1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier
Product Name: ORANGE TOUGH 40
Product Number: 2240
Recommended Use: Cleaning agent
Uses Advised Against: For Industrial and Institutional Use Only

Manufacturer/Supplier: Spartan Chemical Company, Inc.
1110 Spartan Drive
Maumee, Ohio 43537 USA
800-537-8990 (Business hours)
www.spartanchemical.com

24 Hour Emergency Phone Numbers:
Medical Emergency/Information: 888-314-6171
Transportation/Spill/Leak: CHEMTREC 800-424-9300

2. HAZARDS IDENTIFICATION

GHS Classification
Skin Corrosion/Irritation: Category 2
Serious Eye Damage/Eye Irritation: Category 1
Skin Sensitization: Category 1
Specific Target Organ Toxicity (Repeated Exposure): Category 2
Aspiration Toxicity: Category 1
Flammable Liquids: Category 3

GHS Label Elements
Signal Word: Danger
Symbols:

Hazard Statements:
Causes serious eye damage
Causes skin irritation.
May cause an allergic skin reaction
May cause damage to organs through prolonged or repeated exposure (Respiratory tract)
May be fatal if swallowed and enters airways
Flammable liquid and vapor.

Precautionary Statements:
Prevention:

Do not breathe mist, vapors or spray.
Wash hands and any exposed skin thoroughly after handling.
Wear eye / face protection
Wear protective gloves
Contaminated work clothing should not be allowed out of the workplace
Keep away from heat/sparks/open flames/hot surfaces. — No smoking
Keep container tightly closed
Ground container and receiving equipment.
Use explosion-proof electrical equipment
Use only non-sparking tools
Take precautionary measures against static discharge

Response:

Get medical attention if you feel unwell.

-Eyes
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 PHYSICIAN.

-Skin
IF ON SKIN (or hair): Take off immediately all contaminated clothing Wash with plenty of soap and water Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention.

-Ingestion:
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician Do NOT induce vomiting.

-Specific Treatment:
See Safety Data Sheet Section 4: “FIRST AID MEASURES” for additional information.

Fire:
In case of fire: Use CO2, dry chemical, or foam for extinction

Storage:
Store locked up. Store in a well-ventilated place. Keep cool

Disposal:
Dispose of contents and container in accordance with local, state and federal regulations.

Hazards Not Otherwise Classified:
Not Applicable

Other Information:
• May be harmful if swallowed.
• Inhalation of vapors or mist may cause respiratory irritation.
• Keep out of reach of children.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>10-30</td>
</tr>
<tr>
<td>Limonene</td>
<td>5989-27-5</td>
<td>10-30</td>
</tr>
<tr>
<td>C13-14 Isoparaffin</td>
<td>64742-47-8</td>
<td>10-30</td>
</tr>
<tr>
<td>Triethanolamine</td>
<td>102-71-6</td>
<td>7-13</td>
</tr>
<tr>
<td>C12-13 Pareth-5</td>
<td>66455-14-9</td>
<td>5-10</td>
</tr>
<tr>
<td>C9-11 Pareth-6</td>
<td>68439-46-3</td>
<td>1-5</td>
</tr>
<tr>
<td>Alkylbenzene sulfonic acid</td>
<td>68584-22-5</td>
<td>1-5</td>
</tr>
<tr>
<td>Hexylene Glycol</td>
<td>107-41-5</td>
<td>1-5</td>
</tr>
<tr>
<td>Butoxyethanol</td>
<td>111-76-2</td>
<td>1-5</td>
</tr>
<tr>
<td>Ethylhexyloxyethanol</td>
<td>1559-35-9</td>
<td>1-5</td>
</tr>
<tr>
<td>Tetrasodium EDTA</td>
<td>64-02-8</td>
<td>1-5</td>
</tr>
<tr>
<td>Cyclocarboxypropyloleic acid</td>
<td>53980-88-4</td>
<td>1-5</td>
</tr>
<tr>
<td>Potassium hydroxide</td>
<td>1310-58-3</td>
<td>0.1-1</td>
</tr>
<tr>
<td>Diethylene glycol mono(2-ethylhexyl) ether</td>
<td>1559-36-0</td>
<td>0.1-1</td>
</tr>
<tr>
<td>Colorant</td>
<td>PROPRIETARY</td>
<td>&lt;0.1</td>
</tr>
<tr>
<td>Colorant</td>
<td>PROPRIETARY</td>
<td>&lt;0.1</td>
</tr>
</tbody>
</table>

Specific chemical identity and/or exact percentage of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

-Eye Contact:
Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IMMEDIATELY CALL A POISON CENTER OR PHYSICIAN.
-Skin Contact: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. If skin irritation or rash occurs; Get medical attention.

-Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison control center or physician if you feel unwell.

-Ingestion: IMMEDIATELY CALL A POISON CENTER OR PHYSICIAN. Do NOT induce vomiting.

-Note to Physicians: Contains petroleum distillates. Possible aspiration hazard.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Use CO2, dry chemical, or foam
Specific Hazards Arising from the Chemical: Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back.
Hazardous Combustion Products: May include Carbon monoxide, Carbon dioxide, and other toxic gases or vapors.
Protective Equipment and Precautions for Firefighters: Wear MSHA/NIOSH approved self-contained breathing apparatus (SCBA) and full protective gear. Cool fire-exposed containers with water spray.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
Environmental Precautions: Do not rinse spill onto the ground, into storm sewers or bodies of water. Do not dispose of this product by pouring on the ground, into storm sewers, waterways or other surface waters. Consult with local, federal and state authorities prior to disposal of any d-limonene containing product into the sanitary sewer system.
Methods for Clean-Up: Prevent further leakage or spillage if safe to do so. Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13).

7. HANDLING AND STORAGE

Advice on Safe Handling: Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling.
Storage Conditions: Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep containers tightly closed in a cool, well-ventilated place. Keep out of the reach of children.
Suggested Shelf Life: Minimum of 2 years from date of manufacture.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Occupational Exposure Limits:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triethanolamine</td>
<td>TWA: 5mg/m³</td>
<td>(vacated) Ceiling: 25 ppm</td>
<td>Ceiling: 25 ppm</td>
</tr>
<tr>
<td>102-71-6</td>
<td></td>
<td>Ceiling: 125 mg/m³</td>
<td>Ceiling: 125 mg/m³</td>
</tr>
<tr>
<td>Hexylene Glycol</td>
<td>Ceiling: 25 ppm</td>
<td>TWA: 50 ppm</td>
<td>IDLH: 700 ppm</td>
</tr>
<tr>
<td>107-41-5</td>
<td>(vacated) Ceiling: 25 ppm</td>
<td>TWA: 240 mg/m³</td>
<td>TWA: 5 ppm</td>
</tr>
<tr>
<td>Butoxyethanol</td>
<td>TWA: 20 ppm</td>
<td>(vacated) TWA: 25 ppm</td>
<td>TWA: 24 mg/m³</td>
</tr>
<tr>
<td>111-76-2</td>
<td>(vacated) Ceiling: 120 mg/m³</td>
<td>(vacated) S*</td>
<td></td>
</tr>
<tr>
<td>Potassium hydroxide</td>
<td>Ceiling: 2 mg/m³</td>
<td>(vacated) Ceiling: 2 mg/m³</td>
<td>Ceiling: 2 mg/m³</td>
</tr>
<tr>
<td>1310-58-3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Engineering Controls:

Provide good general ventilation. If work practices generate dust, fumes, gas, vapors or mists which expose workers to chemicals above the occupational exposure limits, local exhaust ventilation or other engineering controls should be considered.
Personal Protective Equipment
Eye/Face Protection: Wear splash goggles.
Skin and Body Protection: Wear rubber or other chemical-resistant gloves.
Respiratory Protection: Not required with expected use.
If occupational exposure limits are exceeded or respiratory irritation occurs, use of a NIOSH/MSHA approved respirator suitable for the use-conditions and chemicals in Section 3 should be considered.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance/Physical State</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Orange</td>
</tr>
<tr>
<td>Odor</td>
<td>Orange</td>
</tr>
<tr>
<td>pH</td>
<td>8.5-9.5</td>
</tr>
<tr>
<td>Melting Point / Freezing Point</td>
<td>No information available.</td>
</tr>
<tr>
<td>Boiling Point / Boiling Range</td>
<td>99 °C / 210 °F</td>
</tr>
<tr>
<td>Flash Point</td>
<td>53 °C / 127 °F ASTM D56</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>&lt; 1</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No information available.</td>
</tr>
<tr>
<td>Upper Flammability Limit</td>
<td>No information available.</td>
</tr>
<tr>
<td>Lower Flammability Limit</td>
<td>No information available.</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>No information available.</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>No information available.</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>0.954</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td>Miscible in water</td>
</tr>
<tr>
<td>Partition Coefficient</td>
<td>No information available.</td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>No information available.</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>No information available.</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No information available.</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Reactivity: This material is considered to be non-reactive under normal conditions of use.
Chemical Stability: Stable under normal conditions.
Possibility of Hazardous Reactions: Not expected to occur with normal handling and storage.
Conditions to Avoid: Heat, flames and sparks. Extremes of temperature and direct sunlight.
Hazardous Decomposition Products: May include carbon monoxide, carbon dioxide (CO2) and other toxic gases or vapors.

11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Eyes, Skin, Ingestion, Inhalation.
Symptoms of Exposure:
- Eye Contact: Pain, redness, swelling of the conjunctiva and tissue damage. Eye contact may cause permanent damage.
- Skin Contact: Pain, redness and cracking of the skin. May cause sensitization by skin contact
- Inhalation: Nasal discomfort and coughing.
- Ingestion: Pain, nausea, vomiting and diarrhea. Aspiration may cause pulmonary edema and pneumonitis.
Immediate, Delayed, Chronic Effects
Product Information: Data not available or insufficient for classification.
Chronic Toxicity: Repeated contact may cause allergic reactions in very susceptible persons. Avoid repeated exposure. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.
The following acute toxicity estimates (ATE) are calculated based on the GHS document.

ATEmix (oral): 2576 mg/kg
ATEmix (dermal): 3284 mg/kg
ATEmix (inhalation-dust/mist): 38.9 mg/l

### Component Acute Toxicity Information

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>&gt; 90 mL/kg (Rat)</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
<tr>
<td>Limonene</td>
<td>= 5200 mg/kg (Rat) = 4400 mg/kg (Rat)</td>
<td>&gt; 5 g/kg (Rabbit)</td>
<td>Not Available</td>
</tr>
<tr>
<td>C13-14 Isoparaffin</td>
<td>&gt; 5000 mg/kg (Rat)</td>
<td>&gt; 2000 mg/kg (Rabbit)</td>
<td>&gt; 5.2 mg/L (Rat) 4 h</td>
</tr>
<tr>
<td>Triethanolamine</td>
<td>= 4190 mg/kg (Rat)</td>
<td>&gt; 20 mL/kg (Rabbit)</td>
<td>Not Available</td>
</tr>
<tr>
<td>C12-13 Pareth-5</td>
<td>&gt; 10 g/kg (Rat)</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
<tr>
<td>C9-11 Pareth-6</td>
<td>= 1400 mg/kg (Rat)</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
<tr>
<td>Alkylbenzene sulfonic acid</td>
<td>= 775 mg/kg (Rat)</td>
<td>= 2000 mg/kg (Rabbit)</td>
<td>Not Available</td>
</tr>
<tr>
<td>Hexylene Glycol</td>
<td>= 3700 mg/kg (Rat)</td>
<td>Not Available</td>
<td>&gt; 310 mg/m³ (Rat) 1 h</td>
</tr>
<tr>
<td>Butoxyethanol</td>
<td>= 470 mg/kg (Rat)</td>
<td>= 99 mg/kg (Rabbit)</td>
<td>= 450 ppm (Rat) 4 h</td>
</tr>
<tr>
<td>Ethylhexyloxyethanol</td>
<td>= 3080 mg/kg (Rat)</td>
<td>= 2120 mg/kg (Rabbit)</td>
<td>Not Available</td>
</tr>
<tr>
<td>Tetrasodium EDTA</td>
<td>= 1658 mg/kg (Rat)</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
<tr>
<td>Cyclocarboxypropyleic acid</td>
<td>= 6176 mg/kg (Rat)</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
<tr>
<td>Potassium hydroxide</td>
<td>= 284 mg/kg (Rat)</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

**Carcinogenicity:** No components present at 0.1% or greater are listed as to being carcinogens by ACGIH, IARC, NTP or OSHA.

### 12. ECOLOGICAL INFORMATION

#### Ecotoxicity

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Algae/Aquatic Plants</th>
<th>Fish</th>
<th>Toxicity to Microorganisms</th>
<th>Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limonene</td>
<td>Not Available</td>
<td>0.619 - 0.796: 96 h Pimephales promelas mg/L LC50 flow-through 35: 96 h Oncorhynchus mykiss mg/L LC50</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
<tr>
<td>C13-14 Isoparaffin</td>
<td>Not Available</td>
<td>45: 96 h Pimephales promelas mg/L LC50 static 2.4: 96 h Lepomis macrochirus mg/L LC50 static</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
<tr>
<td>Triethanolamine</td>
<td>216: 72 h Desmodesmus subspicatus mg/L EC50 169: 96 h Desmodesmus subspicatus mg/L EC50</td>
<td>10600 - 13000: 96 h Pimephales promelas mg/L LC50 flow-through 1000: 96 h Pimephales promelas mg/L LC50 static 450 - 1000: 96 h Lepomis macrochirus mg/L LC50 static</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
<tr>
<td>Alkylbenzene sulfonic acid</td>
<td>Not Available</td>
<td>3: 96 h Oncorhynchus mykiss mg/L LC50 static</td>
<td>Not Available</td>
<td>2.9: 48 h Daphnia magna mg/L EC50</td>
</tr>
</tbody>
</table>
Hexylene Glycol
107-41-5

Not Available

10500 - 11000: 96 h Pimephales promelas mg/L LC50 flow-through 10000: 96 h Lepomis macrochirus mg/L LC50 static 8690: 96 h Pimephales promelas mg/L LC50 flow-through 10700: 96 h Pimephales promelas mg/L LC50 static

Butoxyethanol
111-76-2

Not Available

1490: 96 h Lepomis macrochirus mg/L LC50 static 2950: 96 h Lepomis macrochirus mg/L LC50 static

Tetrasodium EDTA
64-02-8

1.01: 72 h Desmodesmus subspicatus mg/L EC50 41: 96 h Lepomis macrochirus mg/L LC50 static 59.8: 96 h Pimephales promelas mg/L LC50 static

Persistence and Degradability: No information available.
Bioaccumulation: No information available.
Other Adverse Effects: No information available.

13. DISPOSAL CONSIDERATIONS

Disposal of Wastes: Dispose of in accordance with federal, state and local regulations.
Contaminated Packaging: Dispose of in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

DOT:
UN/ID No: UN1993
Proper Shipping Name: Flammable liquids, n.o.s., (contains d-limonene)
Hazard Class: 3
Packing Group: III
Special Provisions: Class 3, Packing Group III materials meet the exception requirements of section 49 CFR 173.150 when individual containers of not more than 1.3 gallons are packed in a strong outer packaging and ground transportation is utilized. Such containers may be reclassified as “Limited Quantity”.
Shipping descriptions may vary based on mode of transport, quantities, package size, and/or origin and destination. Check with a trained hazardous materials transportation expert for information specific to your situation.

IMDG:
UN/ID No: UN1993
Proper Shipping Name: Flammable liquids, n.o.s., (contains d-limonene)
Hazard Class: 3
Packing Group: III

15. REGULATORY INFORMATION

TSCA Status: (Toxic Substance Control Act Section 8(b) Inventory)
All chemical substances in this product are included on or exempted from listing on the TSCA Inventory of Chemical Substances.

SARA 313
This product contains the following listed substances:
Butoxyethanol
CAS No 111-76-2 applies to R-(OCH2CH2)n-OR’, where n = 1, 2, or 3, R=Alkyl C7 or less, or R = Phenyl or Alkyl substituted phenyl, R’ = H or Alkyl C7 or less, or OR’ consisting of Carboxylic acid ester, Sulfate, Phosphate, Nitrate, or SulfonateChemical Category N230

SARA 311/312 Hazard Categories
Acute Health Hazard: Yes
Chronic Health Hazard: Yes
Fire Hazard: Yes
Sudden release of pressure hazard: No
Reactive Hazard: No

California Proposition 65
This product is not subject to warning requirements under California Proposition 65.

16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health Hazards: 2</th>
<th>Flammability: 2</th>
<th>Instability: 0</th>
<th>Special: N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>HMIS</td>
<td>Health Hazards: 2*</td>
<td>Flammability: 2</td>
<td>Physical Hazards: 0</td>
<td></td>
</tr>
</tbody>
</table>

Revision Date: 10-Dec-2018
Reasons for Revision: Revised formula

Disclaimer:
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet