

Glycolube™ AFA-1



Superior Antifog for PVC Film

- Potential cost savings of up to \$0.03/lb of film due to reduced additive loadings
 - Up to 3x lower use levels compared to nonylphenol ethoxylates (NPE's)
- Better performance with less additive
 - Improved film clarity, improved food presentation
 - Multifunctionality: Imparts anti-static properties, potentially eliminating the expense of separate anti-stats
 - May allow increased production rates
- This product does not contain NPE's. NPE's are prohibited in several countries due to environmental concerns.
- Kosher-certified and FDA-approved for food contact
- Recommended use levels: 1-3% (1.5% typical)
- Low odor, low color
- Also effective in polyethylene, polypropylene, polystyrene and PET

Technical Data

Flexible PVC Base Formulation

Ingredient	Loading (phr)
PVC Resin, K-68	100
DOA Plasticizer	35
Epoxidized Soy Bean Oil	10
Ca/Zn Stabilizer	1
Organophosphite Chelator	1
Antifog Additives	As in Tables

Antifog Testing @ Room Temperature

Antifog Agent	Loading (phr)	Fog Clear Time	Result @ 30 min
None	0	Did Not Clear	Foggy/Light Drops
Glycolube™AFA-1	2.5	0 sec	Clear
Nonylphenol Ethoxylate	3.0	Did Not Clear	Foggy/Heavy Film

Static Decay Measurements

Antifog Agent	Loading (phr)	Decay Time (sec) +5 kV	Decay Time (sec) -5 kV
None	0	29.1	34.7
Glycolube™AFA-1	2.5	<0.5	<0.5
Nonylphenol Ethoxylate	3.0	3.3	3.8

Antifog Testing @ 2-5°C

Antifog Agent	Loading (phr)	Fog Clear Time	Result @ 30 min	Result @ 120 min
None	0	Did Not Clear	Foggy/Light Drops	Foggy/Heavy Drops
Glycolube™ AFA-1	2.5	0 sec	Clear	Clear
Nonylphenol Ethoxylate	3.0	20 min – 2 hours	Light Fog	Clear/Light Drops

Mushroom Test (Color and Consistency of Mushrooms in Container)

Antifog Agent	Results @ 1.5 Hours	Results @ 18 Hours	Results @ 24 Hours
None	White	White	White & Dried
Glycolube™ AFA-1	White	White	White
Nonylphenol Ethoxylate	Black Around Edges	Black	Black

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** German speaking region

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