### 1. CORRECTIVE RESPONSE ACTIONS
- **Ship discharge:** Not listed.
- **Contain:** Not listed.
- **Collection Systems:** Not pertinent.
- **Salvage waterfowl:** Not pertinent.

### 2. CHEMICAL DESIGNATIONS
- **CG Compatibility Group:** Ester (est.).
- **IM unbelievably designation:** Not listed.
- **DOT ID No.:** Not listed.
- **GHS Classification:** Not pertinent.
- **NAERG Guide No.:** Not listed.
- **Standard Industrial Trade Classification:** 51385.

### 3. HEALTH HAZARDS
- **Personal Protective Equipment:** Not required.
- **Symptoms Following Exposure:** Produces no ill effects at normal temperatures but may give rise to irritation and burning of airway.
- **Treatment of Exposure:** Leave contaminated area; wash skin with soap and water; flush eyes with water.
- **TLV-TWA:** Not listed.
- **TLV-Ceiling:** Not listed.
- **Toxicity by Inhalation:** Not pertinent.
- **Toxicity by Ingestion:** Grade 0; LD₅₀ above 15 g/kg (rat).
- **Toxicity by Inhalation:** Currently not available.
- **Chronic Toxicity:** Not established.
- **Vapor (Gas) Irritant Characteristics:** Not irritating to the eyes and throat.
- **Liquid or Solid Characteristics:** No appreciable hazard. Practically harmless to the skin.
- **Odor Threshold:** Currently not available.
- **IDUH Value:** Not listed.
- **OSHA PEL-TWA:** Not listed.
- **OSHA PEL-STEL:** Not listed.
- **OSHA PEL-Ceiling:** Not listed.
- **EPA AEGGL:** Not listed.

### 4. FIRE HAZARDS
- **Flash Point:** 425°F (calc.)
- **Flammable Limits in Air:** Not pertinent.
- **Fire Extinguishing Agents:** Dry chemical, carbon dioxide, foam.
- **Fire Extinguising Agents Not to Be Used:** Water or foam may cause foaming.
- **Special Hazards of Combustion Products:** None.
- **Behavior in Fire:** Not pertinent.
- **Auto Ignition Temperature:** Currently not available.
- **Electrical Hazards:** Not pertinent.
- **Burning Rate:** Currently not available.
- **ADI Abdominal Flame Temperature:** Currently not available.
- **Stoichiometric Air to Fuel Ratio:** 1:49.9 (calc.)
- **Flame Temperature:** Currently not available.
- **Combustion Molar Ratio:** Reactant to Product: 43.5 (calc.)
- **Minimum Oxygen Concentration for Combustion:** (MOCC) Not listed.

### 5. CHEMICAL REACTIVITY
- **Reactivity with Water:** None.
- **Reactivity with Common Materials:** No reaction.
- **Stability During Transport:** Stable.
- **Neutralizing Agents for Acids:** Caustics.
- **Stability:** Stable.
- **Reactivity with Water:** Not pertinent.
- **Neutralizing Agents for Acids:** Caustics.
- **Inert Atmosphere:** Not pertinent.

### 6. WATER POLLUTION
- **Aquatic Toxicity:** Currently not available.
- **Waterfowl Toxicity:** Currently not available.
- **Biological Oxygen Demand (BOD):** Currently not available.
- **Food Chain Concentration Potential:** None.
- **GESAMP Hazard Profile:** Bioaccumulation: 0. Damage to living resources: 2. Human Oral hazard: 1. Human Contact hazard: 1. Reduction of amenities: XX.

### 6. WATER POLLUTION
- **Aquatic Toxicity:** Currently not available.
- **Waterfowl Toxicity:** Currently not available.
- **Biological Oxygen Demand (BOD):** Currently not available.
- **Food Chain Concentration Potential:** None.
- **GESAMP Hazard Profile:** Bioaccumulation: 0. Damage to living resources: 2. Human Oral hazard: 1. Human Contact hazard: 1. Reduction of amenities: XX.

### 7. SHIPPING INFORMATION
- **Grades of Purity:** Currently not available.
- **Storage Temperature:** Ambient.
- **Inert Atmosphere:** Not pertinent.
- **Venting:** Currently not available.

### 8. HAZARD CLASSIFICATIONS
- **49 CFR Classification:** Not listed.
- **Class:** Not pertinent.
- **Package Group:** Not listed.
- **Marine Pollutant:** Not pertinent.

### 9. PHYSICAL & CHEMICAL PROPERTIES
- **Physical State at 15° C and 1 atm:** Liquid.
- **Molecular Weight:** 390.6.
- **Boiling Point:** 727°F = 386°C = 659°F.
- **Freezing Point:** Currently not available.
- **Critical Temperature:** Not pertinent.
- **Critical Pressure:** Not pertinent.
- **Specific Gravity:** 0.980 at 25°C (liquid).
- **Liquid Surface Tension:** (est.) 15 dynes/cm.
- **Liquid Water Interfacial Tension:** (est.) 30 dynes/cm.
- **Marine Pollutant:** 5000 pounds.
- **49 CFR Class:** Not pertinent.
- **Category:** Not pertinent.
- **Dangerous Goods Number:** 1007.
- **EPA FWPCA List:** Not listed.

### NOTES
- **Heat of Decomposition:** Not pertinent.
- **Heat of Vaporization:** Not pertinent.
- **Heat of Fusion:** Not pertinent.
- **Heat of Solution:** Not pertinent.
- **Heat of Polymerization:** Not pertinent.
- **Heat of Condensation:** Not pertinent.

**JUNE 1999**
<table>
<thead>
<tr>
<th>Temperature (degrees F)</th>
<th>Pounds per cubic foot</th>
<th>Temperature (degrees F)</th>
<th>British thermal unit per pound-F</th>
<th>Temperature (degrees F)</th>
<th>British thermal unit inch per hour-square foot-F</th>
<th>Temperature (degrees F)</th>
<th>Centipoise</th>
</tr>
</thead>
<tbody>
<tr>
<td>34</td>
<td>62.350</td>
<td>32</td>
<td>0.478</td>
<td>45</td>
<td>0.944</td>
<td>32</td>
<td>16.670</td>
</tr>
<tr>
<td>36</td>
<td>62.280</td>
<td>34</td>
<td>0.478</td>
<td>50</td>
<td>0.942</td>
<td>34</td>
<td>14.770</td>
</tr>
<tr>
<td>38</td>
<td>62.210</td>
<td>36</td>
<td>0.478</td>
<td>55</td>
<td>0.940</td>
<td>36</td>
<td>13.920</td>
</tr>
<tr>
<td>40</td>
<td>62.150</td>
<td>38</td>
<td>0.478</td>
<td>60</td>
<td>0.939</td>
<td>38</td>
<td>13.140</td>
</tr>
<tr>
<td>42</td>
<td>62.080</td>
<td>40</td>
<td>0.478</td>
<td>65</td>
<td>0.937</td>
<td>40</td>
<td>12.400</td>
</tr>
<tr>
<td>44</td>
<td>62.010</td>
<td>42</td>
<td>0.478</td>
<td>70</td>
<td>0.935</td>
<td>42</td>
<td>11.700</td>
</tr>
<tr>
<td>46</td>
<td>61.940</td>
<td>44</td>
<td>0.478</td>
<td>75</td>
<td>0.933</td>
<td>44</td>
<td>11.060</td>
</tr>
<tr>
<td>48</td>
<td>61.870</td>
<td>46</td>
<td>0.478</td>
<td>80</td>
<td>0.931</td>
<td>46</td>
<td>10.450</td>
</tr>
<tr>
<td>50</td>
<td>61.800</td>
<td>48</td>
<td>0.478</td>
<td>85</td>
<td>0.929</td>
<td>48</td>
<td>9.978</td>
</tr>
<tr>
<td>52</td>
<td>61.730</td>
<td>50</td>
<td>0.478</td>
<td>90</td>
<td>0.927</td>
<td>50</td>
<td>9.543</td>
</tr>
<tr>
<td>54</td>
<td>61.660</td>
<td>52</td>
<td>0.478</td>
<td>95</td>
<td>0.925</td>
<td>52</td>
<td>8.841</td>
</tr>
<tr>
<td>56</td>
<td>61.590</td>
<td>54</td>
<td>0.478</td>
<td>100</td>
<td>0.924</td>
<td>54</td>
<td>8.370</td>
</tr>
<tr>
<td>58</td>
<td>61.520</td>
<td>56</td>
<td>0.478</td>
<td>105</td>
<td>0.922</td>
<td>56</td>
<td>7.927</td>
</tr>
<tr>
<td>60</td>
<td>61.450</td>
<td>58</td>
<td>0.478</td>
<td>110</td>
<td>0.920</td>
<td>58</td>
<td>7.511</td>
</tr>
<tr>
<td>62</td>
<td>61.380</td>
<td>60</td>
<td>0.478</td>
<td>115</td>
<td>0.918</td>
<td>60</td>
<td>7.119</td>
</tr>
<tr>
<td>64</td>
<td>61.310</td>
<td>62</td>
<td>0.478</td>
<td>120</td>
<td>0.916</td>
<td>62</td>
<td>6.751</td>
</tr>
<tr>
<td>66</td>
<td>61.240</td>
<td>64</td>
<td>0.478</td>
<td>125</td>
<td>0.914</td>
<td>64</td>
<td>6.404</td>
</tr>
<tr>
<td>68</td>
<td>61.170</td>
<td>66</td>
<td>0.478</td>
<td>130</td>
<td>0.912</td>
<td>66</td>
<td>6.079</td>
</tr>
<tr>
<td>70</td>
<td>61.100</td>
<td>68</td>
<td>0.478</td>
<td>135</td>
<td>0.911</td>
<td>68</td>
<td>5.770</td>
</tr>
<tr>
<td>72</td>
<td>60.930</td>
<td>70</td>
<td>0.478</td>
<td>140</td>
<td>0.909</td>
<td>70</td>
<td>5.481</td>
</tr>
<tr>
<td>74</td>
<td>60.870</td>
<td>72</td>
<td>0.478</td>
<td>145</td>
<td>0.907</td>
<td>72</td>
<td>5.207</td>
</tr>
<tr>
<td>76</td>
<td>60.800</td>
<td>74</td>
<td>0.478</td>
<td>150</td>
<td>0.905</td>
<td>74</td>
<td>4.950</td>
</tr>
<tr>
<td>78</td>
<td>60.730</td>
<td>76</td>
<td>0.478</td>
<td>155</td>
<td>0.903</td>
<td>76</td>
<td>4.707</td>
</tr>
<tr>
<td>80</td>
<td>60.670</td>
<td>78</td>
<td>0.478</td>
<td>160</td>
<td>0.901</td>
<td>80</td>
<td>3.974</td>
</tr>
<tr>
<td>82</td>
<td>60.610</td>
<td>80</td>
<td>0.478</td>
<td>165</td>
<td>0.899</td>
<td>82</td>
<td>3.457</td>
</tr>
<tr>
<td>84</td>
<td>60.550</td>
<td>82</td>
<td>0.478</td>
<td>170</td>
<td>0.897</td>
<td>84</td>
<td>3.085</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Temperature (degrees F)</th>
<th>Pounds per 100 pounds of water</th>
<th>Temperature (degrees F)</th>
<th>Pounds per square inch</th>
<th>Temperature (degrees F)</th>
<th>Pounds per cubic foot</th>
<th>Temperature (degrees F)</th>
<th>British thermal unit per pound-F</th>
</tr>
</thead>
<tbody>
<tr>
<td>77</td>
<td>0.005</td>
<td>340</td>
<td>0.006</td>
<td>340</td>
<td>0.006</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>345</td>
<td>0.007</td>
<td>345</td>
<td>0.008</td>
<td>350</td>
<td>0.009</td>
<td>O</td>
<td></td>
</tr>
<tr>
<td>350</td>
<td>0.009</td>
<td>355</td>
<td>0.011</td>
<td>360</td>
<td>0.013</td>
<td>P</td>
<td></td>
</tr>
<tr>
<td>360</td>
<td>0.013</td>
<td>365</td>
<td>0.015</td>
<td>370</td>
<td>0.017</td>
<td>E</td>
<td></td>
</tr>
<tr>
<td>370</td>
<td>0.017</td>
<td>375</td>
<td>0.020</td>
<td>380</td>
<td>0.023</td>
<td>R</td>
<td></td>
</tr>
<tr>
<td>380</td>
<td>0.023</td>
<td>385</td>
<td>0.026</td>
<td>390</td>
<td>0.031</td>
<td>T</td>
<td></td>
</tr>
<tr>
<td>390</td>
<td>0.031</td>
<td>395</td>
<td>0.035</td>
<td>400</td>
<td>0.040</td>
<td></td>
<td></td>
</tr>
<tr>
<td>400</td>
<td>0.040</td>
<td>405</td>
<td>0.044</td>
<td>410</td>
<td>0.046</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>410</td>
<td>0.046</td>
<td>415</td>
<td>0.053</td>
<td>420</td>
<td>0.061</td>
<td>O</td>
<td></td>
</tr>
<tr>
<td>420</td>
<td>0.061</td>
<td>425</td>
<td>0.070</td>
<td>430</td>
<td>0.080</td>
<td>T</td>
<td></td>
</tr>
<tr>
<td>430</td>
<td>0.080</td>
<td>435</td>
<td>0.091</td>
<td>440</td>
<td>0.103</td>
<td></td>
<td></td>
</tr>
<tr>
<td>440</td>
<td>0.103</td>
<td>445</td>
<td>0.117</td>
<td>450</td>
<td>0.124</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

JUNE 1999