TRITON™ X-45 Surfactant
Product Information

Chemical Description
Name: Octylphenol Ethoxylate
Surfactant Type: Nonionic

\[
R = \text{octyl (C8)} \\
x = 4.5 \text{ (avg)}
\]

Benefits
- Excellent emulsifier with good wetting
- Aids in rinseability of solvent-based systems
- Low foam
- Increases oily soil removal in water-based systems
- Readily biodegradable

Applications
This product is suitable for use in applications such as:
- Defoamers
- Cleaners
- Paints & coatings
- Metalworking fluids
- Agrochemicals
- Textile
- Pulp & paper
- Oilfield
**Typical Physical Properties**
These properties are typical but do not constitute specifications.

<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 1°</td>
<td>Dispersible</td>
</tr>
<tr>
<td>HLB 2</td>
<td>9.8</td>
</tr>
<tr>
<td>Moles EO</td>
<td>4.5</td>
</tr>
<tr>
<td>Pour Point 3</td>
<td>-24</td>
</tr>
<tr>
<td>Appearance 4</td>
<td>Yellow liquid</td>
</tr>
<tr>
<td>pH, 5% aq solution</td>
<td>6</td>
</tr>
<tr>
<td>Viscosity at 25°C (77°F), cP</td>
<td>290</td>
</tr>
<tr>
<td>Density at 25°C (77°F), g/mL</td>
<td>1.031</td>
</tr>
<tr>
<td>Flash Pt, Closed Cup, ASTM D93</td>
<td>218°C 425°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 5</td>
<td>136</td>
</tr>
<tr>
<td>Surface Tension 6°</td>
<td>29</td>
</tr>
<tr>
<td>Foam Height 7°</td>
<td>23/9</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**

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