

**NP-9 Type Nonionic Surfactant****Chemical Description**

Name: Nonylphenol Ethoxylate Surfactant

Type: Nonionic

Benefits

- Excellent detergency
- Outstanding wetting
- Versatile solubility characteristics
- Exceptional handling properties
- Low odor
- Good rinseability

Applications

- Cleaners & detergents
- Paper & textile processing
- Laundry
- Paints & coatings
- Dust control
- Agrochemicals
- Metalworking fluids

Typical Physical Properties

Actives, wt%	90-100
Cloud Point ⁽¹⁾	54
HLB ⁽²⁾	12.9
Moles EO	9
Pour Point ⁽³⁾	-1
Appearance	Pale yellow liquid
pH, 1% aq solution	6
Viscosity at 25°C (77°F), cP	243
Density at 20°C (68°F), g/mL	1.055
Flash Pt, Closed Cup, ASTM D93	247°C 477°F

⁽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**Typical Performance Properties**

CMC ⁽⁴⁾	60
Surface Tension ⁽⁵⁾	32
Foam Height ⁽⁶⁾	105/90
Draves 20 sec wetting conc, wt% at 25°C (77°F)	0.06
at 50°C (122°F)	0.04

⁽⁴⁾ Critical Micelle Concentration: ppm at 25°C⁽⁵⁾ Surface tension: dynes/cm at 1% actives, 25°C⁽⁶⁾ Ross-Miles foam height: mm at 0.1 wt% actives, 25°C, initial / 5 minute**Solubility and Compatibility**

- Soluble in water
- Soluble in chlorinated solvents and most polar solvents
- Chemically stable in the presence of dilute acids, bases and salts
- Compatible with soaps, anionic and other nonionic surfactants, and many organic solvents