1 Identification

· Product identifier
  · Trade name: Viva Oxy
  · Application of the substance / the mixture
    Laundry
    Bleaching agent

· Details of the supplier of the safety data sheet
  · Manufacturer/Supplier:
    SEITZ GmbH
    Gutenbergstrasse 1 - 3
    65830 Kriftel / Germany
    Tel. + 49(0) 6192-9948-0
    Fax + 49(0) 6192-9948-99
    order@seitz24.com
    www.seitz24.com

  · Information department:
    CHEM-TEL Inc.
    1305 North Florida Ave
    Tampa Florida 33602
  · Emergency telephone number: 1-800-255-3924

2 Hazard(s) identification

· Classification of the substance or mixture
  · GHS03 Flame over circle
    Ox. Liq. 2  H272  May intensify fire; oxidizer.

  · GHS05 Corrosion
    Met. Corr.1  H290  May be corrosive to metals.
    Skin Corr. 1A  H314  Causes severe skin burns and eye damage.

  · GHS07
    Acute Tox. 4  H302  Harmful if swallowed.
    STOT SE 3  H335  May cause respiratory irritation.

· Label elements
  · GHS label elements
    The product is classified and labeled according to the Globally Harmonized System (GHS).

  · Hazard pictograms
    GHS03  GHS05  GHS07

· Signal word Danger

(Contd. on page 2)
43.2.5

· Hazard-determining components of labeling:
   hydrogen peroxide
   peracetic acid
   acetic acid

· Hazard statements
   H272 May intensify fire; oxidizer.
   H290 May be corrosive to metals.
   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.
   P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
   P280 Wear protective gloves/protective clothing/eye protection/face protection.
   P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
   P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
   P310 Immediately call a POISON CENTER/doctor.
   P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

· Other hazards

· Results of PBT and vPvB assessment

· PBT: Not applicable.
· vPvB: Not applicable.

3 Composition/information on ingredients

· Chemical characterization: Mixtures

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>Components</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS: 7722-84-1</td>
<td>hydrogen peroxide</td>
<td>25 - 50%</td>
</tr>
<tr>
<td>CAS: 64-19-7</td>
<td>acetic acid</td>
<td>&lt; 10%</td>
</tr>
<tr>
<td>CAS: 79-21-0</td>
<td>peracetic acid</td>
<td>&lt; 10%</td>
</tr>
</tbody>
</table>

· Additional information For the wording of the listed hazard phrases refer to section 16.

4 First-aid measures

· Description of first aid measures

· General information
   Remove casualties from exposure.
   Keep unprotected persons away.
   Immediately remove any clothing soiled by the product.

· After inhalation
   Supply fresh air or oxygen; call for doctor.
   In case of unconsciousness place patient stably in side position for transportation.

· After skin contact
   Immediately rinse with water.
   Seek medical treatment.

· After eye contact
   Rinse opened eye for several minutes under running water.
   Call a doctor immediately.

(Contd. on page 3)
· **After swallowing**
  Rinse out mouth and then drink plenty of water.
  Do not induce vomiting; immediately call for medical help.
· **Information for doctor**
· **Most important symptoms and effects, both acute and delayed**
  Causes severe skin burns and eye damage.
  May cause respiratory irritation.
  Nausea
  Dizziness
  Vertigo
  Headache
· **Indication of any immediate medical attention and special treatment needed**
  Symptomatic treatment

### 5 Fire-fighting measures

· **Extinguishing media**
  · **Suitable extinguishing agents**
    Water spray
    Foam
    Fire-extinguishing powder
    Carbon dioxide
· **For safety reasons unsuitable extinguishing agents**
  Organic compounds
· **Special hazards arising from the substance or mixture**
  In case of fire, the following can be released:
  Oxygen (O2)
  Product is fire encouraging.
· **Advice for firefighters**
  · **Protective equipment:**
    Do not inhale explosion gases or combustion gases.
    Wear self-contained respiratory protective device.
    Wear fully protective suit.
  · **Additional information**
    Cool endangered receptacles with water spray.
    Collect contaminated fire fighting water separately. It must not enter the sewage system.
    Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

### 6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
  Wear protective equipment. Keep unprotected persons away.
  Ensure adequate ventilation
  Avoid contact with eyes and skin.
  Do not breathe gases/ vapours.
  Keep away from ignition sources
· **Environmental precautions:**
  Do not allow to enter sewers/ surface or ground water.
  Do not allow to penetrate the ground/soil.
· **Methods and material for containment and cleaning up:**
  Dilute with plenty water.
  Absorb with liquid-binding material (sand, diatomite)
  Send for recovery or disposal in suitable receptacles.
Trade name: Viva Oxy

- Reference to other sections
  See Section 7 for information on safe handling
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.

7 Handling and storage

- Handling
  - Precautions for safe handling
    Keep away from heat and direct sunlight.
    Avoid contact with eyes and skin.
    Ensure good ventilation/exhaustion at the workplace.
    Prevent formation of aerosols.
  - Information about protection against explosions and fires:
    Protect from heat.
    Keep ignition sources away - Do not smoke.
    Substance/ product is oxidizing.

- Conditions for safe storage, including any incompatibilities

- Storage
  - Requirements to be met by storerooms and receptacles:
    Use only receptacles specifically permitted for this substance/product.
    Suitable material: stainless steel 1.4571 (V4A), plastics, glass, ceramic
    Provide acid-resistant floor.
    Provide ventilation for receptacles.
  - Information about storage in one common storage facility:
    Store away from foodstuffs.
    Store away from flammable substances, reducing agents, alkalis and metal salts.
  - Further information about storage conditions:
    Protect from heat and direct sunlight.
    Store receptacle in a well ventilated area.
    Do not gas tight seal receptacle.
    Store in a cool place.
    Time of storage: max. 24 month
  - Specific end use(s) Laundry

8 Exposure controls/personal protection

- Additional information about design of technical systems: No further data; see item 7.

- Control parameters

  Components with limit values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th>CAS: 7722-84-1 hydrogen peroxide</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEL (USA)</td>
</tr>
<tr>
<td>REL (USA)</td>
</tr>
<tr>
<td>TLV (USA)</td>
</tr>
<tr>
<td>EL (Canada)</td>
</tr>
<tr>
<td>EV (Canada)</td>
</tr>
</tbody>
</table>
Safety Data Sheet acc. to OSHA HCS

Trade name: Viva Oxy

CAS: 64-19-7 acetic acid

PEL (USA) Long-term value: 25 mg/m³, 10 ppm
REL (USA) Short-term value: 37 mg/m³, 15 ppm
Long-term value: 25 mg/m³, 10 ppm
TLV (USA) Short-term value: 37 mg/m³, 15 ppm
EL (Canada) Short-term value: 15 ppm
EV (Canada) Short-term value: 37 mg/m³, 15 ppm
Long-term value: 25 mg/m³, 10 ppm

CAS: 79-21-0 peracetic acid

TLV (USA) Short-term value: 1.24* mg/m³, 0.4* ppm
*inhalable fraction + vapor

Additional information: The lists that were valid during the creation were used as basis.

Exposure controls

Personal protective equipment

General protective and hygienic measures
The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Do not eat, drink, smoke or sniff while working.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
Do not inhale gases / fumes / aerosols.

Breathing equipment:
Ensure good ventilation/exhaustion at the workplace.
Use suitable respiratory protective device in case of insufficient ventilation (exceeding the workplace limit values, formation of aerosols).

Protection of hands:
Acid resistant gloves
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Material of gloves
Chloroprene rubber, CR
Natural rubber, NR
Nitrile rubber, NBR

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection:
Gauze goggles
Tightly sealed goggles.

Body protection: Acid resistant protective clothing
9 Physical and chemical properties

- Information on basic physical and chemical properties
  - General Information
  - Appearance:
    - Form: Fluid
    - Color: Colorless
  - Odor: Pungent
  - Odor threshold: Not determined.
  - pH-value at 20 °C (68 °F): 0.6
  - Change in condition
    - Melting point/Melting range: ~ -28 °C
    - Boiling point/Boiling range: not applicable
  - Flash point: Not applicable
  - Flammability (solid, gaseous) No further relevant information available.
  - Ignition temperature: 395 °C (743 °F) (DIN 51 794)
  - Decomposition temperature: ≥ 60 °C (≥ 140 °F)
  - Auto igniting: Product is not selfigniting.
  - Danger of explosion: No further relevant information available.
  - Explosion limits:
    - Lower: No further relevant information available.
    - Upper: No further relevant information available.
  - Oxidizing properties: oxidising
  - Vapor pressure at 20 °C (68 °F): ~27 hPa (~20 mm Hg)
  - Density at 20 °C (68 °F): ~1.12 g/cm³
  - Relative density No further relevant information available.
  - Vapor density No further relevant information available.
  - Evaporation rate No further relevant information available.
  - Solubility in / Miscibility with Water: Fully miscible
  - Partition coefficient (n-octanol/water): -1.25 log POW (calculated)
  - Viscosity:
    - dynamic: No further relevant information available.
    - kinematic at 20 °C (68 °F): ~1.19 mm²/s (DIN 51 562)
  - Other information No further relevant information available.

10 Stability and reactivity

- Reactivity No decomposition if used and stored according to specifications.
- Chemical stability
  Stable under normal ambient conditions.
  Danger of decomposition in case of warmth and heat influence.
- Possibility of hazardous reactions
  Reaction (decomposition) with metal ions, -salts and metals
  Flammable
Trade name: Viva Oxy

Danger of bursting
- Conditions to avoid: Protect from heat and direct sunlight.
- Incompatible materials:
  - Metal ions, metal salts, metals
  - Alkalis, reducing agents
  - Flammable substances
- Hazardous decomposition products:
  - Steam and oxygen
  - Ethanoic acid
- Additional information: Product is stabilized.

11 Toxicological information

- Information on toxicological effects
- Acute toxicity:
  - LD/LC50 values that are relevant for classification:
    - CAS: 7722-84-1 hydrogen peroxide
      - Oral LD50: 1190 - 1270 mg/kg (rat)
      - Dermal LD50: > 2000 mg/kg (rabbit)
      - Inhalative LC50 (4h): 11 mg/l (ATE)
    - CAS: 79-21-0 peracetic acid
      - Oral LD50: 100 mg/kg (rat)
      - Dermal LD50: 1100 mg/kg (rabbit)
      - Inhalative LC50 (4h): 11 mg/l (ATE)
- On the skin: Causes severe skin burns and eye damage.
- On the eye: Causes serious eye damage.
- Sensitization: Based on available data, the classification criteria are not met.
- Additional toxicological information:
- Carcinogenic categories
  - IARC (International Agency for Research on Cancer)
    - CAS: 7722-84-1 hydrogen peroxide: 3
  - NTP (National Toxicology Program)
    - None of the ingredients is listed.
  - OSHA-Ca (Occupational Safety & Health Administration)
    - None of the ingredients is listed.

12 Ecological information

- Toxicity
  - Aquatic toxicity:
    - CAS: 79-21-0 peracetic acid
      - EC50: 0.5 - 1.0 mg/l (Aquatic invertebrates) (48 h; Daphnia magna)
      - LC50: 1.1 - 3.3 mg/l (Fish) (96 h; Lepomis macrochirus)
  - Persistence and degradability: No further relevant information available.
  - Other information: The product is easily biodegradable.
43.2.5 Behavior in environmental systems:
- Bioaccumulative potential: No further relevant information available.
- Mobility in soil: No further relevant information available.

Additional ecological information:
- According to the formulation contains the following heavy metals and compounds from the EU guideline NO. 2006/11/EC:
  According to the latest stage of our technical knowledge the product does not contain any heavy metals nor compounds acc. to EG-standard 76/464 EWG.
- General notes:
  Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
  Avoid transfer into the environment.
- Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.
- Other adverse effects: No further relevant information available.

13 Disposal considerations

- Waste treatment methods
  Recommendation:
  Contaminated adsorbent, soil, water must be disposed of in a permitted hazardous waste management facility. Recovered products may be reused, reprocessed or incinerated or must be treated in a permitted hazardous waste management facility. It is your duty to dispose of the chemical materials and/or their containers in accordance with the Clean Air Act, The Clean Water Act, RCRA, as well as applicable Federal, State, and local Regulations regarding disposal.

14 Transport information

- UN-Number
- DOT, ADR, IMDG, IATA: UN3149
- DOT: Hydrogen peroxide and peroxyacetic acid mixtures, stabilized
- ADR: 3149 Hydrogen peroxide and peroxyacetic acid mixtures, stabilized, ENVIRONMENTALLY HAZARDOUS
- IMDG: HYDROGEN PEROXIDE AND PEROXYACETIC ACID MIXTURE, STABILIZED, MARINE POLLUTANT
- IATA: HYDROGEN PEROXIDE AND PEROXYACETIC ACID MIXTURE, STABILIZED
- Transport hazard class(es)
  - DOT
    - Class: 5.1 Oxidizing substances
### Trade name: Viva Oxy

<table>
<thead>
<tr>
<th>Label</th>
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</tr>
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<tbody>
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<td>ADR</td>
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<td>Class</td>
<td>5.1 (OC1) Oxidizing substances</td>
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<td>Marine pollutant:</td>
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<td>Special marking (ADR):</td>
<td>Symbol (fish and tree)</td>
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<tr>
<td>Special precautions for user</td>
<td>Warning: Oxidizing substances</td>
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<tr>
<td>Danger code (Kemler):</td>
<td>-</td>
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<td>EMS Number:</td>
<td>F-H,S-Q</td>
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<tr>
<td>Segregation groups</td>
<td>Peroxides</td>
</tr>
<tr>
<td>Stowage Category</td>
<td>D</td>
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<tr>
<td>Stowage Code</td>
<td>SW1 Protected from sources of heat.</td>
</tr>
<tr>
<td>Segregation Code</td>
<td>SG16 Stow &quot;separated from&quot; class 4.1</td>
</tr>
<tr>
<td>Segregation Code</td>
<td>SG59 Stow &quot;separated from&quot; permanganates</td>
</tr>
<tr>
<td>Segregation Code</td>
<td>SG72 See 7.2.6.3.2.</td>
</tr>
</tbody>
</table>

| Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| Transport/Additional information: | |
| DOT | |
| Quantity limitations | On passenger aircraft/rail: 1 L |
| On cargo aircraft only: | 5 L |
| ADR | |
| Excepted quantities (EQ) | Code: E2 |
| Maximum net quantity per inner packaging: | 30 ml |
| Maximum net quantity per outer packaging: | 500 ml |

(Contd. on page 10)
Trade name: Viva Oxy

1L
Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml

UN "Model Regulation": UN 3149 HYDROGEN PEROXIDE AND PEROXYACETIC ACID MIXTURES, STABILIZED, 5.1 (8), II, ENVIRONMENTALLY HAZARDOUS

15 Regulatory information

Canadian substance lists
- Canadian domestic substance list (DSL): All ingredients are listed.
- Canadian ingredient disclosure list (limit 0.1%): None of the ingredients is listed.
- Canadian ingredient disclosure list (limit 1%):
  - CAS: 7722-84-1 hydrogen peroxide
  - CAS: 64-19-7 acetic acid
  - CAS: 79-21-0 peracetic acid

Sara
- Section 355 (extremely hazardous substances):
  - CAS: 7722-84-1 hydrogen peroxide
  - CAS: 79-21-0 peracetic acid
- Section 313 (specific toxic chemical listings):
  - CAS: 79-21-0 peracetic acid
- TSCA (Toxic Substances Control Act): All ingredients are listed.

Proposition 65
- Chemicals known to cause cancer: None of the ingredients is listed.
- Chemicals known to cause reproductive toxicity for females: None of the ingredients is listed.
- Chemicals known to cause reproductive toxicity for males: None of the ingredients is listed.
- Chemicals known to cause developmental toxicity: None of the ingredients is listed.

New Jersey Right-to-Know List:
- CAS: 7722-84-1 hydrogen peroxide
- CAS: 64-19-7 acetic acid
- CAS: 79-21-0 peracetic acid

(Contd. on page 11)
Trade name: Viva Oxy

- **New Jersey Special Hazardous Substance List:**
  - CAS: 7722-84-1 hydrogen peroxide
  - CAS: 64-19-7 acetic acid
  - CAS: 79-21-0 peracetic acid

- **Pennsylvania Right-to-Know List:**
  - CAS: 7722-84-1 hydrogen peroxide
  - CAS: 64-19-7 acetic acid
  - CAS: 79-21-0 peracetic acid

- **Pennsylvania Special Hazardous Substance List:**
  - CAS: 7722-84-1 hydrogen peroxide
  - CAS: 64-19-7 acetic acid
  - CAS: 79-21-0 peracetic acid

- **EPA (Environmental Protection Agency)**
  None of the ingredients is listed.

- **TLV (Threshold Limit Value established by ACGIH)**
  - CAS: 7722-84-1 hydrogen peroxide A3

- **NIOSH-Ca (National Institute for Occupational Safety and Health)**
  None of the ingredients is listed.

- **National regulations**
- **Other regulations, limitations and prohibitive regulations**
- **Please note:**
  The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied is given. Regulatory requirements are subject to change and may differ from one location to another. It is the buyers responsibility to ensure that its activities comply with Federal, State or provincial, and local laws. The following specific information is made for the purpose of complying with numerous laws and regulations.

- **Other information:**
  The product has been designed for professional use only.

**16 Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Date of preparation / last revision** 11/15/2016 / 2
- **Abbreviations and acronyms:**
  - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  - IMDG: International Maritime Code for Dangerous Goods
  - DOT: US Department of Transportation
  - IATA: International Air Transport Association
  - ACGIH: American Conference of Governmental Industrial Hygienists
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - ELINCS: European List of Notified Chemical Substances
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative
  - NIOSH: National Institute for Occupational Safety
  - OSHA: Occupational Safety & Health
  - TLV: Threshold Limit Value
  - PEL: Permissible Exposure Limit
  - REL: Recommended Exposure Limit
**Trade name: Viva Oxy**

<table>
<thead>
<tr>
<th>Property</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ox. Liq. 2: Oxidizing liquids</td>
<td>Category 2</td>
</tr>
<tr>
<td>Met. Corr. 1: Corrosive to metals</td>
<td>Category 1</td>
</tr>
<tr>
<td>Acute Tox. 4: Acute toxicity</td>
<td>Category 4</td>
</tr>
<tr>
<td>Skin Corr. 1A: Skin corrosion/irritation</td>
<td>Category 1A</td>
</tr>
<tr>
<td>STOT SE 3: Specific target organ toxicity (single exposure)</td>
<td>Category 3</td>
</tr>
</tbody>
</table>

* Data compared to the previous version altered.