

Siloxane Masterbatch MB50-010

Siloxane Polymer (UHMW)

Multibase, A Dow Corning Company

Message:

Ultra-high molecular weight siloxane polymer dispersed in thermoplastic polyester elastomer.

DOW CORNING MB50-010 Masterbatch is a pelletized formulation containing 50% of an ultra-high molecular weight siloxane polymer dispersed in HYTREL. It is designed to be used as an additive in polyester elastomer-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 HYTREL or similar polyester elastomers at 0.1% to 1.0%, improved processing and flow of the resin is expected, including better mold filling, less extruder torque, internal lubrication, 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 coefficient of friction values of a PBT elastomer are lowered by an ultra-high molecular weight siloxane additive.

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 MB50-010 Masterbatch should be blended with virgin polymer pellets to give the desired siloxane level in the final product. DOW CORNING MB50-010 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	Kosher certification Ultra high molecular weight smoothness Excellent printability Workability, good Sprayable Good processing stability Good liquidity Good wear resistance Scratch resistance Lubrication Compliance of Food Exposure Good demoulding performance Excellent appearance

Uses	Composite Mixing
Agency Ratings	BgVV Unspecified Rating FDA 21 CFR 177.2600
Appearance	White-like
Forms	Particle
Processing Method	Composite Extrusion Injection molding

Additional Information

Siloxane Content: 50%Organic Resin: HYTREL® 1, MI 11(Durometer D Hardness 63)Suggested Use Level (0.1 to 5% siloxane): 0.2 to 10%

Injection	Nominal Value	Unit
Drying Temperature	80.0	°C
Drying Time	2.0 - 8.0	hr
Suggested Max Moisture	0.20	%

Extrusion	Nominal Value	Unit
Drying Temperature	80.0	°C
Drying Time	2.0 - 8.0	hr
Suggested Max Moisture	0.20	%

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