**SECTION 1: Product and company identification**

Product name: Vanquish Disinfectant  
Use of the substance/mixture: Disinfectant  
Product code: 0175  
Company: Total Solutions  
P.O. Box 240014  
Milwaukee, WI 53224 - USA  
T: (414) 354-6417  
Emergency number: Chemtec: (800) 424-9300

**SECTION 2: Hazards identification**

2.1. Classification of the substance or mixture

GHS-US classification  
Skin Corr. 1B H314

2.2. Label elements

GHS-US labeling  
Hazard pictograms (GHS-US): GHS05

Signal word (GHS-US): Danger  
Hazard statements (GHS-US): Causes severe skin burns and eye damage  
Precautionary statements (GHS-US):  
- Do not breathe spray  
- Wash thoroughly after handling  
- Wear eye protection, protective gloves  
- If swallowed: rinse mouth. Do NOT induce vomiting  
- If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower  
- If inhaled: Remove person to fresh air and keep comfortable for breathing  
- If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
- Immediately call a doctor  
- Specific treatment (see First aid measures on this label)  
- Wash contaminated clothing before reuse  
- Store locked up  
- Dispose of contents/container to comply with local/regional/national/international regulations

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

**SECTION 3: Composition/Information on ingredients**

3.1. Substances

Not applicable

Full text of H-phrases: see section 16

3.2. Mixtures

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides</td>
<td>(CAS-No.) 68424-85-1</td>
<td>1 - 5</td>
<td>Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314</td>
</tr>
<tr>
<td>Alcohols (c12-15 Ln. Saturated) Ethoxylate</td>
<td>(CAS-No.) 68131-39-5</td>
<td>1 - 5</td>
<td>Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318</td>
</tr>
<tr>
<td>Tetrasodium ethylenediaminetetraacetate</td>
<td>(CAS-No.) 64-02-8</td>
<td>1 - 5</td>
<td>Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318</td>
</tr>
<tr>
<td>QUATERNIUM-24</td>
<td>(CAS-No.) 32426-11-2</td>
<td>0.5 - 1.5</td>
<td>Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314</td>
</tr>
</tbody>
</table>
SECTION 4: First aid measures

4.1. Description of first aid measures
First-aid measures general: If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
First-aid measures after skin contact: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes. Take victim to a doctor if irritation persists.
First-aid measures after eye contact: Rinse immediately with plenty of water for 15 minutes. Take victim to an ophthalmologist.
First-aid measures after ingestion: Immediately call a poison center or doctor/physician. Rinse mouth. Do NOT induce vomiting. Drink plenty of water.

4.2. Most important symptoms and effects, both acute and delayed
Symptoms/effects: Causes severe skin burns and eye damage.
Symptoms/effects after inhalation: Corrosive to the respiratory tract.
Symptoms/effects after skin contact: Caustic burns/corrosion of the skin.
Symptoms/effects after eye contact: Causes serious eye irritation. Corrosion of the eye tissue. Permanent eye damage.
Symptoms/effects after ingestion: Burns to the gastric/intestinal mucosa.

4.3. Indication of any immediate medical attention and special treatment needed
No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media: All extinguishing media allowed.

5.2. Special hazards arising from the substance or mixture
Reactivity: Upon combustion: CO and CO2 are formed.

5.3. Advice for firefighters
Firefighting instructions: Exercise caution when fighting any chemical fire. Use water moderately and if possible collect or contain it. Use water spray or fog for cooling exposed containers.
Protection during firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
General measures: Isolate from fire, if possible, without unnecessary risk.

6.1.1. For non-emergency personnel
Emergency procedures: Keep upwind.

6.1.2. For emergency responders
Protective equipment: Equip cleanup crew with proper protection.
Emergency procedures: Stop leak if safe to do so. Stop release. Ventilate area.

6.2. Environmental precautions
Avoid release to the environment. Prevent soil and water pollution.

6.3. Methods and material for containment and cleaning up
For containment: Contain released substance, pump into suitable containers.
Methods for cleaning up: This material and its container must be disposed of in a safe way, and as per local legislation.

6.4. Reference to other sections
No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Precautions for safe handling: Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required.
Hygiene measures: Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse.
7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Keep container closed when not in use. Store in original container.
Incompatible products: Strong acids.
Storage area: Keep only in the original container. Store in a dry area. Store in a cool area.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Substance Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides (68424-85-1)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>QUATERNIUM-24 (32426-11-2)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>didecyldimethylammonium chloride (7173-51-5)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Dimethyldioctylammonium chloride (5538-94-3)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Alcohols (c12-15 Ln. Saturated) Ethoxylate (68131-39-5)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>tetrasyodium ethylenediaminetetraacetate (64-02-8)</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

8.2. Exposure controls

Personal protective equipment: Gloves. Safety glasses. Protective clothing. Use appropriate personal protective equipment when risk assessment indicates this is necessary.

SECTION 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>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Clear, colorless liquid.</td>
</tr>
<tr>
<td>Odor</td>
<td>Mild odor</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>12.4</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt; 200 °F</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosion limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Specific gravity / density</td>
<td>1 g/ml</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in water.</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Log Kow</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
</tbody>
</table>
Decomposition temperature : No data available
Viscosity : No data available
Viscosity, kinematic : No data available
Viscosity, dynamic : No data available
VOC content : < 1 %

SECTION 10: Stability and reactivity

10.1. Reactivity
Upon combustion: CO and CO2 are formed.

10.2. Chemical stability
No additional information available

10.3. Possibility of hazardous reactions
No additional information available

10.4. Conditions to avoid
No additional information available

10.5. Incompatible materials
May be corrosive to metals. Strong acids, metals.

10.6. Hazardous decomposition products
Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

**Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides (68424-85-1)**

LD50 oral rat 344 mg/kg
LD50 dermal rabbit 3340 mg/kg
ATE CLP (oral) 344.000 mg/kg body weight
ATE CLP (dermal) 3340.000 mg/kg body weight

**didecyldimethylammonium chloride (7173-51-5)**

LD50 oral rat 238 mg/kg Method: OECD Test Guideline 401
LD50 dermal rabbit 3342 mg/kg
ATE CLP (oral) 238.000 mg/kg body weight
ATE CLP (dermal) 3342.000 mg/kg body weight


LD50 oral rat > 2000 mg/kg
LD50 dermal rabbit > 2000 mg/kg

**tetrasodium ethylenediaminetetraacetate (64-02-8)**

LD50 oral rat > 2000 mg/kg (Rat)
ATE CLP (oral) 500.000 mg/kg body weight

Skin corrosion/irritation : Causes severe skin burns and eye damage.
  pH: 12.4

Serious eye damage/irritation : Not classified
  pH: 12.4

Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
Specific target organ toxicity – single exposure : Not classified
Specific target organ toxicity – repeated exposure : Not classified
Aspiration hazard : Not classified
Symptoms/effects after inhalation : Corrosive to the respiratory tract.
Symptoms/effects after skin contact : Caustic burns/corrosion of the skin.
Vanquish Disinfectant
Safety Data Sheet

Symptoms/effects after eye contact: Causes serious eye irritation. Corrosion of the eye tissue. Permanent eye damage.
Symptoms/effects after ingestion: Burns to the gastric/intestinal mucosa.
Likely routes of exposure: Skin and eye contact

SECTION 12: Ecological information

12.1. Toxicity

<table>
<thead>
<tr>
<th>Substance</th>
<th>LC50 fish 1</th>
<th>EC50 Daphnia 1</th>
<th>ErC50 (algae)</th>
<th>LC50 fish 1</th>
<th>EC50 Daphnia 1</th>
<th>Threshold limit algae 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohols (c12-15 Ln. Saturated) Ethoxylate (68131-39-5)</td>
<td>5 - 10 mg/l</td>
<td>5 - 10 mg/l</td>
<td>10 - 100 mg/l</td>
<td>121 mg/l</td>
<td>625 mg/l</td>
<td>&gt; 100 mg/l</td>
</tr>
</tbody>
</table>

tetrasodium ethylenediaminetetraacetate (64-02-8)

<table>
<thead>
<tr>
<th>Substance</th>
<th>LC50 fish 1</th>
<th>EC50 Daphnia 1</th>
<th>Threshold limit algae 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>tetrasodium ethylenediaminetetraacetate (64-02-8)</td>
<td>121 mg/l</td>
<td>625 mg/l</td>
<td>&gt; 100 mg/l</td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability

<table>
<thead>
<tr>
<th>Substance</th>
<th>Log Pow</th>
<th>Bioaccumulative potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>tetrasodium ethylenediaminetetraacetate (64-02-8)</td>
<td>-2.6</td>
<td>Bioaccumulation: not applicable.</td>
</tr>
</tbody>
</table>

12.3. Bioaccumulative potential

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations: Dispose in a safe manner in accordance with local/national regulations.

SECTION 14: Transport information

Department of Transportation (DOT)

Transport document description: UN1903 Disinfectants, liquid, corrosive n.o.s. (Quaternary Ammonium Chloride), 8, II
UN-No.(DOT): UN1903
Proper Shipping Name (DOT): Disinfectants, liquid, corrosive n.o.s.
Class (DOT): 8 - Class 8 - Corrosive material 49 CFR 173.136
Hazard labels (DOT): 8 - Corrosive

Packing group (DOT): II - Medium Danger
DOT Packaging Non Bulk (49 CFR 173.xxx): 202
DOT Packaging Bulk (49 CFR 173.xxx): 242
DOT Symbols: G - Identifies PSN requiring a technical name
DOT Packaging Exceptions (49 CFR 173.xxx): 154
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27): 1 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75): 30 L
DOT Vessel Stowage Location: B
SECTION 15: Regulatory information

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labelling 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. CORROSIVE. Causes irreversible eye damage and skin burns. Do not get in eyes, on skin or on clothing. Wear protective eyewear (goggles, face shield, or safety glasses), protective (rubber or chemical resistant) gloves and protective clothing. Harmful if swallowed or absorbed through the skin. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove contaminated clothing and wash clothing before reuse.

California Proposition 65 - This product does not contain substances known to the state of California to cause cancer and/or reproductive toxicity.

SECTION 16: Other information

Training advice: Normal use of this product shall imply use in accordance with the instructions on the packaging.

Full text of H-phrases:

<table>
<thead>
<tr>
<th>H301</th>
<th>Toxic if swallowed</th>
</tr>
</thead>
<tbody>
<tr>
<td>H302</td>
<td>Harmful if swallowed</td>
</tr>
<tr>
<td>H314</td>
<td>Causes severe skin burns and eye damage</td>
</tr>
<tr>
<td>H318</td>
<td>Causes serious eye damage</td>
</tr>
</tbody>
</table>

NFPA health hazard: 3 - Materials that, under emergency conditions, can cause serious or permanent injury.
NFPA fire hazard: 1 - Materials that must be preheated before ignition can occur.
NFPA reactivity: 0 - Material that in themselves are normally stable, even under fire conditions.

Prepared by: Technical Department

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. No warranty is expressed or implied regarding the accuracy of this data or the results obtained from the use thereof. Our company assumes no responsibility for personal injury or property damage to the vendee, users or third parties caused by the material. Such vendees or users assume all risks associated with the use of this material.