



POLYFOX™

the friendly fluorosurfactant

PolyFox™ PF-151N

Fluorosurfactant for Improved Water Resistance, Reduced Foaming,
Lower Surface Tension and Improved Performance in Wax Emulsions

GENERAL INFORMATION:

PolyFox PF-151N fluorosurfactant is an **environmentally preferred**, water dispersible polymer based on OMNOVA Solutions' platform of poly(oxetanes). PolyFox PF-151N is used in wax emulsions to produce more cost effective lower solids products and make more stable emulsions with less foam. PF-151N has found particular application in wood composites where improved water resistance, reduced edge and center swell and increased strength properties have been demonstrated.

KEY FEATURES AND BENEFITS:

- **Environmentally Preferred** – Compared to certain telomer-based and other conventional fluorosurfactants, PolyFox fluorosurfactants do not bioaccumulate, thereby resulting in very **low environmental impact**.
- **Low Foaming Characteristics** – Wax emulsions manufactured with PolyFox PF-151N develop significantly **less foam** than conventional wax emulsions. And the small amount of foam developed during processing is short lived.
- **Improved Water Resistance** – According to available published data, southern yellow pine particle board made with wax emulsions containing PolyFox fluorosurfactants have about **65% less water uptake, 40% less edge swell and 60% lower center swell**.
- **Improved Stability at Lower Solids** – Incorporation of PolyFox PF-151N into wax emulsions permits the manufacture of more **stable emulsions at 45% solids** versus more conventional emulsions typically made up at 55 – 60% solids.
- **Extremely High Efficiency** – Only **0.025 wt% (250 ppmw)** of PolyFox PF-151N is required to obtain the optimum wax emulsion surface tension of 40 – 60 dynes per cm.

Table 1. Typical Properties of PolyFox PF-151N Fluorosurfactant

Property	PolyFox PF-151N
Appearance	Clear
Viscosity @77°F (cps)	700
Color	Colorless to light straw
% Non volatile by wt.	50
Type	Fluorinated Polyether Diol
Solvent	Water/Butyl Carbitol (80:20)
Ionic character	Non-ionic
pH	4.5
Specific Gravity	9.7 lbs./gal
Flash Point (Pensky Martens Closed Cup)	>200°F
Surface Tension (mN/m) (in pH 7 buffered water)	24 (pure material @1000 ppm)
Ross-Miles Foam Test (Foam height in mm) ASTM D1173-53 (49°C @ 1000 ppm in distilled water)	Initial: 0 After 5 minutes: 0
Solubility in water	Dispersible

Learn More:

Find out how PolyFox fluorosurfactants can improve the performance of your products.

Call **888-253-5454** or email **SpecialtyChem@omnova.com** for samples, literature, or technical assistance, or visit our website at www.omnova.com

NOTE:

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09--2007