1. Identification

1.1. Product identifier

Product Identity: Quatricide®
Alternate Names: Quatricide®

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

Intended use: See Technical Data Sheet.
Application Method: See Technical Data Sheet.

1.3. Details of the supplier of the safety data sheet

Company Name: Pharmacal Research Labs., Inc.
562 Captain Neville Dr.
Waterbury, CT 06705, USA

Emergency
CHEMTREC (USA) (800) 424-9300
IN CANADA CALL CANUTE (613) 996-6666

2. Hazard(s) identification

2.1. Classification of the substance or mixture

Skin Irrit. 2;H315 Causes skin irritation.
Eye Dam. 1;H318 Causes serious eye damage.

2.2. Label elements

Using the Toxicity Data listed in section 11 and 12 the product is labeled as follows.

Danger

H315 Causes skin irritation.
H318 Causes serious eye damage.

[Prevention]:
P264 Wash thoroughly after handling.
P280 Wear protective gloves / eye protection / face protection.

[Response]:
P302+352 IF ON SKIN: Wash with plenty of soap and water.
P305+351+338 IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.
P310 Immediately call a POISON CENTER or doctor / physician.
P321 Specific treatment (see information on this label).
P332+313 If skin irritation occurs: Get medical advice / attention.
P362 Take off contaminated clothing and wash before reuse.

[Storage]:
No GHS storage statements

[Disposal]:
P501 Dispose of contents / container in accordance with local / national regulations.

3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations.

<table>
<thead>
<tr>
<th>Ingredient/Chemical Designations</th>
<th>Weight %</th>
<th>GHS Classification</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethoxylated Alcohols&lt;br&gt;CAS Number: 0068131-39-5</td>
<td>1.0 - 10</td>
<td>Skin Irrit. 2;H315&lt;br&gt;Eye Dam. 1;H318&lt;br&gt;Aquatic Acute 1;H400</td>
<td>[1]</td>
</tr>
<tr>
<td>Sodium carbonate&lt;br&gt;CAS Number: 0000497-19-8</td>
<td>1.0 - 10</td>
<td>Eye Irrit. 2;H319</td>
<td>[1]</td>
</tr>
<tr>
<td>Quaternary ammonium compounds, benzyl-C12-18-alkyldimethyl, chlorides&lt;br&gt;CAS Number: 0068391-01-5</td>
<td>1.0 - 10</td>
<td>Acute Tox. 4;H302&lt;br&gt;Skin Corr. 1B;H314&lt;br&gt;Aquatic Acute 1;H400</td>
<td>[1]</td>
</tr>
<tr>
<td>Quaternary ammonium compounds, C12-14-alkyl[(ethylphenyl)methyl]dimethyl, chlorides&lt;br&gt;CAS Number: 0085409-23-0</td>
<td>1.0 - 10</td>
<td>Acute Tox. 4;H302&lt;br&gt;Skin Corr. 1;H314&lt;br&gt;Aquatic Acute 1;H400</td>
<td>[1]</td>
</tr>
</tbody>
</table>

In accordance with paragraph (i) of §1910.1200, the specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

[1] Substance classified with a health or environmental hazard.

*The full texts of the phrases are shown in Section 16.

4. First aid measures

4.1. Description of first aid measures

General: In all cases of doubt, or when symptoms persist, seek medical attention.
Never give anything by mouth to an unconscious person.

Inhalation: Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give
artificial respiration. If unconscious place in the recovery position and obtain immediate medical attention. Give nothing by mouth.

**Eyes**
Irrigate copiously with clean water for at least 15 minutes, holding the eyelids apart and seek medical attention.

**Skin**
Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser.

**Ingestion**
- Call a poison control center or doctor immediately for treatment advice.
- Have person drink egg whites or gelatin solution, or if these are not available, drink large quantities of water if able to swallow.
- Do not give anything by mouth to an unconscious person.

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

**Overview**
Contact with eyes causes irritation. Prolonged or repeated contact with skin may cause irritation. Vapors or mist may irritate respiratory passages. Probable mucosal damage may contraindicate the use of gastric lavage. See section 2 for further details.

**Eyes**
Causes serious eye damage.

**Skin**
Causes skin irritation.

5. **Fire-fighting measures**

5.1. **Extinguishing media**
Approach fire from upwind to avoid hazardous vapors and toxic decomposition products. Use CO2, dry chemicals, synthetic foam or water. Type BC or ABC extinguishers.

5.2. **Special hazards arising from the substance or mixture**
Hazardous decomposition: Ammoniacal vapors

5.3. **Advice for fire-fighters**
None

6. **Accidental release measures**

6.1. **Personal precautions, protective equipment and emergency procedures**
Put on appropriate personal protective equipment (see section 8).

6.2. **Environmental precautions**
Do not allow spills to enter drains or waterways.
Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

6.3. **Methods and material for containment and cleaning up**
Contain all spills and leaks to prevent discharge to the environment. Ventilate area. Recover liquid and dispose waste material in accordance with all applicable federal, state and local laws.
7. Handling and storage

7.1. Precautions for safe handling
Severely irritating to skin & eyes. Use self-contained breathing apparatus for maximum respiratory protection. Water may be used to cool containers if not ruptured or leaking.
See section 2 for further details. - [Prevention]:

7.2. Conditions for safe storage, including any incompatibilities
Handle containers carefully to prevent damage and spillage.
Incompatible materials: Avoid contact with anionic materials and strong oxidizers.
Do not reuse empty containers. Triple rinse with water and dispose of in conformance with federal, state and local regulations.
See section 2 for further details. - [Storage]:

7.3. Specific end use(s)
No data available.

8. Exposure controls and personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Ingredient</th>
<th>Source</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000497-19-8</td>
<td>Sodium carbonate</td>
<td>OSHA</td>
<td>No Established Limit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ACGIH</td>
<td>No Established Limit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NIOSH</td>
<td>No Established Limit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Supplier</td>
<td>No Established Limit</td>
</tr>
<tr>
<td>0068131-39-5</td>
<td>Ethoxylated Alcohols</td>
<td>OSHA</td>
<td>No Established Limit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ACGIH</td>
<td>No Established Limit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NIOSH</td>
<td>No Established Limit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Supplier</td>
<td>No Established Limit</td>
</tr>
<tr>
<td>0068391-01-5</td>
<td>Quaternary ammonium compounds, benzyl-C12-18-alkyldimethyl, chlorides</td>
<td>OSHA</td>
<td>No Established Limit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ACGIH</td>
<td>No Established Limit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NIOSH</td>
<td>No Established Limit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Supplier</td>
<td>No Established Limit</td>
</tr>
<tr>
<td>0085409-23-0</td>
<td>Quaternary ammonium compounds, C12-14-alkyl(ethylphenyl)methyl(dimethyl, chlorides</td>
<td>OSHA</td>
<td>No Established Limit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ACGIH</td>
<td>No Established Limit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NIOSH</td>
<td>No Established Limit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Supplier</td>
<td>No Established Limit</td>
</tr>
</tbody>
</table>
Carcinogen Data

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Ingredient</th>
<th>Source</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000497-19-8</td>
<td>Sodium carbonate</td>
<td>OSHA</td>
<td>Select Carcinogen: No</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NTP</td>
<td>Known: No; Suspected: No</td>
</tr>
<tr>
<td></td>
<td></td>
<td>IARC</td>
<td>Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;</td>
</tr>
<tr>
<td>0068131-39-5</td>
<td>Ethoxylated Alcohols</td>
<td>OSHA</td>
<td>Select Carcinogen: No</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NTP</td>
<td>Known: No; Suspected: No</td>
</tr>
<tr>
<td></td>
<td></td>
<td>IARC</td>
<td>Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;</td>
</tr>
<tr>
<td>0068391-01-5</td>
<td>Quaternary ammonium compounds, benzyl-C12-18-alkyldimethyl, chlorides</td>
<td>OSHA</td>
<td>Select Carcinogen: No</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NTP</td>
<td>Known: No; Suspected: No</td>
</tr>
<tr>
<td></td>
<td></td>
<td>IARC</td>
<td>Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;</td>
</tr>
<tr>
<td>0085409-23-0</td>
<td>Quaternary ammonium compounds, C12-14-alkyl[(ethylphenyl)methyl]dimethyl,</td>
<td>OSHA</td>
<td>Select Carcinogen: No</td>
</tr>
<tr>
<td></td>
<td>chlorides</td>
<td>NTP</td>
<td>Known: No; Suspected: No</td>
</tr>
<tr>
<td></td>
<td></td>
<td>IARC</td>
<td>Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;</td>
</tr>
</tbody>
</table>

8.2. Exposure controls

Respiratory: Not normally required. Use NIOSH approved if required.
Eyes: Chemical splash goggles and face shield.
Skin: Wear overalls to keep skin contact to a minimum. Impervious rubber gloves.
Engineering Controls: Good ventilation to keep hazardous ingredients below TLV.
Other Work Practices: Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.
See section 2 for further details. - [Prevention]:

9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Rust to Red Liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>Mint</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not Measured</td>
</tr>
<tr>
<td>pH</td>
<td>11</td>
</tr>
<tr>
<td>Melting point / freezing point</td>
<td>Not Measured</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>100 C / 212 F</td>
</tr>
<tr>
<td>Flash Point</td>
<td>200 F</td>
</tr>
<tr>
<td>Evaporation rate (Ether = 1)</td>
<td>Not Measured</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td><strong>Lower Explosive Limit:</strong> Not Measured</td>
</tr>
<tr>
<td></td>
<td><strong>Upper Explosive Limit:</strong> Not Measured</td>
</tr>
<tr>
<td>Vapor pressure (Pa)</td>
<td>Not Measured</td>
</tr>
</tbody>
</table>
10. Stability and reactivity

10.1. Reactivity
Hazardous Polymerization will not occur.

10.2. Chemical stability
Stable under normal circumstances.

10.3. Possibility of hazardous reactions
No data available.

10.4. Conditions to avoid
No data available.

10.5. Incompatible materials
Avoid contact with anionic materials and strong oxidizers.

10.6. Hazardous decomposition products
Ammoniacal vapors

11. Toxicological information

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Oral LD50, mg/kg</th>
<th>Skin LD50, mg/kg</th>
<th>Inhalation Vapor LC50, mg/L/4hr</th>
<th>Inhalation Dust/Mist LC50, mg/L/4hr</th>
<th>Inhalation Gas LC50, ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethoxylated Alcohols - (68131-39-5)</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>Sodium carbonate - (497-19-8)</td>
<td>4,090.00, Rat - Category: 5</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>Quaternary ammonium compounds, benzyl-C12-18-alkyl(dimethyl), chlorides - (68391-01-5)</td>
<td>85No data available 4</td>
<td>2.30No data available 5</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>Quaternary ammonium compounds, C12-14-alkyl[(ethylphenyl)methyl]dimethyl, chlorides - (85409-23-0)</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
</tr>
</tbody>
</table>
Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

<table>
<thead>
<tr>
<th>Classification</th>
<th>Category</th>
<th>Hazard Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity (oral)</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Acute toxicity (dermal)</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Acute toxicity (inhalation)</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>2</td>
<td>Causes skin irritation.</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>1</td>
<td>Causes serious eye damage.</td>
</tr>
<tr>
<td>Respiratory sensitization</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Skin sensitization</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>STOT-single exposure</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>STOT-repeated exposure</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

12. Ecological information

12.1. Toxicity
Harmful to aquatic life.

Aquatic Ecotoxicity

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>96 hr LC50 fish, mg/l</th>
<th>48 hr EC50 crustacea, mg/l</th>
<th>ErC50 algae, mg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethoxylated Alcohols - (68131-39-5)</td>
<td>Not Available</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
<tr>
<td>Sodium carbonate - (497-19-8)</td>
<td>300.00, Lepomis macrochirus</td>
<td>265.00, Daphnia magna</td>
<td>242.00 (72 hr), Freshwater Algae</td>
</tr>
<tr>
<td>Quaternary ammonium compounds, benzyl-C12-18-alkyldimethyl, chlorides - (68391-01-5)</td>
<td>0.52, Fish (Piscis)</td>
<td>Not Available</td>
<td>0.80 (96 hr), Algae</td>
</tr>
<tr>
<td>Quaternary ammonium compounds, C12-14-alkyl[(ethylphenyl)methyl]dimethyl, chlorides - (85409-23-0)</td>
<td>Not Available</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability
There is no data available on the preparation itself.

12.3. Bioaccumulative potential
Not Measured
12.4. Mobility in soil  
No data available.  

12.5. Results of PBT and vPvB assessment  
This product contains no PBT/vPvB chemicals.  

12.6. Other adverse effects  
No data available.  

13. Disposal considerations  

13.1. Waste treatment methods  
Observe all federal, state and local regulations when disposing of this substance.  

14. Transport information  

14.1. UN number  
Not Applicable  

14.2. UN proper shipping name  
Not Regulated  

14.3. Transport hazard class(es)  
DOT Hazard Class: Not Applicable  
IMDG: Not Applicable  

14.4. Packing group  
Not Applicable  

14.5. Environmental hazards  
IMDG Marine Pollutant: No  

14.6. Special precautions for user  
No further information  

15. Regulatory information  

Regulatory Overview  
The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.  

FIFRA  
This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:  

DANGER  
Keep out of reach of children  
Corrosive.
Causes irreversible eye damage and skin burns. Avoid breathing spray mist. Do not get in eyes, on skin, or on clothing.
ENVIROMENTAL HAZARDS: This product is toxic to fish and aquatic invertebrates.

**Toxic Substance Control Act (TSCA)**
All components of this material are either listed or exempt from listing on the TSCA Inventory.

**WHMIS Classification**
D2B  E

**US EPA Tier II Hazards**
- **Fire**: No
- **Sudden Release of Pressure**: No
- **Reactive**: No
- **Immediate (Acute)**: Yes
- **Delayed (Chronic)**: No

**EPCRA 311/312 Chemicals and RQs:**
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

**EPCRA 302 Extremely Hazardous:**
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

**EPCRA 313 Toxic Chemicals:**
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

**Proposition 65 - Carcinogens (>0.0%)**:
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

**Proposition 65 - Developmental Toxins (>0.0%)**:
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

**Proposition 65 - Female Repro Toxins (>0.0%)**:
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

**Proposition 65 - Male Repro Toxins (>0.0%)**:
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

**New Jersey RTK Substances (>1%)**:
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

**Pennsylvania RTK Substances (>1%)**:
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

---

**16. Other information**

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and
orders.
The full text of the phrases appearing in section 3 is:
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H400 Very toxic to aquatic life.

This is the first version in the GHS SDS format. Listings of changes from previous versions in other formats are not applicable.

The information and recommendations contained herein are, to the best of Pharmacal's knowledge and belief, accurate and reliable as of the date issued. Pharmacal does not warrant or guarantee their accuracy or reliability, and Pharmacal shall not be liable for any loss or damage arising out of there use thereof.
The information and recommendations are offered for the user's consideration and examination, and it is the user's responsibility to satisfy itself that they are suitable and complete for its particular use.
The hazardous materials identification system (HMIS) and national fire protection association ratings have been included by Pharmacal research laboratories INC. In order to provide additional health and hazard information. The ratings recommended are based upon criteria supplied by the developers of these rating systems, together with Pharmacal's interpretation of the available data.

End of Document