

Polymist® F5A R polytetrafluoroethylene

Polymist® F5A R is a white PTFE micronized powder PTFE micronized powder composed of discrete particles.

Designed for use in critical engineering and high-end performance elastomers and coatings, Polymist® F5A R will improved abrasion and tear resistance as well as non-stick properties, mar and abrasion resistance.

Polymist® F5A R can also be used in plastics application to improved wear resistance and low coefficient of friction or in lubricants for its thickening effect, lubricity, improved corrosion and temperature resistance.

Main features of Polymist® F5A R are:

- Improved lubricity, abrasion, scratch and rub resistance
- Increased (hot) tear strength
- Better flex life
- Increased slip and surface lubricity
- Reduced blocking
- Better chemical resistance
- Increased temperature resistance
- Gloss retention

General

Material Status	• Commercial: Active	
Availability	• Asia Pacific	• Europe
Uses	• Additive	
Appearance	• White	
Forms	• Powder	

Physical

	Typical Value	Unit	Test method
Average Particle Size			Internal Method
D50	4.0	µm	
D99	15	µm	
Bulk Density	400	g/l	ASTM D4895
Specific Surface Area	3.0	m ² /g	Internal Method

Additional Information

	Typical Value	Unit	Test method
Grind in Oil	2.50		NPIRI
Melt Temperature	320 to 330	°C	ASTM D3418



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Processing

- Besides its main function as a wear additive, Polymist® F5A R can be used at low concentration to improve mold release properties.
- Internal or open mixers (e.g. Banbury or two-roll mixers) are normally used to allow a good distribution of Polymist® F5A R in the elastomeric compound. Additional fillers are normally included with Polymist® micronized PTFE during the blending process. The resulting elastomeric composition can then be processed under normal conditions.
- Polymist® F5A R can also be used as additives in paints and coatings where improvements in non-stick, mar resistance, slip, chemical resistance, and moisture repelling characteristics are desired. Polymist® F5A R may be used independently as an additive or in combination with polyethylene waxes. The PTFE content at the surface layer is required in order to impart the properties of PTFE to the coating.

Storage and Handling

- The usual precautions for safe storage and handling of Polymist® F5A R should be taken according to material safety documentation and experience. There will be no chemical deterioration of the Polymist® F5A R during proper storage.
- Shelf life of Polymist® F5A R micronized powders will vary depending upon whether the recommended storage conditions are maintained and whether the material remains free from foreign contamination during storage time (not exposed to dirt, dust, water or other chemicals). The material should remain sealed in the original containers and storage conditions should provide for protection from temperature extremes as well as rain, snow or other wet environments (or such conditions which may damage the storage containers in which the product is stored).

Safety and Toxicology

- Before using Polymist® F5A R PTFE micronized powders, consult the product Material Safety Data Sheet and follow all label directions and handling precautions.
- As with all PTFE materials, handling and processing should only be carried out in well ventilated areas. Vapor extractor units should be installed above processing equipment. Fumes must not be inhaled and eye and skin contact ought to be avoided. In case of skin contact wash with soap and water. In case of eye contact flush with water immediately and seek medical help.
- Do not smoke in areas contaminated with powder, vapor or fumes.
- See Material Safety Data Sheet for detailed advice on waste disposal methods.

Packaging

- Polymist® F5A R is packaged in 25 kg nonreturnable drums. Each drum has two bag liners made of polyethylene resin.
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Notes

Typical properties: these are not to be construed as specifications.

