<th>CEN Standard</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>[image]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

"As the product is a mixture of several substances, the resistance of the glove material can not be predicted in advance with total reliability and has therefore to be checked prior to the application"

D. Ocular and facial protection

<table>
<thead>
<tr>
<th>Pictogram</th>
<th>PPE</th>
<th>Labelling</th>
<th>CEN Standard</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>[image]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

E. Body protection

<table>
<thead>
<tr>
<th>Pictogram</th>
<th>PPE</th>
<th>Labelling</th>
<th>CEN Standard</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>[image]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

F. Additional emergency measures

<table>
<thead>
<tr>
<th>Emergency measure</th>
<th>Standards</th>
<th>Emergency measure</th>
<th>Standards</th>
</tr>
</thead>
</table>

Environmental exposure controls:

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

Volatile organic compounds:

With regard to Directive 2010/75/EU, this product has the following characteristics:

- V.O.C. (Supply): 0 % weight
- V.O.C. density at 20 °C: 0 kg/m³ (0 g/L)
- Average carbon number: Non-applicable
- Average molecular weight: Non-applicable

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

*Not relevant due to the nature of the product, not providing information property of its hazards.
For complete information see the product datasheet.

### Appearance:
- Physical state at 20 °C: Liquid
- Appearance: Not available
- Colour: Not available
- Odour: Not available
- Odour threshold: Non-applicable *

### Volatility:
- Boiling point at atmospheric pressure: Non-applicable *
- Vapour pressure at 20 °C: Non-applicable *
- Vapour pressure at 50 °C: <300000 Pa (300 kPa)
- Evaporation rate at 20 °C: Non-applicable *

### Product description:
- Density at 20 °C: 1129 kg/m³
- Relative density at 20 °C: 1,129
- Dynamic viscosity at 20 °C: Non-applicable *
- Kinematic viscosity at 20 °C: Non-applicable *
- Kinematic viscosity at 40 °C: Non-applicable *
- Concentration: Non-applicable *
- pH: Non-applicable *
- Vapour density at 20 °C: Non-applicable *
- Partition coefficient n-octanol/water 20 °C: Non-applicable *
- Solubility in water at 20 °C: Non-applicable *
- Solubility properties: Non-applicable *
- Decomposition temperature: Non-applicable *
- Melting point/freezing point: Non-applicable *
- Explosive properties: Non-applicable *
- Oxidising properties: Non-applicable *

### Flammability:
- Flash Point: Non Flammable (>60 °C)
- Flammability (solid, gas): Non-applicable *
- Autoignition temperature: Non-applicable *
- Lower flammability limit: Non-applicable *
- Upper flammability limit: Non-applicable *

### Explosive:
- Lower explosive limit: Non-applicable *
- Upper explosive limit: Non-applicable *

### Other information:
- Surface tension at 20 °C: Non-applicable *
- Refraction index: Non-applicable *

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

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### SECTION 10: STABILITY AND REACTIVITY

#### 10.1 Reactivity:
No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7.
SECTION 10: STABILITY AND REACTIVITY (continued)

10.2 Chemical stability:
Chemically stable under the conditions of storage, handling and use.

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

10.4 Conditions to avoid:
Applicable for handling and storage at room temperature:

<table>
<thead>
<tr>
<th>Shock and friction</th>
<th>Contact with air</th>
<th>Increase in temperature</th>
<th>Sunlight</th>
<th>Humidity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

10.5 Incompatible materials:

<table>
<thead>
<tr>
<th>Acids</th>
<th>Water</th>
<th>Combustive materials</th>
<th>Combustible materials</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avoid strong acids</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Avoid alkalis or strong bases</td>
</tr>
</tbody>
</table>

10.6 Hazardous decomposition products:
See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO2), carbon monoxide and other organic compounds.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:
The experimental information related to the toxicological properties of the product itself is not available

Dangerous health implications:
In case of exposure that is repetitive, prolonged or at concentrations higher than the recommended occupational exposure limits, adverse effects on health may result, depending on the means of exposure:
A.- Ingestion (acute effect):
- Acute toxicity: Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous for consumption. For more information see section 3.
- Corrosivity/Irritability: The consumption of a considerable dose can cause irritation in the throat, abdominal pain, nausea and vomiting.
B.- Inhalation (acute effect):
- Acute toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for inhalation. For more information see section 3.
- Corrosivity/Irritability: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
C.- Contact with the skin and the eyes (acute effect):
- Contact with the skin: Produces skin inflammation.
- Contact with the eyes: Produces eye damage after contact.
D.- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):
- Carcinogenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for the effects mentioned. For more information see section 3.
- Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
- Reproductive toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
E.- Sensitizing effects:
- Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous with sensitising effects. For more information see section 3.
- Cutaneous: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
F.- Specific target organ toxicity (STOT) - single exposure:
Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
G.- Specific target organ toxicity (STOT)-repeated exposure:

- CONTINUED ON NEXT PAGE -
SECTION 11: TOXICOLOGICAL INFORMATION (continued)

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

H- Aspiration hazard:

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

Other information:

Non-applicable

Specific toxicology information on the substances:

<table>
<thead>
<tr>
<th>Identification</th>
<th>Acute toxicity</th>
<th>Genus</th>
</tr>
</thead>
<tbody>
<tr>
<td>guanidinium chloride</td>
<td>LD50 oral 907 mg/kg</td>
<td>Rat</td>
</tr>
<tr>
<td>CAS: 50-01-1</td>
<td>LD50 dermal Non-applicable</td>
<td></td>
</tr>
<tr>
<td>EC: 200-002-3</td>
<td>LC50 inhalation Non-applicable</td>
<td></td>
</tr>
</tbody>
</table>

SECTION 12: ECOLOGICAL INFORMATION

The experimental information related to the eco-toxicological properties of the product itself is not available

12.1 Toxicity:

<table>
<thead>
<tr>
<th>Identification</th>
<th>Acute toxicity</th>
<th>Species</th>
<th>Genus</th>
</tr>
</thead>
<tbody>
<tr>
<td>guanidinium chloride</td>
<td>LC50 1850 mg/L (96 h)</td>
<td>Pimephales promelas</td>
<td>Fish</td>
</tr>
<tr>
<td>CAS: 50-01-1</td>
<td>EC50 70 mg/L (48 h)</td>
<td>Daphnia magna</td>
<td>Crustacean</td>
</tr>
<tr>
<td>EC: 200-002-3</td>
<td>EC50 33 mg/L (72 h)</td>
<td>Pseudokirchneriella subcapitata</td>
<td>Algae</td>
</tr>
</tbody>
</table>

12.2 Persistence and degradability:

<table>
<thead>
<tr>
<th>Identification</th>
<th>Degradability</th>
<th>Biodegradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>guanidinium chloride</td>
<td>BOD5 Non-applicable</td>
<td>Concentration 20 mg/L</td>
</tr>
<tr>
<td>CAS: 50-01-1</td>
<td>COD Non-applicable</td>
<td>Period 22 days</td>
</tr>
<tr>
<td>EC: 200-002-3</td>
<td>BOD5/COD Non-applicable</td>
<td>% Biodegradable 100 %</td>
</tr>
</tbody>
</table>

12.3 Bioaccumulative potential:

<table>
<thead>
<tr>
<th>Identification</th>
<th>Bioaccumulation potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>guanidinium chloride</td>
<td>BCF 1</td>
</tr>
<tr>
<td>CAS: 50-01-1</td>
<td>Pow Log -1.63</td>
</tr>
<tr>
<td>EC: 200-002-3</td>
<td>Potential Low</td>
</tr>
</tbody>
</table>

12.4 Mobility in soil:

Not available

12.5 Results of PBT and vPvB assessment:

Product fails to meet PBT/vPvB criteria

12.6 Other adverse effects:

Not described

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Waste class (Regulation (EU) No 1357/2014)</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 05 06*</td>
<td>Laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals</td>
<td>Dangerous</td>
</tr>
</tbody>
</table>

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

HP4 Irritant — skin irritation and eye damage, HP6 Acute Toxicity

Waste management (disposal and evaluation):
SECTION 13: DISPOSAL CONSIDERATIONS (continued)

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

Regulations related to waste management:

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


SECTION 14: TRANSPORT INFORMATION

This product is not regulated for transport (ADR/RID,IMDG,IATA)

SECTION 15: REGULATORY INFORMATION

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

Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Non-applicable

Substances included in Annex XIV of REACH (“Authorisation List”) and sunset date: Non-applicable

Regulation (EC) No 1005/2009, about substances that deplete the ozone layer: Non-applicable

Article 95, REGULATION (EU) No 528/2012: Non-applicable

REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Non-applicable

Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII REACH, etc ….):

Non-applicable

Specific provisions in terms of protecting people or the environment:

It is recommended to use the information included in this safety data sheet as a basis for conducting workplace-specific risk assessments in order to establish the necessary risk prevention measures for the handling, use, storage and disposal of this product.

Other legislation:

The product could be affected by sectorial legislation

15.2 Chemical safety assessment:

The supplier has not carried out evaluation of chemical safety.

SECTION 16: OTHER INFORMATION

Legislation related to safety data sheets:

This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) No 1907/2006 (Regulation (EC) No 2015/830)

Modifications related to the previous Safety Data Sheet which concerns the ways of managing risks.:

Non-applicable

Texts of the legislative phrases mentioned in section 2:

H315: Causes skin irritation
H319: Causes serious eye irritation

Texts of the legislative phrases mentioned in section 3:

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

CLP Regulation (EC) No 1272/2008:

Acute Tox. 4: H302 - Harmful if swallowed
Eye Irrit. 2: H319 - Causes serious eye irritation
Skin Irrit. 2: H315 - Causes skin irritation

Classification procedure:

Skin Irrit. 2: Calculation method
Eye Irrit. 2: Calculation method

Advice related to training:

- CONTINUED ON NEXT PAGE -
SECTION 16: OTHER INFORMATION (continued)

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

Principal bibliographical sources:
http://echa.europa.eu
http://eur-lex.europa.eu

Abbreviations and acronyms:
ADR: European agreement concerning the international carriage of dangerous goods by road
IMDG: International maritime dangerous goods code
IATA: International Air Transport Association
ICAO: International Civil Aviation Organisation
COD: Chemical Oxygen Demand
BOD5: 5-day biochemical oxygen demand
BCF: Bioconcentration factor
LD50: Lethal Dose 50
LC50: Lethal Concentration 50
EC50: Effective concentration 50
Log-POW: Octanol–water partition coefficient
Koc: Partition coefficient of organic carbon
SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier: KB-03-008 Reagent F

Streptozocin
CAS: 18883-66-4
EC: 242-646-8
Index: Non-applicable
REACH: Non-applicable

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

Relevant uses: Research use. For professional user only.
Uses advised against: All uses not specified in this section or in section 7.3

1.3 Details of the supplier of the safety data sheet:

BIOQUOCHEM S.L.
Edificio CEEI. Parque Tecnológico de Asturias
33428 Llanera - Asturias - ESpaña
Phone.: 985269292
hmunoz@bioquochem.com
http://www.bqckit.com

1.4 Emergency telephone number: +34985269292 (9:00-19:00 UTC+1h; M-F)

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:

CLP Regulation (EC) No 1272/2008:
Classification of this product has been carried out in accordance with CLP Regulation (EC) No 1272/2008.
Carc. 1B: Carcinogenicity, Category 1B, H350

2.2 Label elements:

CLP Regulation (EC) No 1272/2008:
Danger

Hazard statements:
Carc. 1B: H350 - May cause cancer

Precautionary statements:
P201: Obtain special instructions before use
P202: Do not handle until all safety precautions have been read and understood
P308+P313: IF exposed or concerned: Get medical advice/attention
P405: Store locked up
P501: Dispose of contents and / or containers in accordance with regulations on hazardous waste or packaging and packaging waste respectively

Additional Labelling (Annex XVII, REACH):
Restricted to professional users

2.3 Other hazards:
Product fails to meet PBT/vPvB criteria

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance:
Chemical description: Aqueous solution of organic and inorganic compounds, glycol-ethers, surfactants, enzymes and colourants.

Components:
In accordance with Annex II of Regulation (EC) No 1907/2006 (point 3), the product contains:
To obtain more information on the risk of the substances consult sections 8, 11, 12, 15 and 16.

### SECTION 4: FIRST AID MEASURES

4.1 **Description of first aid measures:**

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

**By inhalation:**

This product does not contain substances classified as hazardous for inhalation, however, in case of symptoms of intoxication remove the person affected from the exposure area and provide with fresh air. Seek medical attention if the symptoms get worse or persist.

**By skin contact:**

In case of contact it is recommended to clean the affected area thoroughly with water and neutral soap. In case of changes to the skin (stinging, redness, rashes, blisters,…), seek medical advice with this Safety data Sheet

**By eye contact:**

This product does not contain substances classified as hazardous for eye contact. Rinse eyes thoroughly for at least 15 minutes with lukewarm water, ensuring that the person affected does not rub or close their eyes.

**By ingestion/aspiration:**

In case of consumption, seek immediate medical assistance showing the SDS for the product.

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

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

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

Non-applicable

### SECTION 5: FIREFIGHTING MEASURES

5.1 **Extinguishing media:**

Product is non-flammable under normal conditions of storage, handling and use. In the case of combustion as a result of improper handling, storage or use preferably use polyvalent powder extinguishers (ABC powder), in accordance with the Regulation on fire protection systems. IT IS NOT RECOMMENDED to use tap water as an extinguishing agent.

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

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

5.3 **Advice for firefighters:**

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

**Additional provisions:**

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

### SECTION 6: ACCIDENTAL RELEASE MEASURES

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

Sweep up and shovel product or collect by other means and place in container for reuse (preferred) or disposal

6.2 **Environmental precautions:**

- CONTINUED ON NEXT PAGE -
SECTION 6: ACCIDENTAL RELEASE MEASURES (continued)

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

6.3 Methods and material for containment and cleaning up:

It is recommended:

Sweep up and shovel product or collect by other means and place in container for reuse (preferred) or disposal

6.4 Reference to other sections:

See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:

A.- Precautions for safe manipulation

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

B.- Technical recommendations for the prevention of fires and explosions

Due to its non-flammable nature, the product does not present a fire risk under normal conditions of storage, handling and use.

C.- Technical recommendations to prevent ergonomic and toxicological risks

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

D.- Technical recommendations to prevent environmental risks

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

7.2 Conditions for safe storage, including any incompatibilities:

A.- Technical measures for storage

Minimum Temp.: 5 °C
Maximum Temp.: 30 °C
Maximum time: 6 Months

B.- General conditions for storage

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

7.3 Specific end use(s):

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

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters:

Substances whose occupational exposure limits have to be monitored in the work environment

Nuisance dust: Inhalable dust 10 mg/m3 // Respirable dust 4 mg/m3

DNEL (Workers):

Non-applicable

DNEL (General population):

Non-applicable

PNEC:

Non-applicable

8.2 Exposure controls:

A.- General security and hygiene measures in the work place

As a preventative measure it is recommended to use basic Personal Protective Equipment, with the corresponding <<CE marking>> in accordance with Directive 89/686/EC. For more information on Personal Protective Equipment (storage, use, cleaning, maintenance, class of protection,… ) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1.

All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

B.- Respiratory protection
## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

<table>
<thead>
<tr>
<th>Pictogram</th>
<th>PPE</th>
<th>Labelling</th>
<th>CEN Standard</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Mandatory respiratory protection" /></td>
<td><strong>Filter mask for gases and vapours</strong></td>
<td><img src="image" alt="Cat III" /></td>
<td>EN 405:2001+A1:2009</td>
<td>Replace when there is a taste or smell of the contaminant inside the face mask. If the contaminant comes with warnings it is recommended to use isolation equipment.</td>
</tr>
<tr>
<td><img src="image" alt="Mandatory hand protection" /></td>
<td><strong>NON-disposable chemical protective gloves</strong></td>
<td><img src="image" alt="Cat III" /></td>
<td>EN 374-1:2003 EN 374-3:2003/AC:2006 EN 420:2003+A1:2009</td>
<td>The Breakthrough Time indicated by the manufacturer must exceed the period during which the product is being used. Do not use protective creams after the product has come into contact with skin.</td>
</tr>
<tr>
<td><img src="image" alt="Mandatory face protection" /></td>
<td><strong>Face mask</strong></td>
<td><img src="image" alt="Cat II" /></td>
<td>EN 166:2001 EN 167:2001 EN 168:2001 EN ISO 4007:2012</td>
<td>Clean daily and disinfect periodically according to the manufacturer’s instructions. Use if there is a risk of splashing.</td>
</tr>
<tr>
<td><img src="image" alt="Mandatory foot protection" /></td>
<td><strong>Safety footwear for protection against chemical risk</strong></td>
<td><img src="image" alt="Cat III" /></td>
<td>EN ISO 20345:2011 EN 13832-1:2005</td>
<td>Replace boots at any sign of deterioration.</td>
</tr>
</tbody>
</table>

### C. Specific protection for the hands

### D. Ocular and facial protection

### E. Body protection

### F. Additional emergency measures

<table>
<thead>
<tr>
<th>Emergency measure</th>
<th>Standards</th>
<th>Emergency measure</th>
<th>Standards</th>
</tr>
</thead>
</table>

### Environmental exposure controls:

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

### Volatile organic compounds:

With regard to Directive 2010/75/EU, this product has the following characteristics:

- **V.O.C. (Supply):** 0 % weight
- **V.O.C. density at 20 °C:** 0 kg/m³ (0 g/L)
- **Average carbon number:** Non-applicable
- **Average molecular weight:** Non-applicable

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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

For complete information see the product datasheet.

### Appearance:

*Not relevant due to the nature of the product, not providing information property of its hazards.*
SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state at 20 °C</td>
<td>Solid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Not available</td>
</tr>
<tr>
<td>Colour</td>
<td>Not available</td>
</tr>
<tr>
<td>Odour</td>
<td>Not available</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>Non-applicable *</td>
</tr>
<tr>
<td><strong>Vapour pressure at 20 °C</strong></td>
<td>Non-applicable *</td>
</tr>
<tr>
<td><strong>Vapour pressure at 50 °C</strong></td>
<td>&lt;300000 Pa (300 kPa)</td>
</tr>
<tr>
<td><strong>Evaporation rate at 20 °C</strong></td>
<td>Non-applicable *</td>
</tr>
<tr>
<td><strong>Product description:</strong></td>
<td></td>
</tr>
<tr>
<td>Density at 20 °C</td>
<td>1100 kg/m³</td>
</tr>
<tr>
<td>Relative density at 20 °C</td>
<td>1,1</td>
</tr>
<tr>
<td>Dynamic viscosity at 20 °C</td>
<td>Non-applicable *</td>
</tr>
<tr>
<td>Kinematic viscosity at 20 °C</td>
<td>Non-applicable *</td>
</tr>
<tr>
<td>Kinematic viscosity at 40 °C</td>
<td>Non-applicable *</td>
</tr>
<tr>
<td>Concentration</td>
<td>Non-applicable *</td>
</tr>
<tr>
<td><strong>pH</strong></td>
<td>Non-applicable *</td>
</tr>
<tr>
<td>Vapour density at 20 °C</td>
<td>Non-applicable *</td>
</tr>
<tr>
<td>Partition coefficient n-octanol/water 20 °C</td>
<td>Non-applicable *</td>
</tr>
<tr>
<td>Solubility in water at 20 °C</td>
<td>Non-applicable *</td>
</tr>
<tr>
<td>Solubility properties</td>
<td>Non-applicable *</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Non-applicable *</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>Non-applicable *</td>
</tr>
<tr>
<td><strong>Explosive properties</strong></td>
<td>Non-applicable *</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>Non-applicable *</td>
</tr>
<tr>
<td><strong>Flammability:</strong></td>
<td></td>
</tr>
<tr>
<td>Flash Point</td>
<td>Non-applicable</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Non-applicable *</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>Non-applicable *</td>
</tr>
<tr>
<td>Lower flammability limit</td>
<td>Non-applicable *</td>
</tr>
<tr>
<td>Upper flammability limit</td>
<td>Non-applicable *</td>
</tr>
<tr>
<td><strong>Explosive:</strong></td>
<td>Non-applicable *</td>
</tr>
<tr>
<td>Lower explosive limit</td>
<td>Non-applicable *</td>
</tr>
<tr>
<td>Upper explosive limit</td>
<td>Non-applicable *</td>
</tr>
</tbody>
</table>

**Other information:**
- Surface tension at 20 °C: Non-applicable *
- Refraction index: Non-applicable *

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

SECTION 10: STABILITY AND REACTIVITY

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

10.2 Chemical stability:
Chemically stable under the conditions of storage, handling and use.
SECTION 10: STABILITY AND REACTIVITY (continued)

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

10.4 Conditions to avoid:
Applicable for handling and storage at room temperature:

<table>
<thead>
<tr>
<th>Shock and friction</th>
<th>Contact with air</th>
<th>Increase in temperature</th>
<th>Sunlight</th>
<th>Humidity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

10.5 Incompatible materials:

<table>
<thead>
<tr>
<th>Acids</th>
<th>Water</th>
<th>Combustive materials</th>
<th>Combustible materials</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avoid strong acids</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Avoid alkalis or strong bases</td>
</tr>
</tbody>
</table>

10.6 Hazardous decomposition products:

See subsection 10.5, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO2), carbon monoxide and other organic compounds.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:
The experimental information related to the toxicological properties of the product itself is not available.

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

A- Ingestion (acute effect):
- Acute toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for consumption. For more information see section 3.
- Corrosivity/Irritability: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

B- Inhalation (acute effect):
- Acute toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for inhalation. For more information see section 3.
- Corrosivity/Irritability: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

C- Contact with the skin and the eyes (acute effect):
- Contact with the skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for skin contact. For more information see section 3.
- Contact with the eyes: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):
- Carcinogenicity: Exposure to this product can cause cancer. For more specific information on the possible health effects see section 2.
- Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
- Reproductive toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

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

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

G- Specific target organ toxicity (STOT)-repeated exposure:
- Specific target organ toxicity (STOT)-repeated exposure: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
- Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
 SECTION 11: TOXICOLOGICAL INFORMATION (continued)

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

Other information:
Non-applicable

Specific toxicology information on the substances:
Not available

SECTION 12: ECOLOGICAL INFORMATION

The experimental information related to the eco-toxicological properties of the product itself is not available

12.1 Toxicity:
   Not available

12.2 Persistence and degradability:
   Not available

12.3 Bioaccumulative potential:
   Not available

12.4 Mobility in soil:
   Not available

12.5 Results of PBT and vPvB assessment:
   Product fails to meet PBT/vPvB criteria

12.6 Other adverse effects:
   Not described

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Waste class (Regulation (EU) No 1357/2014)</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 05 06*</td>
<td>Laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals</td>
<td>Dangerous</td>
</tr>
</tbody>
</table>

Type of waste (Regulation (EU) No 1357/2014):
HP7 Carcinogenic

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

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

SECTION 14: TRANSPORT INFORMATION

This product is not regulated for transport (ADR/RID, IMDG, IATA)
SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:
- Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Non-applicable
- Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Non-applicable
- Regulation (EC) No 1005/2009, about substances that deplete the ozone layer: Non-applicable
- Article 95, REGULATION (EU) No 528/2012: Non-applicable
- REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Non-applicable
- Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Non-applicable
- Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Non-applicable
- The supplier has not carried out evaluation of chemical safety.

15.2 Chemical safety assessment:
- The product could be affected by sectorial legislation

SECTION 16: OTHER INFORMATION

Legislation related to safety data sheets:
- This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) No 1907/2006 (Regulation (EC) No 2015/830)

Modifications related to the previous Safety Data Sheet which concerns the ways of managing risks.:
- Non-applicable

Texts of the legislative phrases mentioned in section 2:
- H350: May cause cancer

Texts of the legislative phrases mentioned in section 3:
- The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3

CLP Regulation (EC) No 1272/2008:
- Carc. 1B: H350 - May cause cancer

Advice related to training:
- Minimal training is recommended in order to prevent industrial risks for staff using this product and to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

Principal bibliographical sources:
- http://echa.europa.eu
- http://eur-lex.europa.eu

Abbreviations and acronyms:
- ADR: European agreement concerning the international carriage of dangerous goods by road
- IMDG: International maritime dangerous goods code
- IATA: International Air Transport Association
- ICAO: International Civil Aviation Organisation
- COD: Chemical Oxygen Demand
- BOD5: 5-day biochemical oxygen demand
- BCF: Bioconcentration factor
- LD50: Lethal Dose 50
- LC50: Lethal Concentration 50
- EC50: Effective concentration 50
- Log-POW: Octanol–water partition coefficient
- Koc: Partition coefficient of organic carbon

The information contained in this safety data sheet is based on sources, technical knowledge and current legislation at European and state level, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product, it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within our awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.

- END OF SAFETY DATA SHEET -