

Siloxane Masterbatch MB50-011

Siloxane Polymer (UHMW)
Multibase, A Dow Corning Company

Message:

Ultra-high molecular weight siloxane polymer dispersed in nylon 6.
DOW CORNING MB50-011 Masterbatch is a pelletized formulation containing 50% of an ultra-high molecular weight siloxane polymer dispersed in nylon 6. It is designed to be used as an additive in most nylon-compatible systems to impart benefits such as processing improvements and modification of surface characteristics.
Liquid siloxane plastic additives have been used for several years to improve the lubricity and flow of thermoplastics. They are effective in this role although some difficulties have been experienced in the incorporation of liquids into thermoplastic melts without the use of specialized equipment. It has also been difficult to produce masterbatches with greater than 20% liquid siloxane because of processing difficulty and bleed problems.
The DOW CORNING® MB Series Masterbatches address these problems by supplying a high concentration of an ultra-high molecular weight siloxane as a dispersion in a dry pellet form in a variety of thermoplastics.

BENEFITS
When added to nylon or similar thermoplastics at 0.1% to 1.0% siloxane, improved processing and flow of the resin is expected, including better mold release and faster throughput. At higher addition levels, 1% to 5% siloxane, improved surface properties are expected, including lubricity, slip, lower coefficient of friction, and greater mar and abrasion resistance. The DOW CORNING MB Series Masterbatches are expected to give improved benefits compared to conventional lower molecular weight siloxane additives, e.g. less screw slippage, improved release, a lower coefficient of friction, fewer paint and printing problems, and a broader range of performance capabilities.
The addition of 2% polydimethylsiloxane gives a significant reduction in wear rate. While this data was obtained with a lower molecular weight siloxane additive, similar results are expected when DOW CORNING MB50-011 Masterbatch is added to nylon. an ultra-high molecular weight siloxane additive in nylon 6,6 has a small effect on tensile and impact strengths.

LIMITATIONS
This product is neither tested nor represented as suitable for medical or pharmaceutical uses.
HOW TO USE

DOW CORNING MB Series Masterbatches may be processed in the same way as the thermoplastics on which they are based. Sufficient DOW CORNING MB50-011 Masterbatch should be blended with virgin polymer pellets to give the desired siloxane level in the final product. DOW CORNING MB50-011 Masterbatch pellets can be added during compounding in a single screw extruder or added at the feed hopper during injection molding or extrusion.

General Information	
Additive	Silicone lubricant demoulding slip agent
Features	Ultra high molecular weight smoothness Excellent printability Workability, good Sprayable Good processing stability Good liquidity Good wear resistance Scratch resistance Good wear resistance Lubrication Good demoulding performance Excellent appearance

Uses	Composite Mixing
Appearance	White-like
Forms	Particle
Processing Method	Composite Extrusion Injection molding

Additional Information

Siloxane Content: 50%Organic Resin: Low Viscosity, general purpose nylon 6Suggested Use Level (0.1 to 5% siloxane): 0.2 to 10%

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