

Fluoroguard™

Polymer Additive

Technical Information

Description

Fluoroguard™ is a colorless, odorless, nonflammable, and chemically inert polymer additive based on fluorinated synthetic oil (perfluoropolyether). It has excellent color and UV/thermal stability. Added to plastics and elastomers, it improves processing characteristics and properties of polymer compounds. Fluoroguard™ internally lubricates to improve flow properties, processibility, throughput, uniform mixing/dispersion of ingredients, and offers other advantages over competitive process aids. Fluoroguard™ improves product performance by increasing wear and flex fatigue resistance, and making parts last longer. In addition, Fluoroguard™ eliminates marring and scratching of polymer surfaces. It also offers other benefits, such as improved physical properties, product gloss, surface lubricity, and reduced coefficient of friction (COF) and squeak/noise.

Grades

Three grades of Fluoroguard™—PCA, SG, and PRO—are available for different application areas of polymer processing and compounds. Fluoroguard™ PCA and SG are based on high molecular weight oils, while Fluoroguard™ PRO is based on low molecular weight oils. Fluoroguard™ PCA is primarily used for enhancing product performance, while processing benefits are additional advantages. Fluoroguard™ SG is a purified form and meets USP Plastics Class VI requirements (NAMSA tested). Fluoroguard™ PRO is primarily intended for use as a process aid.

Typical Properties of Fluoroguard™ Polymer Additives

Properties	Units/Conditions	Typical Values		
		PRO	PCA	SG
Average Molecular Weight	—	1375	4800	4950
Viscosity	cSt at 50 °C (122 °F)	5	101	107
Volatility	22 hr at 121 °C (250 °F)	—	<1.0%	<1.0%
Density	g/mL at 23 °C (74 °F)	1.9	1.9	1.9
Surface Tension	dyn/cm at 26 °C (79 °F)	18	18	18
Refractive Index	nD25	1.3	1.3	1.3
Pour Point	°C (°F)	<-70 (<-94)	<-36 (<-33)	<-36 (<-33)
Appearance	—	Clear liquid	Clear liquid	Clear liquid

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