SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form: Mixture
Trade name: Pine Oil 60%, Disinfectant, Detergent
Product code: N/A
NSN: 6840-00-678-7904 (Quart) 6840-00-584-3129 (1 Gal) 6840-00-551-8346 (Drum)
Unit of issue: 1 QT = 24/ Case; 1 Gal = 6/Case; Drum = 1 each
GSA Contract#: GS-07F-P0060
Cage#: 1A862

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture: Industrial use only, EPA registration # 34160-5. Disinfectant, detergent.

1.3. Details of the supplier of the safety data sheet

The Lighthouse of Houston
3530 W. Dallas St.
Houston, Tx 77019
Tel: 713-527-9561
www.houstonlighthouse.org

1.4. Emergency telephone number

Emergency number: CHEM-TEL: 1 800 255-3924

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification
Flam. Liq. 4 H227
Eye Irrit. 2A H319
Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labelling
Hazard pictograms (GHS-US)

Signal word (GHS-US): Warning
Hazard statements (GHS-US): H227 - Combustible liquid
H319 - Causes serious eye irritation
Precautionary statements (GHS-US): P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
P264 - Wash hands thoroughly after handling
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337+P313 - If eye irritation persists: get medical advice/attention
P370+P378 - In case of fire: Use Foam. Dry powder. Carbon dioxide to extinguish
P403+P235 - Store in a well-ventilated place. Keep cool
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, national and/or international regulation.
Pine Oil 60%, Disinfectant, Detergent
Safety Data Sheet
according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

2.3. Other hazards
other hazards which do not result in classification : Potential CNS impairment; upper respiratory irritation. May cause irritation to the respiratory tract.

2.4. Unknown acute toxicity (GHS-US)
Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance
Not applicable

3.2. Mixture

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pine oil</td>
<td>(CAS No) 8002-09-3</td>
<td>60</td>
<td>Not classified</td>
</tr>
<tr>
<td>Tall oil fatty acids</td>
<td>(CAS No) 81750-12-3</td>
<td>10 - 11</td>
<td>Not classified</td>
</tr>
<tr>
<td>Isopropyl alcohol</td>
<td>(CAS No) 67-63-0</td>
<td>3</td>
<td>Flam. Liq. 2, H225; Eye Irrit. 2A, H319; Eye Dam. 1, H318</td>
</tr>
<tr>
<td>Sodium hydroxide</td>
<td>(CAS No) 1310-73-2</td>
<td>&lt; 2</td>
<td>Met. Corr. 1, H290; Acute Tox. 4 (Dermal), H312; Skin Corr. 1A, H314</td>
</tr>
</tbody>
</table>

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : After contact with skin, wash immediately and thoroughly with water and soap. Remove all contaminated clothing and footwear.
First-aid measures after eye contact : 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.
First-aid measures after ingestion : If the person is fully conscious, make him/her drink water. Never give an unconscious person anything to drink. Call a poison center or a doctor if you feel unwell.

4.3. Indication of any immediate medical attention and special treatment needed
Symptoms/injuries after eye contact : Eye irritation.

SECTION 5: Firefighting measures

5.1. Extinguishing media
Unsuitable extinguishing media : None known

5.2. Special hazards arising from the substance or mixture
Fire hazard : Intense heat may cause container to burst
Explosion hazard : Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.

5.3. Advice for firefighters
Firefighting instructions : Use water spray or fog for cooling exposed containers.
Protective equipment for firefighters : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
6.1.1. For non-emergency personnel
No additional information available
6.1.2. For emergency responders
Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions
Avoid release to the environment. Do not discharge into lakes, streams, ponds or public waterways unless in accordance with a National Pollutant Discharge Elimination System (NPDES) permit. For guidance, contact your State Water Board or regional office of the EPA.

6.3. Methods and material for containment and cleaning up
Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections
For further information refer to section 8: Exposure-controls/personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Precautions for safe handling : Ensure good ventilation of the work station. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Wear personal protective equipment. Avoid contact with skin and eyes. Keep in original container. When not in use, keep containers tightly closed.
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities
Storage conditions : Store in a well-ventilated place. Keep cool.
Incompatible materials : Oxidizing agent. Keep away from pesticides, fertilizer, and food.

7.3. Specific end use(s)
No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Pine oil (8002-09-3)</th>
<th>ACGIH</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSHA</td>
<td>Not applicable</td>
<td></td>
</tr>
<tr>
<td>Isopropyl alcohol (67-63-0)</td>
<td>ACGIH</td>
<td>ACGIH TWA (ppm) 200 ppm</td>
</tr>
<tr>
<td></td>
<td>ACGIH</td>
<td>ACGIH STEL (ppm) 400 ppm</td>
</tr>
<tr>
<td></td>
<td>OSHA</td>
<td>OSHA PEL (TWA) (mg/m³) 980 mg/m³</td>
</tr>
<tr>
<td></td>
<td>OSHA</td>
<td>OSHA PEL (TWA) (ppm) 400 ppm</td>
</tr>
<tr>
<td>Sodium hydroxide (1310-73-2)</td>
<td>ACGIH</td>
<td>ACGIH Ceiling (mg/m³) 2 mg/m³</td>
</tr>
<tr>
<td></td>
<td>OSHA</td>
<td>OSHA PEL (TWA) (mg/m³)</td>
</tr>
<tr>
<td>Tall oil fatty acids (81790-12-3)</td>
<td>ACGIH</td>
<td>Not applicable</td>
</tr>
<tr>
<td></td>
<td>OSHA</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

8.2. Exposure controls
Appropriate engineering controls : Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure good ventilation of the work station.
Pine Oil 60%, Disinfectant, Detergent
Safety Data Sheet
according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)


Eye protection: Safety glasses.
Skin and body protection: Wear suitable protective clothing.
Respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment.
Environmental exposure controls: Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties
- Physical state: Liquid
- Colour: Straw yellow to dark amber
- Odour: Pine like
- Odour threshold: No data available
- pH: 10.5
- Relative evaporation rate (butyl acetate=1): No data available
- Melting point: 0 °C (32 °F)
- Freezing point: No data available
- Boiling point: > 185 °C (365 °F)
- Flash point: 77 °C (170 °F)
- Auto-ignition temperature: No data available
- Decomposition temperature: No data available
- Flammability (solid, gas): Not applicable
- Vapour pressure: No data available
- Relative vapour density at 20 °C: No data available
- Relative density: 0.945 (water=1)
- Solubility: Completely soluble in water
- Log Pow: No data available
- Log Kow: No data available
- Viscosity, kinematic: No data available
- Viscosity, dynamic: Ca. 46 mm²/S at 40 °C (104 °F)
- Explosive properties: No data available
- Oxidising properties: No data available
- Explosive limits: No data available

9.2. Other information
- Percent volatile: 77 % at 100 °C (212 °F)

SECTION 10: Stability and reactivity

10.1. Reactivity
React with oxidizing agent.

10.2. Chemical stability
Stable at ambient temperature and under normal conditions of use.

10.3. Possibility of hazardous reactions
Hazardous polymerization will not occur.

10.4. Conditions to avoid
Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials
Oxidizing agent.
### 10.6. Hazardous decomposition products

### SECTION 11: Toxicological information

11.1. Information on toxicological effects

<table>
<thead>
<tr>
<th>Compound</th>
<th>Acute toxicity</th>
<th>Toxicity on skin</th>
<th>Respiratory or skin sensitisation</th>
<th>Germ cell mutagenicity</th>
<th>Carcinogenicity</th>
<th>Reproductive toxicity</th>
<th>Specific target organ toxicity (single exposure)</th>
<th>Specific target organ toxicity (repeated exposure)</th>
<th>Aspiration hazard</th>
<th>Symptoms/injuries after eye contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropyl alcohol (67-63-0)</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50 oral rat</td>
<td>1870 mg/kg</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50 dermal rabbit</td>
<td>4059 mg/kg</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>LC50 inhalation rat (mg/l)</td>
<td>72000 mg/m³ (Exposure time: 4 h)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>ATE US (oral)</td>
<td>4398.000 mg/kg bodyweight</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>ATE US (dermal)</td>
<td>12890.000 mg/kg bodyweight</td>
<td></td>
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<td></td>
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<tr>
<td>Sodium hydroxide (1310-73-2)</td>
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<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>LD50 dermal rabbit</td>
<td>1350 mg/kg</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATE US (dermal)</td>
<td>1350.000 mg/kg bodyweight</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tall oil fatty acids (61790-12-3)</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50 oral rat</td>
<td>7600 mg/kg</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<td></td>
</tr>
</tbody>
</table>

### SECTION 12: Ecological information

12.1. Toxicity
Ecology - general: The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.
## Pine Oil 60%, Disinfectant, Detergent

### Safety Data Sheet

According to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

### 03/27/2015

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC50 Daphnia 1</th>
<th>LC50 fish 1</th>
<th>LC50 fish 2</th>
<th>LC50 fish 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pine oil (8002-09-3)</td>
<td>17 - 28 mg/l</td>
<td>9640 mg/l</td>
<td>13299 mg/l</td>
<td>11130 mg/l</td>
</tr>
<tr>
<td>Isopropyl alcohol (67-63-0)</td>
<td>0.05 (at 25 °C)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sodium hydroxide (1310-73-2)</td>
<td>45.4 mg/l</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

<table>
<thead>
<tr>
<th>Substance</th>
<th>Log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropyl alcohol (67-63-0)</td>
<td>0.05 (at 25 °C)</td>
</tr>
<tr>
<td>Tall oil fatty acids (61790-12-3)</td>
<td>4.89 - 5.98 (at 25 °C)</td>
</tr>
</tbody>
</table>

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

Effect on ozone layer: No additional information available

Effect on the global warming: No additional information available

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Waste disposal recommendations: Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. Empty containers can be dumped according to local legislation.

### SECTION 14: Transport information

In accordance with DOT

Not regulated for transport

### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

Pine oil (8002-09-3) is listed on the United States TSCA (Toxic Substances Control Act) inventory

Comment: Transport information are directly taken from your current (M)SDS. However, unless otherwise there are testing available, the current information is not correct.
Pine Oil 60%, Disinfectant, Detergent
Safety Data Sheet
according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

<table>
<thead>
<tr>
<th>Isopropyl alcohol (67-63-0)</th>
<th>Listed on the United States TSCA (Toxic Substances Control Act) inventory</th>
<th>Listed on United States SARA Section 313</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPA TSCA Regulatory Flag</td>
<td>T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA.</td>
<td></td>
</tr>
<tr>
<td>SARA Section 313 - Emission Reporting</td>
<td>1.0 % (only if manufactured by the strong acid process, no supplier notification)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sodium hydroxide (1310-73-2)</th>
<th>Listed on the United States TSCA (Toxic Substances Control Act) inventory</th>
</tr>
</thead>
<tbody>
<tr>
<td>RQ (Reportable quantity, section 304 of EPA's List of Lists)</td>
<td>1000 lb</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pine oil 60%, Disinfectant, Detergent</th>
<th>RQ (Reportable quantity)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>50,000 lb</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tall oil fatty acids (61790-12-3)</th>
<th>Listed on the United States TSCA (Toxic Substances Control Act) inventory</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPA TSCA Regulatory Flag</td>
<td>Y2 - Y2 - indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.</td>
</tr>
</tbody>
</table>

15.2. International regulations

CANADA

<table>
<thead>
<tr>
<th>Pine oil (8002-09-3)</th>
<th>Listed on the Canadian DSL (Domestic Substances List)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WHMIS Classification</td>
<td>Class B Division 3 - Combustible Liquid</td>
</tr>
<tr>
<td></td>
<td>Class D Division 2 Subdivision B - Toxic material causing other toxic effects</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Isopropyl alcohol (67-63-0)</th>
<th>Listed on the Canadian DSL (Domestic Substances List)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WHMIS Classification</td>
<td>Class B Division 2 - Flammable Liquid</td>
</tr>
<tr>
<td></td>
<td>Class D Division 2 Subdivision B - Toxic material causing other toxic effects</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sodium hydroxide (1310-73-2)</th>
<th>Listed on the Canadian DSL (Domestic Substances List)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WHMIS Classification</td>
<td>Class E - Corrosive Material</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tall oil fatty acids (61790-12-3)</th>
<th>Listed on the Canadian DSL (Domestic Substances List)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WHMIS Classification</td>
<td>Uncontrolled product according to WHMIS classification criteria</td>
</tr>
</tbody>
</table>

EU-Regulations

No additional information available

Isopropyl alcohol (67-63-0) Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
Sodium hydroxide (1310-73-2) Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
Tall oil fatty acids (61790-12-3) Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Classification according to Regulation (EC) No. 1272/2008 [CLP]
No information available

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]
No information available

15.2.2. National regulations

Pine oil (8002-09-3) Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

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Pine Oil 60%, Disinfectant, Detergent
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Isopropyl alcohol (67-63-0)
- Listed on the AICS (Australian Inventory of Chemical Substances)
- Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
- Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
- Listed on the Japanese ISHL (Industrial Safety and Health Law)
- Listed on the Korean ECL (Existing Chemicals List)
- Listed on NZIoC (New Zealand Inventory of Chemicals)
- Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
- Listed on the Canadian IDL (Ingredient Disclosure List)

Sodium hydroxide (1310-73-2)
- Listed on the AICS (Australian Inventory of Chemical Substances)
- Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
- Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
- Listed on the Korean ECL (Existing Chemicals List)
- Listed on NZIoC (New Zealand Inventory of Chemicals)
- Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
- Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
- Listed on the Korean ECL (Existing Chemicals List)
- Listed on NZIoC (New Zealand Inventory of Chemicals)
- Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Tall oil fatty acids (61790-12-3)
- Listed on the AICS (Australian Inventory of Chemical Substances)
- Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
- Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
- Listed on the Korean ECL (Existing Chemicals List)
- Listed on NZIoC (New Zealand Inventory of Chemicals)
- Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

15.3. US State regulations

SECTION 16: Other information

Revision date: 03/27/2015

Full text of H-phrases:

<table>
<thead>
<tr>
<th>Acute Tox. 4 (Dermal)</th>
<th>Acute toxicity (dermal) Category 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye Irrit. 2A</td>
<td>Serious eye damage/eye irritation, Category 2A</td>
</tr>
<tr>
<td>Flamm. Liq. 2</td>
<td>Flammable liquids Category 2</td>
</tr>
<tr>
<td>Flamm. Liq. 4</td>
<td>Flammable liquids Category 4</td>
</tr>
<tr>
<td>Corros. to metals</td>
<td>Corrosive to metals, Category 1</td>
</tr>
<tr>
<td>Skin Corr. 1A</td>
<td>Skin corrosion/vitilication Category 1A</td>
</tr>
<tr>
<td>STOT SE 3</td>
<td>Specific target organ toxicity (single exposure) Category 3</td>
</tr>
<tr>
<td>H225</td>
<td>Highly flammable liquid and vapour</td>
</tr>
<tr>
<td>H227</td>
<td>Combustible liquid</td>
</tr>
<tr>
<td>H290</td>
<td>May be corrosive to metals</td>
</tr>
<tr>
<td>H312</td>
<td>Harmful in contact with skin</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>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
<tr>
<td>H336</td>
<td>May cause drowsiness or dizziness</td>
</tr>
</tbody>
</table>

The information presented herein is believed to be correct but is not purported to be all inclusive and shall be used only as a guide. AMSPEC Chemical shall not be held liable for any damage resulting from handling or from contact with the above product.

03/27/2015 EN (English) SDS ID: 7904/3129/8346 8/8