SAFETY DATA SHEET

1. Product and Company Identification

Product identifier: IMS-III Sanitizing Concentrate (4211-34)
Other means of identification: Not available
Recommended use: Disinfectant / Cleaner / Sanitizer / Deodorizer
Recommended restrictions: None known.
Manufacturer/Importer/Supplier/Distributor information:
Company name: Nu-Calgon
Address: 2008 Altom Court
St. Louis, MO 63146
United States
Telephone: 314-469-7000 / 800-554-
E-mail: info@nucalgon.com
Emergency phone number: 1-800-424-9300 (CHEMTREC)

2. Hazards Identification

Physical hazards: Not classified.
Health hazards:
Skin corrosion/irritation: Category 2
Serious eye damage/eye irritation: Category 2
Environmental hazards: Not classified.
OSHA defined hazards: Not classified.

Signal word: Warning
Hazard statement:
Causes skin irritation. Causes serious eye irritation.
Precautionary statement:
Prevention: Wash thoroughly after handling. Wear protective gloves. Wear eye/face protection.
Response: If on skin: Wash with plenty of water. Specific treatment (see this label). If skin irritation occurs:
Get medical advice/attention. Take off immediately all contaminated clothing and wash it before reuse.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Storage: Store away from incompatible materials.
Disposal: Dispose of waste and residues in accordance with local authority requirements.
Hazard(s) not otherwise classified (HNOC): None known.
Supplemental information: This is a registered EPA product. The product labeling is in compliance with EPA regulations and guidelines.

3. Composition/Information on Ingredients

Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alkyl (60% C14, 30% C16, 5% C12, 5% C18) dimethyl benzyl ammonium chloride</td>
<td>53516-76-0</td>
<td>0.781</td>
<td></td>
</tr>
<tr>
<td>Alkyl (68% C12, 32% C14) dimethyl ethylbenzyl ammonium chloride</td>
<td>85409-23-0</td>
<td>0.781</td>
<td></td>
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</tbody>
</table>
4. First Aid Measures

**Inhalation**
Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

**Skin contact**
If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control centre or doctor for treatment advice.

**Eye contact**
Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

**Ingestion**
Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. DO NOT induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

**Most important symptoms/effects, acute and delayed**
Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

**Indication of immediate medical attention and special treatment needed**
Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed. Probable mucosal damage may contraindicate the use of gastric lavage.

**General information**
Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. If you feel unwell, seek medical advice (show the label where possible). Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Wear rubber gloves and chemical splash goggles. Keep out of reach of children.

5. Fire Fighting Measures

**Suitable extinguishing media**

**Unsuitable extinguishing media**
Do not use water jet as an extinguisher, as this will spread the fire.

**Specific hazards arising from the chemical**
Firefighters should wear a self-contained breathing apparatus.

**Special protective equipment and precautions for firefighters**
Firefighters should wear full protective clothing including self contained breathing apparatus.

**Fire-fighting equipment/instructions**
Move containers from fire area if you can do so without risk.

**General fire hazards**
No unusual fire or explosion hazards noted.

6. Accidental Release Measures

**Personal precautions, protective equipment and emergency procedures**
Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. 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 leak if you can do so without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Prevent entry into waterways, sewers, basements or confined areas.

**Environmental precautions**
Avoid discharge into drains, water courses or onto the ground. Do not discharge into lakes, streams, ponds or public waters.

7. Handling and Storage

**Precautions for safe handling**
Use only with adequate ventilation. Avoid prolonged exposure. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Wash thoroughly after handling. Do not get in eyes, on skin or on clothing. Avoid breathing vapors or mists of this product. Use good industrial hygiene practices in handling this material. Keep container tightly closed.

**Conditions for safe storage, including any incompatibilities**
Do not contaminate water, food or feed by storage or disposal. Store only in closed, properly labeled containers. Store in original container in areas inaccessible to small children. Store locked up.

8. Exposure Controls/Personal Protection

**Occupational exposure limits**
No exposure limits noted for ingredient(s).
Biological limit values
No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls
Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection
Wear chemical goggles. Use a face shield if splashing is possible. Eye wash fountain and emergency showers are recommended.

Hand protection
Impervious gloves. Confirm with reputable supplier first.

Respiratory protection
Avoid breathing mists or vapors. Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.

Thermal hazards
Not applicable.

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. Wash hands before breaks and immediately after handling the product. Use good industrial hygiene practices in handling this material.

9. Physical and Chemical Properties

| Appearance | Clear |
| Physical state | Liquid |
| Form | Liquid |
| Color | Colorless to Straw |
| Odor | Characteristic |
| Odor threshold | Not available. |
| pH | 9 - 11 |
| Melting point/freezing point | Not available. |
| Initial boiling point and boiling range | Not available. |
| Pour point | Not available. |
| Specific gravity | Not available. |
| Partition coefficient (n-octanol/water) | Not available. |
| Flash point | > 212.0 °F (> 100.0 °C) Pensky-Martens Closed Cup |
| Evaporation rate | Same as water |
| Flammability (solid, gas) | Not applicable. |

Upper/lower flammability or explosive limits

| Flammability limit - lower (%) | Not available |
| Flammability limit - upper (%) | Not available |
| Explosive limit - lower (%) | Not available. |
| Explosive limit - upper (%) | Not available. |
| Vapor pressure | Not available |
| Vapor density | Not available |
| Relative density | Not available. |
| Solubility(ies) | Not available. |
| Auto-ignition temperature | Not available |
| Decomposition temperature | Not available. |
| Viscosity | Not available. |

10. Stability and Reactivity

Reactivity
Reacts violently with acids.
This product may react with oxidizing agents.

Possibility of hazardous reactions
Hazardous polymerization does not occur.

Chemical stability
Stable under recommended storage conditions.
## Conditions to avoid

Hazardous vapours may be produced when mixed with chlorinated detergents or sanitizers. Do not use or store near heat or open flame. Do not mix with oxidizers, anionic soaps and detergents.

## Incompatible materials

Acids.

## Hazardous decomposition products

May include and are not limited to: Oxides of nitrogen. Oxides of carbon.

### 11. Toxicological Information

#### Information on likely routes of exposure

- **Ingestion**: Expected to be a low ingestion hazard.
- **Inhalation**: No adverse effects due to inhalation are expected.
- **Skin contact**: Causes skin irritation.
- **Eye contact**: Causes serious eye irritation.

#### Symptoms related to the physical, chemical and toxicological characteristics

Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

#### Information on toxicological effects

##### Acute toxicity

<table>
<thead>
<tr>
<th>Product</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMS-II Sanitizing Concentrate (4211-34) (CAS Mixture)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute Dermal LD50</td>
<td>&gt; 2000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Oral LD50</td>
<td>&gt; 5000 mg/kg</td>
<td></td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
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<td>Alkyl (60% C14, 30% C16, 5% C12, 5% C18) dimethyl benzyl ammonium chloride (CAS 53516-76-0)</td>
<td></td>
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<tr>
<td>Acute Inhalation LC50</td>
<td>Not available</td>
<td></td>
</tr>
<tr>
<td>Oral LD50</td>
<td>Not available</td>
<td></td>
</tr>
</tbody>
</table>

| Alkyl (68% C12, 32% C14) dimethyl ethylbenzyl ammonium chloride (CAS 85409-23-0) |  |  |
| Acute Dermal LD50 | Not available |
| Inhalation LC50 | Not available |
| Oral LD50 | Rat 300 - 2000 mg/kg |

##### Skin corrosion/irritation

- **Exposure minutes**: Not available.
- **Erythema value**: Not available.
- **Oedema value**: Not available.

##### Serious eye damage/eye irritation

- **Corneal opacity value**: Not available.
- **Iris lesion value**: Not available.
- **Conjunctival reddening value**: Not available.
- **Conjunctival oedema value**: Not available.
- **Recover days**: Not available.

##### Respiratory or skin sensitization

- **Respiratory sensitization**: Not available.
- **Skin sensitization**: This product is not expected to cause skin sensitization.
- **Germ cell mutagenicity**: Non-hazardous by OSHA criteria.
- **Carcinogenicity**: Not classified or listed by IARC, NTP, OSHA and ACGIH.
10. Reproductive toxicity
Not listed.
Specific target organ toxicity - single exposure
Non-hazardous by OSHA criteria.
Specific target organ toxicity - repeated exposure
Not classified.
Aspiration hazard
Not available.
Chronic effects
Prolonged inhalation may be harmful.
Further information
Not available.

12. Ecological Information
Ecotoxicity
This product is toxic to fish.
Persistence and degradability
No data is available on the degradability of this product.
Bioaccumulative potential
No data available.
Mobility in soil
No data available.
Mobility in general
Not 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.

13. Disposal Considerations
Disposal instructions
Dispose of contents/container in accordance with local/regional/national/international regulations.
PESTICIDE DISPOSAL: / CONTAINER DISPOSAL: Non-refillable container. Do not reuse or refill this container.
RESIDUE REMOVAL INSTRUCTIONS: Triple rinse container promptly after emptying. Triple rinse as follows: Fill the container ¼ full with water and recap. Shake for 10 seconds. Follow Pesticide Disposal instructions for rinsate disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.
Local disposal regulations
Dispose in accordance with all applicable regulations.
Hazardous waste code
The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products
Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging
Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport Information
U.S. Department of Transportation (DOT)
Not regulated as dangerous goods.

15. Regulatory Information
US federal regulations
This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
EPA Reg. # 10324-166-65516
PRECAUTIONARY STATEMENTS: HAZARDS TO HUMANS AND DOMESTIC ANIMALS.
WARNING. KEEP OUT OF REACH OF CHILDREN. Causes substantial but temporary eye injury. Harmful if swallowed, inhaled, or absorbed through the skin. Do not get in eyes or on clothing. Avoid contact with skin. Wear goggles or face shield when handling. 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.
ENVIRONMENTAL HAZARD: This product is toxic to fish.
PHYSICAL OR CHEMICAL HAZARD: Do not use or store near heat or open flame. Do not mix with oxidizers, anionic soaps and detergents.
TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not regulated.
CERCLA Hazardous Substance List (40 CFR 302.4)
Not listed.
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
- Immediate Hazard - Yes
- Delayed Hazard - No
- Fire Hazard - No
- Pressure Hazard - No
- Reactivity Hazard - No

SARA 302 Extremely hazardous substance
- No

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.

Food and Drug Administration (FDA)
- Not regulated.

US state regulations
WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance
- Benzene, (chloromethyl)- (CAS 100-44-7) Listed.
- Ethanol (CAS 64-17-5) Listed.

US. Massachusetts RTK - Substance List
- Not regulated.

US. Pennsylvania RTK - Hazardous Substances
- Not regulated.

US. Rhode Island RTK
- Not regulated.

Country(s) or region
Inventory name
On inventory (yes/no)*
United States & Puerto Rico Toxic Substances Control Act (TSCA) Inventory Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s)

16. Other Information

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<table>
<thead>
<tr>
<th></th>
<th>HEALTH</th>
<th>FLAMMABILITY</th>
<th>PHYSICAL HAZARD</th>
<th>PERSONAL PROTECTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Severe</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>X</td>
</tr>
<tr>
<td>Serious</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Moderate</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Slight</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Minimal</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
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</tbody>
</table>

Disclaimer
The information in the sheet was written based on the best knowledge and experience currently available. Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

Issue date
18-June-2015

Further information
For an updated SDS, please contact the supplier/manufacturer listed on the first page of the document.
Other information

This Safety Data Sheet was prepared to comply with the current OSHA Hazard Communication Standard (HCS) adoption of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

Prepared by

Nu-Calgon Technical Service   Phone: (314) 469-7000