



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 **Eric Rall** at **(714) 273-9182** or email **eric.rall@omnova.com** for samples, literature, or technical assistance, or visit our website at www.omnova.com

NOTE:

Although the data supplied above is believed to be accurate, each user is advised to make an independent determination as to whether the described product(s) is/are appropriate for a particular use or application, whether such a use will comply with all applicable laws or regulations, or whether such use will infringe the intellectual property rights of third parties.



OMNOVA Solutions Inc. · 1455 J. A. Cochran By-Pass. · Chester, SC 29706
Telephone (888) 253-5454 · www.omnova.com

POLYFOX is a trademark used under license by OMNOVA Solutions Inc.

ALL OMNOVA PRODUCTS AND SERVICES ARE OFFERED AND SOLD SUBJECT TO THE OMNOVA STANDARD TERMS AND CONDITIONS OF SALE AGREEMENT SET FORTH AT WWW.OMNOVA.COM
© 2010 OMNOVA Solutions Inc.
09-2007