



PolyFox™ PF-2002 & PF-2003 Polymers

Wetting, Flow and Leveling Fluorosurfactants for aqueous Floor Polish Formulations

PolyFox™ PF-2002 and PF-2003 polymers are effective flow, wetting, and leveling agents designed specifically for use in a wide variety of aqueous floor polish formulations. PF-2002 is the PolyFox VM-1 Polymer except that Dowanol™ DPM solvent is used to comply with The United States Environmental Protection Agency's Design for the Environment Program. PF-2003 is the PolyFox TM-1 polymer with Dowanol DPM solvent.

PolyFox PF-2002 and PF-2003 are designed with a three tiered approach to Green chemistry:

- The unique polymer structure is large enough to be bio-unavailable.
- Pendent fluorinated moieties are based on short chain (≤ 2 carbon atoms) perfluoroalkyl groups connected to the polymer backbone and side chain attachments.
- The PolyFox polymer backbone is based upon relatively stable ether linkages.

Benefits:

- Environmentally preferred
- Excellent wetting, flow and leveling
- Very low foam
- Much reduced mop drag
- Excellent re-coat under cold and dry conditions
- High gloss

Typical Physical Properties PolyFox PF-2002:

Physical Form:	Clear/light yellow liquid
Activity:	30 wt %
pH:	8.0
Molecular Weight:	~1800
Perfluoroalkyl Groups:	$\leq C_2F_5$
Weight/gallon:	8.9 pounds/gallon
Effective Use Rate:	150 ppmw Active Material

Typical Physical Properties PolyFox 2003:

Physical Form:	Clear/light yellow liquid
Activity:	30 wt %
pH:	8.0
Molecular Weight:	~1200
Perfluoroalkyl Groups:	$\leq CF_3$
Weight/gallon:	8.9 pounds/gallon
Effective Use Rate:	150 ppmw Active Material

Samples: Contact OMNOVA Customer Service at 1-800-428-7855
Sizes: Available in 1 Quart, 1 Gallon, and 5 Gallon pails and
30 Gallon drums

Use Recommendations:

PolyFox PF-2002 and **PF-2003** polymers are compatible with most OMNOVA Solutions Floor Care polymers and suggested formulations. **PolyFox PF-2002** and **PF-2003** avoid the problems associated with overcharging competitive fluorosurfactants because they do not cause excess foam that can damage the integrity of the film and its appearance.

The addition of defoaming agents may not be required with **PolyFox PF-2002** and **PF-2003**. Defoamer levels can usually be cut in half, and may be eliminated completely in some formulas.

In typical polish formulations, it is recommended that **PolyFox PF-2002** and **PF-2003** be added immediately after the glycol ether and allowed a short mixing time before adding the remaining ingredients.

Suggested Floor Polish Formulation

MOR GLO® 2 -475 20% Solids Using PolyFox Green Technology

Use in a medium maintenance system where frequent low speed buffing or infrequent high speed burnishing is used to restore gloss and appearance. Maintains high initial gloss with regular maintenance. Can be high speed burnished daily. Four to five coats are recommended. Additional coats can be added to achieve the highest gloss.

Item	Components	Weight %
1	Water	44.54
2	Diethylene glycol monoethyl ether	4.5
3	PolyFox™ PF-2002 or PF-2003	0.049
<i>Mix</i>	<i>15 minutes</i>	
4	Tri-butoxy ethyl phosphate	2.0
5	² Proxel GXL biocide	0.1
<i>Mix</i>	<i>30 minutes</i>	
6	MOR GLO® 2 Latex (38%)	38.81
<i>Mix</i>	<i>Mix 30 minutes</i>	
7	AC-325 Nonionic (40% emulsion)	5.0
8	AC-540 Nonionic (25% emulsion)	5.0

Defoamer can be added if needed at (0.01%) SE 21³

¹ Dowanol is a trademark of the Dow Chemical Company

² Proxel GXL is a registered trademark of Avecia.

³ SE-21 silicone emulsion trademark of Wacker

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.



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