

Zonyl™ MP 1000

PTFE Additive

Product Information

Description

Zonyl™ MP 1000 fluoroadditive is a white, free-flowing, PTFE powder designed for use as an additive in other materials or as a dry lubricant. It can be used at temperatures from -190 °C to 250 °C (-310 °F to 480 °F), and is inert to nearly all industrial chemicals and solvents. It is a good electrical insulator, does not absorb water, and is highly resistant to weathering. Its properties are summarized in Table 1.

Zonyl™ MP 1000 can impart:

- Low surface energy
- Improved lubricity and wear in plastics and elastomers
- Improved performance in lubricants under severe conditions

Zonyl™ MP 1000 tends to form clumps of particles, but it can be deagglomerated during mixing and blending operations. Agglomerates of the resin are friable, a characteristic that helps in producing an intimate mixture with host materials. As the resin is dispersed in a solvent for particle size measurement, the agglomerates break down and may approach the 0.2 µm particle size.

Typical Applications

Typical loadings of 5 to 20% by weight are used. Plastics that can benefit in this manner include polyacetals, polyamides, polycarbonates, polyesters, polyimides, polysulfides, and polysulfones; elastomers include acrylates, fluoroelastomers, neoprenes, nitriles, and silicones. Added to high-viscosity specialty lubricants designed for use under high pressure, Zonyl™ MP 1000 may increase lubricity and service life, especially at high temperatures or in corrosive environments. It has been

used in silicone, fluorosilicone, and hydrocarbon lubricant bases. Smooth, uniform suspensions can be made using conventional blending methods.

- Provides anti-stick surfaces
- Reduces surface abrasion
- Reduces friction and wear in parts
- Increases lubrication

Food Contact Compliance

Products are generally not recommended for food contact. For details and information, please contact your Chemours representative.

Safety Precautions

WARNING! VAPORS CAN BE LIBERATED THAT MAY BE HAZARDOUS IF INHALED.

Before using Zonyl™ fluoroadditives, refer to the Safety Data Sheet and the latest edition of "The Guide to the Safe Handling of Fluoropolymer Resins," published by Plastics Industry Association (www.fluoropolymers.org) or PlasticsEurope (www.plasticseurope.org).

Open and use containers only in well-ventilated areas using local exhaust ventilation (LEV). Vapors and fumes liberated during hot processing of Zonyl™ fluoroadditives should be exhausted completely from the work area. Contamination of tobacco with these polymers must be avoided. Vapors and fumes liberated during hot processing that are not properly exhausted, or from smoking tobacco or cigarettes contaminated with Zonyl™ fluoroadditives, may cause flu-like symptoms, such as chills, fever, and sore throat. This may not occur until several hours after exposure and will typically pass within about 24 hours.

Mixtures with some finely divided metals, such as magnesium or aluminum, can be flammable or explosive under some conditions.

Packaging

Zonyl™ MP 1000 is packaged in 25-kg (55.1-lb) drums. Eight 25-kg drums are packaged on one pallet for ease of shipping, handling, and storage.

Table 1. Typical Property Data for Zonyl™ MP 1000 Fluoroaditive

Property	Test Method	Unit	Value
Average Bulk Density	ASTM D4894	g/L	500
Melting Peak Temperature	ASTM D4894	°C (°F)	325 (617)
Average Particle Size (Volume Basis)	ASTM D4464	µm	12
Specific Surface Area	ASTM D4567	m ² /g	5–10

Note: Meets ASTM D5675, Group 1, Class 2, Grade 1 or 2.
Typical properties are not suitable for specification purposes.

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Replaces: K-27011

C-10013 (3/18)