1. Identification of the mixture and of the company

1.1 Product identifier
MATACHANA BluKat® Sterilising solution
Hydrogen peroxide content: 59%

1.2 Relevant identified uses of the substance or mixture and uses advised against
Sterilization solution to be used as sterilizing agent in Matachana HPO sterilizers in strict compliance with their operation manual.

1.3 Details of the supplier of the safety data sheet
ANTONIO MATACHANA, S.A.
C/ Almogàvers, 174. E-08018 Barcelona (Spain)

1.4 Emergency telephone number
Tel. +34 93 300 80 12 (Office hours) / e-mail: info@matachana.com

2. Hazards identification

2.1 Classification of the mixture acc. Regulation (EC) No. 1272/2008
Ox. Liq. 2: H272
Acute Tox. 4: H332
Acute Tox. 4: H302
Skin Corr. 1B: H314
STOT SE 3: H335

2.2 Label elements acc. Regulation (EC) No. 1272/2008
Contents: Hydrogen peroxide 59% (CAS No.: 7722-84-1)
Hazard pictograms and signal word:

Hazard statements:
H272 May intensify fire; oxidiser.
H332 Harmful if inhaled.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H335 May cause respiratory irritation.

Precautionary statements:
P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.
P280 Wear protective gloves.
P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position 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.
P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

2.3 Other hazards
For results of PBT and vPvB assessment see Section 12.5.
3. Composition/information on ingredients

3.2 Mixtures

59% aqueous solution of hydrogen peroxide (EC No. 231-765-0).

Substances that contribute to the hazards of the mixture:

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS No.</th>
<th>Classification Directive 67/548/EC</th>
<th>Classification Regulation 1272/2008/EC</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen peroxide</td>
<td>7722-84-1</td>
<td>R5</td>
<td>Ox. Liq. 1;</td>
<td>59</td>
</tr>
<tr>
<td></td>
<td></td>
<td>O; R8</td>
<td>Acute Tox. 4;</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>C; R35</td>
<td>Acute Tox. 4;</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Xn; R20/22</td>
<td>Skin Corr. 1A;</td>
<td></td>
</tr>
</tbody>
</table>

Specific concentration limits

<table>
<thead>
<tr>
<th>Specific concentration limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>C ≥ 50 % Xn; R20</td>
</tr>
<tr>
<td>C ≥ 8 % Xn; R22</td>
</tr>
<tr>
<td>C ≥ 70 % C; R35</td>
</tr>
<tr>
<td>50 % ≤ C &lt; 70 % C; R34</td>
</tr>
<tr>
<td>35 % ≤ C &lt; 50 % Xi; R37/38</td>
</tr>
<tr>
<td>8 % ≤ C &lt; 8 % Xi; R41</td>
</tr>
<tr>
<td>5 % ≤ C &lt; 8 % Note O; R8</td>
</tr>
<tr>
<td>C ≥ 70 % R5</td>
</tr>
</tbody>
</table>

4. First aid measures

4.1 Description of first aid measures

If inhaled: In case of accident by inhalation: remove casualty to fresh air and keep at rest. If breathing is irregular or stopped, administer artificial respiration. Call a physician immediately.

In case of skin contact: Take off all contaminated clothing immediately and wash off immediately with plenty of water. Obtain medical attention.

In case of eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Consult an eye specialist immediately. Go to an ophthalmic hospital if possible.

If swallowed: Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

See Section 2, on mixture hazards, and Section 11, on toxicological effects.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically and seek medical attention.
5. **Firefighting measures**

5.1 Extinguishing media

Suitable extinguishing media: The product itself does not burn. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media: None known.

5.2 Special hazards arising from the substance or mixture

The product itself does not burn, but in contact with combustible substances it increases the risk of fire and can fuel any existing fire substantially.

5.3 Advice for firefighters

The product itself does not burn, but in contact with combustible substances it increases the risk of fire and can fuel any existing fire substantially.

6. **Accidental release measures**

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Keep away from heat and sources of ignition. Avoid contact with skin and eyes. Do not breathe vapours or spray mist. For personal protection, see Section 8.

6.2 Environmental precautions

Do not flush into surface water or sanitary sewer system. Dilute with water. Local authorities should be advised if significant spillages cannot be contained.

6.3 Methods and material for containment and cleaning up

6.3.1 Accidental spills or leakages

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13).

6.4 Reference to other Sections

For personal protection, see Section 8. For conditions concerning the elimination, see Section 13.

7. **Handling and storage**

7.1 Precautions for safe handling

7.2.1 Advice on safe handling:

Do not keep the container sealed. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Do not breathe vapours or spray mist. Emergency eyewash fountains and emergency showers should be available in the immediate vicinity.

7.2.2 Hygiene measures:

Keep away from food, drink and animal feeding stuffs. Smoking, eating and drinking should be prohibited in the application area. Wash hands before breaks and at the end of workday. Provide adequate ventilation. Take off all contaminated clothing immediately. Avoid contact with the skin and the eyes. Do not breathe vapours or spray mist.

7.2 Conditions for safe storage, including any incompatibilities

7.2.3 Requirements for storage areas and containers:

7. (Continues)

7.2.4 Advice on protection against fire and explosion:

Oxidising. Contact with combustible material may cause fire. Keep away from sources of ignition - No smoking.

7.2.5 Further information on storage conditions:

Do not keep the container sealed. Keep in a well-ventilated place. Store in cool place. Protect against light. Protect from contamination.

7.2.6 Advice on common storage:

Keep away from food, drink and animal feeding stuffs. Keep away from combustible material.

7.2.7 German storage class: 5.1BL Oxidising Liquids.

7.3 Specific end uses

The Matachana BluKat® Sterilising Solution may only be used in Matachana HPO sterilizers.

8. Exposure controls/personal protection

8.1. Control parameters

   a) Exposure Limit Values:

<table>
<thead>
<tr>
<th>EC No.</th>
<th>CAS No.</th>
<th>Name of the substance</th>
<th>Limit Value (TLV)</th>
<th>Limit Value (MAK)</th>
</tr>
</thead>
<tbody>
<tr>
<td>231-765-0</td>
<td>7722-84-1</td>
<td>Hydrogen peroxide</td>
<td>1,4 mg/m³ (1 ppm)</td>
<td>0,71 mg/m³ (0,5 ppm)</td>
</tr>
</tbody>
</table>

   b) Biological Limit Values:

   Hydrogen peroxide has no Biological Limit Value.

8.2 Exposure controls

8.2.1 Appropriate engineering controls

Refer to protective measures listed in sections 7 and 8.2.2.

8.2.2 Individual protection measures

   a) Eye / face protection

   No special measures required.

   b) Skin protection

      i) Hand protection

      The glove material has to be impermeable and resistant to the product / the substance / the preparation. Take note of the information given by the producer concerning permeability and break through times, and of specific workplace conditions (mechanical strain, duration of contact). Protective gloves should be replaced at first signs of wear.

      Material: butyl-rubber / natural rubber / polychloroprene

      Break through time: < 8 h

      Glove thickness: 0,5 mm

      ii) Other

      Impervious clothing.

   c) Respiratory protection

      Use respirator with appropriate filter if vapours or aerosol are released. Combination filter: NO-P3 In case of intensive or longer exposure use self-contained breathing apparatus.

   d) Thermal hazards

      No special measures required.

8.2.3 Environmental exposure controls

Do not flush into surface water or sanitary sewer system. Dilute with water. Local authorities should be advised if significant spillages cannot be contained.
### 9. Physical and chemical properties

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aspect</td>
<td>colourless, clear liquid</td>
</tr>
<tr>
<td>Physical state</td>
<td>liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>colourless, clear</td>
</tr>
<tr>
<td>Odour</td>
<td>odourless</td>
</tr>
<tr>
<td>pH</td>
<td>1,0 - 3,5 at 20 ºC</td>
</tr>
<tr>
<td>Boiling range</td>
<td>119 ºC</td>
</tr>
<tr>
<td>Flash point</td>
<td>n.a.</td>
</tr>
<tr>
<td>Ignition temperature</td>
<td>no data available</td>
</tr>
<tr>
<td>Explosion hazard</td>
<td>none</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>no data available</td>
</tr>
<tr>
<td>Density</td>
<td>c.a. 1,24 g/cm³ at 20 ºC</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>completely miscible</td>
</tr>
<tr>
<td>Viscosity (dynamic)</td>
<td>no data available</td>
</tr>
</tbody>
</table>

#### 9.2 Other information

No further information available.

### 10. Stability and reactivity

#### 10.1 Reactivity

No decomposition if stored and applied as directed.

#### 10.2 Chemical stability

No decomposition if stored and applied as directed.

#### 10.3 Possibility of hazardous reactions

Oxidizing properties.

#### 10.4 Conditions to avoid

- Respect storage conditions (see section 7.2).
- Keep away from direct sunlight.
- Keep away from heat and sources of ignition.

#### 10.5 Incompatible materials

- Reducing agents, metal oxides and powdered metals.
- Protect from contamination.
- Keep away from combustible material.

#### 10.6 Hazardous decomposition products

Oxygen.

### 11. Toxicological information

#### 11.1 Information on toxicological effects

##### 11.1.1 Acute toxicity

- **Oral**
  - Acute toxicity estimate: 596,56 mg/kg.
  - LD50 Oral: 417,55 mg/kg (rat).
  - The toxicological value for the pure substance was calculated on basis of a value for an aqueous solution.

- **Dermal**
  - LD50 dermal: 4060 mg/kg (rabbit).

- **Inhalation**
  - Acute toxicity estimate: 15,72 mg/l.

##### 11.1.2 Irritation

- **Skin**
  - Corrosive effects (rabbit).

- **Eyes**
  - Corrosive effects (rabbit). Risk of serious damage to eyes.
11. (Continues)

11.1.3 Sensitisation
Not sensitising (guinea pig)

11.1.4 Further information
Other relevant toxicity information:
All numerical values for acute toxicity are calculated on the pure substances. If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach. Inhalation of aerosol may cause irritation to the upper respiratory tract. Symptoms of overexposure are dizziness, headache, tiredness, nausea, unconsciousness, cessation of breathing.

12. Ecological information

12.1 Toxicity
Fish: LC50 = 16.4 mg/l (Pimephales promelas; 96 h)
LC50 = 35 mg/l (Leuciscus idus melanotus; 24 h)
Daphnia and other aquatic invertebrates: EC50 = 7.7 mg/l (Daphnia magna; 24 h)
Algae: EC50 = 27.5 - 43 mg/l (scenedesmus quadricauda; 240 h)
Bacteria: EC10 = 11 mg/l (Pseudomonas putida; 16 h)

12.2 Persistence and degradability
Persistence: The product can be degraded by abiotic (e.g. chemical or photolytic) processes.
Biodegradability: Readily biodegradable.

12.3 Bioaccumulative potential
Does not bioaccumulate.

12.4 Mobility in soil
No data available.

12.5 Results of PBT and vPvB assessment
Not applicable.

12.6 Other adverse effects
All numerical values for ecotoxicity effects are calculated on the pure substances. Should not be released into the environment. May be a hazard to drinking water when very large quantities get into groundwater. Harmful effects to aquatic organisms due to pH-shift.

13. Disposal considerations

13.1 Waste treatment methods

13.1.1 Product
Disposal together with normal waste is not allowed. Special disposal required according to local regulations. Do not let product enter drains. Contact waste disposal services.

13.1.2 Contaminated packaging
Empty contaminated packaging thoroughly. They can be recycled after thorough and proper cleaning. Clean container with water. Packaging that cannot be cleaned are to be disposed of in the same manner as the product.

13.1.3 European Waste Catalogue Number
No waste code according to the European Waste Catalogue can be assigned for this product, as the intended use and the regional waste disposer dictates the assignment. The waste code is established in consultation with the regional waste disposer.
14. Transport information

14.1 UN number

2014

14.2. UN proper shipping name

ADR / RID / IMDG:

HYDROGEN PEROXIDE, AQUEOUS SOLUTION with more than 40 percent but not more than 60 percent hydrogen peroxide (stabilized as necessary).

14.3. Transport hazard class(es)

ROAD/RAIL TRANSPORT:
ADR/RID-Class: 5.1
Labels: 5.1, (8)
Classification Code: OC1
Hazard identification No: 58
Tunnel restriction code: (E)
Limited Quantities (LQ): 1L

SEA TRANSPORT:
IMDG-Class: 5.1
Labels: 5.1, (8)
EmS: F-H, S-Q
Limited Quantities (LQ): 1L

14.4. Packaging group

ADR / RID / IMDG: II

14.5. Environmental hazards

Labelling according to 5.2.1.8 ADR / 5.2.1.8 RID / 5.2.1.6.3 IMDG: no
Classification as environmentally hazardous according to 2.9.3 IMDG: no.
Classified as “P” according to 2.10 IMDG: no.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

IMDG: Not applicable.
15. Regulatory information

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


15.2 Chemical safety assessment

No chemical safety assessment has been carried out for this mixture.

16. Other information

The MATACHANA BluKat® Sterilizing Solution may only be used in strict compliance with the instructions for use or the operation manual of the Matachana HPO sterilizer by personnel with adequate training.

The information contained herein is based on our current knowledge. It does not represent any warranty concerning the properties of the equipment, nor does it constitute a contractual relationship.