



Zonyl[®] MP 1400

fluoroadditive

Description

Zonyl[®] MP 1400 fluoroadditive is a free-flowing white powder designed for use as an additive in other materials to impart low-surface energy and other fluoropolymer attributes. Zonyl[®] MP 1400 may improve the wear resistance of host materials such as thermoplastics or coating materials and enhance their nonstick, lubricity, and frictional characteristics. Added to lubricants, it can enhance performance under severe conditions. Zonyl[®] MP 1400 can be used at temperatures from -190 to 250°C (-310 to 480°F).

Zonyl[®] MP 1400 is generally intended to be used as an additive, although it has been used alone as a dry lubricant. Its properties (see **Table 1**) make this material unsuitable as a molding or extrusion resin. It is not a replacement for any of the Teflon[®] high molecular weight fluoropolymer resins in these applications.

Zonyl[®] MP 1400 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.

Table 1
Typical Property Data for
Zonyl[®] MP 1400 Fluoroadditive

Property	Test Method	Unit	Value
Average Bulk Density	ASTM D4894	g/L	425
Melting Peak Temperature	ASTM D4894	°C °F	325 ±5 617
Particle Size Distribution (Volume Basis)	Laser Microtrac	µm	10% <3 Avg. 10 90% <20
Specific Surface Area	Nitrogen Adsorption	m ² /g	1.5-3

Note: Meets ASTM D5675, Type I, Grade 1, Class A or B.

Typical Applications

Zonyl[®] MP 1400 is used as an additive (at up to about 20% by weight) in host materials to improve nonstick performance and enhance tribological characteristics. The tendency for surface blemishes to appear in injection molded thermoplastic parts is minimized with this additive, as is the likelihood of plateout. Plastics that can benefit in this manner include polycarbonates, polyacetals, polyamides, polyesters, polysulfides, and polysulfones.

Zonyl[®] MP 1400 may be used as a component of articles intended for repeated use in contact with food in compliance with 21 CFR 177.1550 and numerous other FDA regulations. For additional information, see DuPont bulletin H-52475-1.

Safety Precautions

WARNING!

VAPORS CAN BE LIBERATED THAT MAY BE HAZARDOUS IF INHALED.

Before using Zonyl[®] MP 1400, read the Material Safety Data Sheet and the detailed information in the “Guide to the Safe Handling of Fluoropolymer Resins,” latest edition, published by the Fluoropolymers Division of The Society of the Plastics Industry—available from DuPont.

Open and use containers only in well-ventilated areas using local exhaust ventilation (LEV). Vapors and fumes liberated during hot processing, or from smoking tobacco or cigarettes contaminated with Zonyl[®] MP 1400, may cause flu-like symptoms (chills, fever, sore throat) that may not occur until several hours after exposure and typically pass within 24 hours. Vapors and fumes liberated during hot processing should be exhausted completely from the work area; contamination of tobacco with polymers should be avoided.

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

Packaging

Zonyl® MP 1400 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.

Freight Classification

Zonyl® MP 1400 when shipped by rail or express is classified "Plastic, Synthetic, O.T.L., NOIBN." Resin shipped by truck is classified "Plastics, Materials Granules."

For more information on Zonyl®:

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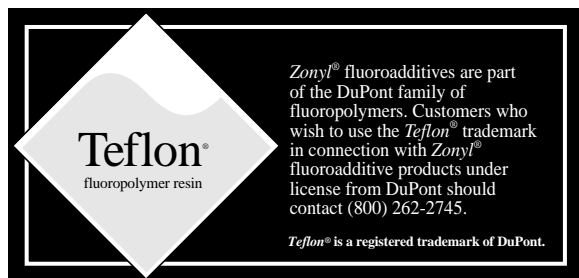
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CAUTION: Do not use in medical applications involving permanent implantation in the human body. For other medical applications, see "DuPont Medical Caution Statement," H-50102.



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