1. Product and Company Identification

Product name: SCRUBS (4366-87, 4366-24)
CAS #: Mixture
Product Use: Waterless Hand Cleaner Towels
Manufacturer: Nu-Calgon
2008 Altom Court
St. Louis, MO 63146 US
Phone: 314-469-7000 / 800-554-5499
Emergency Phone: 1-800-424-9300 (CHEMTREC)

2. Hazards Identification

Emergency overview
CAUTION
MAY CAUSE EYE IRRITATION. MAY CAUSE SKIN IRRITATION. Contact with liquid may cause skin sensitization.

Potential short term health effects
Routes of exposure:
Eye: Inhalation. Ingestion.

Eyes
May cause irritation.

Skin
Contact with skin can cause minor irritation and allergic reaction (sensitization) in some individuals following prolonged direct contact.

Inhalation
Not a normal route of exposure. May cause respiratory irritation.

Ingestion
Not a normal route of exposure. May cause stomach distress, nausea or vomiting.

Target organs
Eyes. Respiratory system.

Chronic effects
Prolonged or repeated exposure can cause drying, defatting and dermatitis.

Signs and symptoms
Symptoms may include redness, oedema, drying, defatting and cracking of the skin.
Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

Potential environmental effects
See section 12.

3. Composition/Information on Ingredients

Components | CAS # | Percent
Limonene | 5989-27-5 | 3 - 7
C12-15 PARETH-11 | 68131-39-5 | 1 - 5

4. First Aid Measures

First aid procedures
Eye contact
Immediately flush with cool water. Remove contact lenses, if applicable, and continue flushing for 15 minutes. Obtain medical attention immediately.

Skin contact
Flush with water. In case of skin irritation, discontinue use of product.

Inhalation
Not a normal route of exposure. If symptoms develop move victim to fresh air. If symptoms persist, obtain medical attention.

Ingestion
Not a normal route of exposure. Do not induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Never give anything by mouth if victim is unconscious, or is convulsing. Obtain medical attention.

Notes to physician
Symptoms may be delayed.

General advice
Keep out of reach of children. Immediate medical attention is required. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. If you feel unwell, seek medical advice (show the label where possible).

5. Fire Fighting Measures

Flammable properties
Not flammable by WHMIS criteria.
Extinguishing media

Suitable extinguishing media

Unsuitable extinguishing media
Not available

Protection of firefighters

Specific hazards arising from the chemical
Not available

Protective equipment for firefighters
Firefighters should wear full protective clothing including self contained breathing apparatus.

Hazardous combustion products
May include and are not limited to: Oxides of carbon. Oxides of sulfur. Hydrogen sulfide.

Explosion data

Sensitivity to mechanical impact
Not available.

Sensitivity to static discharge
Not available.

6. Accidental Release Measures

Personal precautions
Avoid contact with eyes. Avoid inhalation of vapour, fumes, dust and/or mist from the spilled material.

Environmental precautions
Do not discharge into lakes, streams, ponds or public waters.

Methods for containment
Prevent entry into waterways, sewers, basements or confined areas.

Methods for cleaning up
Pick up and discard towel.

7. Handling and Storage

Handling
Avoid contact with eyes, lips and mouth.
Use good industrial hygiene practices in handling this material.
When using do not eat or drink.

Storage
Keep out of the reach of children.
Store in a closed container away from incompatible materials.
Keep away from heat, open flames or other sources of ignition.
Protect from freezing.

8. Exposure Controls/Personal Protection

Exposure limits
Chemicals listed in section 3 that are not listed here do not have established limit values for ACGIH.

Engineering controls
General ventilation normally adequate.

Personal protective equipment

Eye/Face protection
Not normally required.

Hand protection
Not required

Skin and body protection
Not normally required.

Respiratory protection
Not normally required if good ventilation is maintained.

General hygiene considerations
Avoid contact with eyes. Handle in accordance with good industrial hygiene and safety practices.

9. Physical and Chemical Properties

Appearance
Liquid saturated on wipe

Colour
Opaque white

Form
Towelettes.

Odour
Citrus

Odour threshold
Not available.

Physical state
Solid.

pH
9.8 ± 0.5

Freezing point
Not available.

Boiling point
100 °C (212 °F) (liquid)
Pour point: Not available.
Evaporation rate: Not available.
Flash point: None to boiling (PMCC).
Auto-ignition temperature: Not available.
Flammability Limits in Air, Upper, % by Volume: Not available.
Flammability Limits in Air, Lower, % by Volume: Not available.
Heat of combustion: Not available.
Vapour pressure: Not available.
Vapour density: > 1.
Specific gravity: 0.986 (Liquid).
Partition coefficient (n-octanol/water): Not available.
Solubility (Water): Wipe is not soluble.
Relative density: Not available.
Viscosity: Not available.
VOC: < 8.
Percent volatile: Not available.

10. Stability and Reactivity

Reactivity: This product may react with strong oxidising agents.
Possibility of hazardous reactions: Hazardous polymerisation does not occur.
Chemical stability: Stable under recommended storage conditions.
Conditions to avoid: Do not mix with other chemicals.
Hazardous decomposition products: May include and are not limited to: Oxides of carbon. Oxides of sulfur. Hydrogen sulphide.

11. Toxicological Information

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test results</th>
</tr>
</thead>
<tbody>
<tr>
<td>C12-15 PARETH-11 (CAS 68131-39-5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Rabbit</td>
<td>2500 mg/kg</td>
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<tr>
<td></td>
<td></td>
<td>2000 mg/kg</td>
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<tr>
<td>Inhalation</td>
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<td></td>
</tr>
<tr>
<td>LC50</td>
<td>Not available</td>
<td></td>
</tr>
<tr>
<td>Oral</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Rat</td>
<td>1600 mg/kg</td>
</tr>
<tr>
<td>Limonene (CAS 5989-27-5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Rabbit</td>
<td>&gt; 5000 mg/kg</td>
</tr>
<tr>
<td>Inhalation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LC50</td>
<td>Not available</td>
<td></td>
</tr>
<tr>
<td>Oral</td>
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<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Mouse</td>
<td>5600 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Rat</td>
<td>4400 mg/kg</td>
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</tbody>
</table>
Effects of acute exposure

- **Eye contact**: May cause irritation.
- **Skin contact**: Contact with skin can cause minor irritation and allergic reaction (sensitization) in some individuals following prolonged direct contact.
- **Inhalation**: Not a normal route of exposure. May cause respiratory irritation.
- **Ingestion**: Not a normal route of exposure. May cause stomach distress, nausea or vomiting.
- **Sensitisation**: Non-hazardous by WHMIS criteria.
- **Chronic effects**: Non-hazardous by WHMIS criteria.
- **Carcinogenicity**: Non-hazardous by WHMIS criteria.

**IARC Monographs. Overall Evaluation of Carcinogenicity**

Limonene (CAS 5989-27-5) Volume 73 - 3 Not classifiable as to carcinogenicity to humans.

- **Mutagenicity**: Non-hazardous by WHMIS criteria.
- **Reproductive effects**: Non-hazardous by WHMIS criteria.
- **Teratogenicity**: Non-hazardous by WHMIS criteria.
- **Name of Toxicologically Synergistic Products**: Not available.

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### 12. Ecological Information

**Ecotoxicity** Components of this product have been identified as having potential environmental concerns.

#### Ecotoxicological data

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test results</th>
</tr>
</thead>
<tbody>
<tr>
<td>C12-15 PARETH-11 (CAS 68131-39-5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Aquatic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crustacea</td>
<td>EC50</td>
<td>Water flea (Ceriodaphnia dubia)</td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>Channel catfish (Ictalurus punctatus)</td>
</tr>
<tr>
<td><strong>Limonene (CAS 5989-27-5)</strong></td>
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<td></td>
</tr>
<tr>
<td><strong>Aquatic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crustacea</td>
<td>EC50</td>
<td>Water flea (Daphnia pulex)</td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>Fathead minnow (Pimephales promelas)</td>
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<td><strong>Persistence and degradability</strong></td>
<td>Not available.</td>
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<tr>
<td><strong>Bioaccumulation/accumulation</strong></td>
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<tr>
<td><strong>Mobility in environmental media</strong></td>
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<tr>
<td><strong>Environmental effects</strong></td>
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<td><strong>Aquatic toxicity</strong></td>
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<td><strong>Partition coefficient</strong></td>
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<td></td>
<td></td>
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<tr>
<td><strong>Chemical fate information</strong></td>
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</table>

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### 13. Disposal Considerations

#### Disposal instructions

Follow container label directions carefully. Do not reuse towel. Dispose of used towel in trash. Do not flush in toilet. Do not reuse empty container. Wrap container and put in trash collection. Review federal, state/provincial, and local government requirements prior to disposal. Discard with solid waste.

- **Waste from residues / unused products**: Not available
- **Contaminated packaging**: Not available

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### 14. Transport Information

**Transportation of Dangerous Goods (TDG - Canada)**

Not regulated as dangerous goods.
15. Regulatory Information

Canadian federal regulations
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Canada NPRI VOCs with Additional Reporting Requirements: Mass reporting threshold/Identification Number
Limonene (CAS 5989-27-5) 1 TONNES

Canada WHMIS Ingredient Disclosure: Threshold limits
Limonene (CAS 5989-27-5) 1 %

WHMIS Classification
Exempt - Notified cosmetic under the Food & Drugs Act

Inventory status

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory Name</th>
<th>On Inventory (Yes/No)*</th>
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</thead>
<tbody>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
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</table>

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other Information

<table>
<thead>
<tr>
<th>LEGEND</th>
<th>HEALTH</th>
<th>FLAMMABILITY</th>
<th>PHYSICAL HAZARD</th>
<th>PERSONAL PROTECTION</th>
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</tbody>
</table>

Discription
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.

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Effective date
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Expiry Date
31-July-2017
Prepared by
Nu-Calgon Technical Service   Phone: (314) 469-7000
Other information
For an updated MSDS, please contact the supplier/manufacturer listed on the first page of the document.