

Algoflon® DF 330 F

polytetrafluoroethylene

Algoflon® DF 330 F is a white fine coagulated powder and is produced without any intentional use or addition of PFOA. It is designed for paste extrusion in low reduction (RR) range. It is recommended for extrusion of large tubes diameters followed by continuous or batch sintering. It can be used also for manufacture of tapes for wrapping and as additive in plastics for improving their anti-dripping behavior.

Algoflon® DF 330 F exhibits excellent green strength and wrapping behavior and low permeability.

Main features of Algoflon® DF 330 F include:

- Excellent green strength
- Excellent wrapping properties
- Good weldability
- Low permeability
- Optimum electrical properties
- Good anti-dripping effect

General

Material Status	• Commercial: Active	
Availability	• Asia Pacific • Europe	• North America
Features	• Chemical Resistant • Good Processing Stability	• Good Thermal Stability • Low Friction
Uses	• Aerospace Applications • Automotive Applications • Electrical/Electronic Applications	• Industrial Applications • Tubing • Wire & Cable Applications
Agency Ratings	• FDA 21 CFR 177.1550	
Appearance	• White	
Forms	• Powder	

Physical

	Typical Value	Unit	Test method
Specific Gravity	2.14		ASTM D792
Average Particle Size	600	µm	Internal Method
Bulk Density	475	g/l	ASTM D4895
Shear Creep Viscosity	1.00E+11	cP	Internal Method

Mechanical

	Typical Value	Unit	Test method
Tensile Strength	35.0	MPa	ASTM D4895
Elongation at Break	350	%	ASTM D4895

Thermal

	Typical Value	Unit	Test method
Thermal Instability Index	< 15.0		ASTM D4895

Additional Information

	Typical Value	Unit	Test method
Reduction Ratio - range	10.0 to 300		Internal Method
Rheometer Pressure - @ RR 100:1	10.0	MPa	ASTM D4895

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Processing

- Algoflon® DF 330 F is processed according to methods conventionally used for paste extrusion. Initially the powder is mixed with a lubricant to produce a paste. This is then compacted into a preform and extruded through a finishing die using a ram extruder.
- In the production of electrical tapes, further processing as calendering and removal of lubricant can then be carried out to make the final product. For tubing, the lubricant is removed using heat and then the dried extrudate is sintered and cooled to attain the finished tube with specific properties.
- Regarding anti-drip effect, Algoflon DF 330 F content in the range 0.5 - 1 % by weight should be enough to enhance anti-drip property. It is recommended sieving DF 330 F before mixing with others ingredients and feeding in plastics like PC or ABS during extrusion.

Storage and Handling

- Algoflon® PTFE fine coagulated powders must be stored and handled carefully to avoid excessive shearing and particle fibrillation. Fibrillation is irreversible and damaged particles can appear as defects in manufactured articles.
- PTFE fine coagulated powders must be handled below 19°C because above this temperature the powders are softer and can be more easily laminated. It is recommended sieving of powders below 19°C before mixing with others ingredients. Strong vibrations and shocks must be avoided as much as possible for prevent lumps formation.
- Storage and transportation should be carried out in the range 5 - 19°C. Moreover, the powders must be stored in a dry room because the absorption of moisture could negatively affect its processing.
- Storage and handling facilities should be clean since even very small foreign particles can cause defects in finished products. Keep resin drums closed and clean. Good housekeeping and careful handling are essential.

Safety and Toxicology

- Before using Algoflon® PTFE fine coagulated 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 contacts 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

- Algoflon® DF 330 F is packaged in 25 kg non returnable drums.

Additional Technical Information

- For Material Safety Data Sheet or additional technical information consult your Solvay Specialty Polymers sales representative, or contact us by e-mail.
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