SAFETY DATA SHEET

IMPORTANT: Read this SDS before handling & disposing of this product.
Pass this information on to employees, customers, & users of this product.

SECTION 1. IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER

PRODUCT IDENTITY: Disinfecting Detergent
PRODUCT USES: Heavy Duty Cleaner, Disinfectant
COMPANY IDENTITY: Biosolutions LLC
COMPANY ADDRESS: 1800 Industrial Park Drive
COMPANY CITY: Grand Haven, MI 49417
COMPANY PHONE: 1-616-846-1210
EMERGENCY PHONE: CHEMTREC 1-800-424-9300 (U.S)

SECTION 2. HAZARDS IDENTIFICATION

2.1 HAZARD STATEMENTS: (CAT = Hazard Category)
Physical Hazards: None known
Health Hazards: Acute Toxicity, Oral Category 4
Acute Toxicity, Dermal Category 4
Skin corrosion/irritation Category 2
Eye Corrosion/irritation Category 3

Environmental Hazards: None Known
OSHA defined Hazards Not classified

Label Elements

Signal Word Danger

Hazard Statement Harmful if swallowed. Harmful in contact with skin. Causes skin irritation. Causes serious eye damage.

2.2 PRECAUTIONARY STATEMENTS:
Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand. Causes skin irritation and serious eye damage. Harmful if swallowed.

PREVENTION: Do not get in eyes, on skin, or on clothing. Wash affected areas thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves and eye, face and foot protection.

RESPONSE: IF SWALLOWED: Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell. Do NOT induce vomiting. Remove immediately all contaminated clothing. Rinse skin with water. Remove victim to fresh air and keep at rest in a position 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 POISON CENTER or doctor/physician. Wash contaminated clothing before reuse

STORAGE: No special requirements.

DISPOSAL: Dispose of the contents/container in accordance with local, regional, national, and international regulation.

Hazard(s) not otherwise classified (HNOC) None Known

SEE SECTIONS 8, 11 & 12 FOR TOXICOLOGICAL INFORMATION.
SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>MATERIAL</th>
<th>CAS#</th>
<th>WT %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Didecyldimethylammonium Chloride</td>
<td>7173-51-5</td>
<td>4.2-4.4%</td>
</tr>
<tr>
<td>Quaternary Ammonium compounds, Benzyl-C12-C16-Alkyl(dimethyl, Chlorides</td>
<td>68424-85-1</td>
<td>4.2-4.4%</td>
</tr>
</tbody>
</table>

TRACE COMPONENTS: Trace ingredients (if any) are present in < 1% concentration, (< 0.1% for potential carcinogens, reproductive toxins, respiratory tract mutagens, and sensitizers). None of the trace ingredients contribute significant additional hazards at the concentrations that may be present in this product. All pertinent hazard information has been provided in this document, per the requirements of the Federal Occupational Safety and Health Administration Standard (29 CFR 1910.1200), U.S. State equivalents, and Canadian Hazardous Materials Identification System Standard (CPR 4).

SECTION 4. FIRST AID MEASURES

Inhalation
If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.

Skin Contact
Remove contaminated clothing immediately and wash skin with soap and water. Take off immediately all contaminated clothing. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. Wash contaminated clothing before reuse.

Eye Contact
Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Get medical attention if irritation develops and persists.

Ingestion
Rinse mouth. If ingestion of a large amount does occur, call a poison control center immediately.

Most important symptoms/effects, acute and delayed
Burning pain and severe corrosive skin damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

Indication of immediate medical attention and special treatment needed
Provide general supportive measures and treat symptomatically.

General information
Take off all contaminated clothing immediately. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.
SECTION 5. FIRE FIGHTING MEASURES

Suitable extinguishing media

- Water Fog
- Foam
- Dry chemical powder
- Carbon dioxide (CO₂)

Unsuitable Extinguishing media

- Do not use water jet as an extinguisher, as this will spread the fire.

Specific Hazards arising from the chemical

- Vapors may form explosive mixtures in air.

Special protective equipment

- Self-Contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire-fighting equipment/instructions

- In case of fire do not breath fumes.

Specific methods

- Use standard firefighting procedures and consider the hazards of the other involved materials.

General fire hazards

- None Known

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, emergency procedures

- Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece, mop). Clean surface thoroughly to remove residual contamination.

Environmental precautions

- Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.
SECTION 7. HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Use care in handling/storage. Avoid releases to the environment. Do not empty into drains.

Conditions for safe storage, including any incompatibilities

Store in original tightly closed container. Store in a cool, dry place out of direct sunlight.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

Biological Limit values
No biological exposure limits noted for the ingredient(s).

Appropriate Engineering Controls
If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities an emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/Face protection
Wear safety glasses with side shields (or goggles). Face shield is recommended.

Skin protection
Wear appropriate chemical resistant gloves. Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection
If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

Thermal hazards
Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations
Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.
SECTION 9. PHYSICAL & CHEMICAL PROPERTIES

APPEARANCE: Liquid, Clear, and Red
ODOR: Characteristic Odor
ODOR THRESHOLD: Not Available
pH (Neutrality): 7.0-8.5
MELTING POINT/FREEZING POINT: Not Available
BOILING RANGE (IBP,50%,Dry Point): Not Available
FLASH POINT (TEST METHOD): Not Available
EVAPORATION RATE (n-Butyl Acetate=1): Not Available
FLAMMABILITY CLASSIFICATION: Non Flammable Hazard
LOWER FLAMMABLE LIMIT IN AIR (% by vol): Not Available
UPPER FLAMMABLE LIMIT IN AIR (% by vol): Not Available
VAPOR PRESSURE (mm of Hg)@20 C / 68 F: Not Available
VAPOR DENSITY (air=1): Not Available
GRAVITY @ 68/68 F / 20/20 C: 1.00 g/mL
POUNDS/GALLON: 8.35 lb/gal
WATER SOLUBILITY: Soluble
PARTITION COEFFICIENT (n-Octane/Water): Not Available
AUTO IGNITION TEMPERATURE: Not Available
DECOMPOSITION TEMPERATURE: Not Available
VOCs (>0.044 Lbs/Sq In): Not Available
TOTAL VOC'S (TVOC)*: Not Available
NONEXEMPT VOC'S (CVOC)*: Not Available
HAZARDOUS AIR POLLUTANTS (HAPS): Not Available
NONEXEMPT VOC PARTIAL PRESSURE (mm of Hg @ 20 C) 0.0
VISCOSITY @ 20 C (ASTM D445): Not Available
VOLATILE %: Not Available

* Using CARB (California Air Resources Board Rules).

SECTION 10. STABILITY & REACTIVITY

Reactivity The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability Material is stable under normal conditions.

Possibility of hazardous reactions No dangerous reactions known under conditions of normal use

Conditions to avoid None known

Incompatible materials Strong oxidizing agents

Hazardous decomposition products No hazardous decomposition products are known
SECTION 11. TOXICOLOGICAL INFORMATION

Ingestion
Harmful is swallowed. Causes burns/serious damage to mouth, throat and stomach. Symptoms may include vomiting, nausea, and/or feeling of general unwellness.

Inhalation
May cause irritation and corrosive effects to nose, throat and respiratory tract. Symptoms may include coughing and difficulty breathing.

Skin Contact
Corrosive. Causes serious eye damage. Symptoms may include pain, burning sensation, redness, watering, blurred vision or loss of vision.

Eye Contact
Corrosive. Causes serious eye damage. Symptoms may include pain, burning sensation, redness, watering, blurred vision or loss of vision.

Symptoms related to the physical, chemical and toxicological characteristics

Information on toxicological effects

<table>
<thead>
<tr>
<th>Acute toxicity</th>
<th>Toxic if swallowed</th>
</tr>
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<tbody>
<tr>
<td>Didecyldimethylammonium Chloride</td>
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</tr>
<tr>
<td>Dermal LD50:</td>
<td>3342 mg/kg</td>
</tr>
<tr>
<td>Oral LD50:</td>
<td>238 mg/kg</td>
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<tr>
<td>Quaternary Ammonium Compounds, Benzyl-C12-C16-alkyldimethyl, Chlorides</td>
<td></td>
</tr>
<tr>
<td>Dermal LD50:</td>
<td>3560</td>
</tr>
<tr>
<td>Oral LD50:</td>
<td>430</td>
</tr>
</tbody>
</table>

Skin Corrosion/irritation
Causes skin irritation.

Serious eye damage/Eye irritation
Direct contact with eyes may cause temporary irritation.

Respiratory sensitization
Not available.

Skin sensitization
Not available

Germ Cell mutagenicity
No data available to indicate product or any components present at greater than .01% are mutagenic or genotoxic

Carcinogenicity
This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

Reproductive toxicity
This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - Single Exposure
Not Classified.
Specific target organ toxicity
- Repeated exposure

Aspiration hazard

Chronic Effects
Prolonged inhalation may be harmful.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity
Toxic to aquatic life

Persistence and degradability
No data is available on the degradability of this product

Bioaccumulative potential
No data available

Mobility in soil
No data available

Other adverse Effects
No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13. DISPOSAL CONSIDERATIONS

The generation of waste should be avoided or minimized wherever possible. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers and liners may retain some product residues. Vapor from some product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Processing, use or contamination may change the waste disposal requirements. Do not dispose of on land, in surface waters, or in storm drains. Waste should be recycled or disposed of in accordance with regulations. Large amounts should be collected for reuse or consigned to licensed hazardous waste haulers for disposal. ALL DISPOSAL MUST BE IN ACCORDANCE WITH ALL FEDERAL, STATE, PROVINCIAL, AND LOCAL REGULATIONS. IF IN DOUBT, CONTACT PROPER AGENCIES.

SECTION 14. TRANSPORT INFORMATION

MARINE POLLUTANT: No

DOT/TDG SHIP NAME: Not regulated as dangerous goods

IATA / ICAO: Not regulated as dangerous goods

IMO / IMDG: Not regulated as dangerous goods
**SECTION 15. REGULATORY INFORMATION**

TSCA section 12(b) Export Notification (40 CFR 707, Subpt. D)  
Not Regulated

CERCLA hazardous Substance List (40 CFR 302.4)  
Not listed

SARA 304 Emergency release notification  
Not Regulated

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)  
Not listed

Superfund Amendments and Reauthorization Act of 1986 (SARA)  
**Hazard Categories**  
- Immediate Hazard- No  
- Delayed Hazard- No  
- Fire Hazard- No  
- Pressure Hazard- No  
- Reactivity Hazard- NO

SARA 302 Extremely hazardous substance  
Not Listed

SARA 311/312 Hazardous chemical  
No

SARA 313 (TRI reporting)  
Not regulated

Other federal regulations  
- Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List  
  Not regulated  
- Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)  
  Not Regulated
- Safe Drinking Water Act (SDWA)  
  Not regulated

State regulations  
- US. Massachusetts RTK- Substance List  
  Not regulated
- US. New Jersey Worker and Community Right-to-Know Act  
  Not regulated
- US. Pennsylvania Worker and Community Right-to-Know Law  
  Not regulated
- US. Rhode Island RTK  
  Not regulated
- US. California Proposition 65  
  This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.
SECTION 16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>Issue Date</th>
<th>3/20/17</th>
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<tbody>
<tr>
<td>Version #</td>
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NOTICE

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