TRITON™ X-100 Surfactant

Product Information

**Chemical Description**

Name: Octylphenol Ethoxylate
Surfactant Type: Nonionic

R = octyl (C8)
x = 9.5 (avg)

**Benefits**

- Excellent detergent
- Dispersant & emulsifier for oil-in-water systems
- Effective performance across a broad temperature range
- Excellent wetting agent
- Readily biodegradable

**Applications**

- Household & industrial cleaners
- Paints & coatings
- Pulp & paper
- Oilfield
- Textile
- Agrochemicals
- Metalworking fluids

**Typical Physical Properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actives, wt%</td>
<td>100</td>
</tr>
<tr>
<td>Cloud Point (°C)</td>
<td>66</td>
</tr>
<tr>
<td>HLB</td>
<td>13.4</td>
</tr>
<tr>
<td>Moles EO</td>
<td>9.5</td>
</tr>
<tr>
<td>pH, 5% aq solution</td>
<td>6</td>
</tr>
<tr>
<td>Pour Point (°C)</td>
<td>1</td>
</tr>
<tr>
<td>Appearance</td>
<td>Pale yellow liquid</td>
</tr>
<tr>
<td>Viscosity at 25°C (77°F), cP</td>
<td>240</td>
</tr>
<tr>
<td>Density at 25°C (77°F), g/mL</td>
<td>1.061</td>
</tr>
<tr>
<td>Flash Pt, Closed Cup, ASTM D93</td>
<td>251°C - 485°F</td>
</tr>
</tbody>
</table>

(1) Cloud point: °C, 1 wt% actives aqueous solution
(2) HLB Range: <10 w/o emulsifier, > 10 o/w emulsifier, 10-15 good wetting, 12-15 detergents
(3) Pour point: °C
(4) Appearance at 25°C

**Typical Performance Properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMC (ppm)</td>
<td>189</td>
</tr>
<tr>
<td>Surface Tension (dynes/cm)</td>
<td>33</td>
</tr>
<tr>
<td>Foam Height (mm)</td>
<td>128/107</td>
</tr>
<tr>
<td>Draves 25 sec wetting conc, wt% at 25°C (77°F)</td>
<td>0.06</td>
</tr>
</tbody>
</table>

(5) Critical Micelle Concentration: ppm at 25°C
(6) Surface tension: dynes/cm at 1% actives, 25°C
(7) Ross-Miles foam height: mm at 0.1 wt% actives, 25°C, initial / 5 minute
Solubility and Compatibility

- Soluble in water
- Miscible in most polar organic solvents & aromatic hydrocarbons
- Insoluble in aliphatic hydrocarbons
- Chemically stable in most acidic & alkaline solutions
- Compatible with anionic, cationic, and other nonionic surfactants

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