

Algoflon® DF 120 F

polytetrafluoroethylene

Algoflon® DF 120 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 and is particularly recommended for manufacture of tapes and pipe liners.

Algoflon® DF 120 F exhibits good green strength and very low memory effects that are very useful for pipe liners processing. It shows large processing range because can be used from small to large diameters.

Main features of Algoflon® DF 120 F include:

- Good green strength
- Low memory effects
- Low radial shrinkage
- Good mechanical properties

General

Material Status	• Commercial: Active	
Availability	• Asia Pacific • Europe	• North America
Features	• Chemical Resistant • Good Processing Stability	• Good Thermal Stability • Low Friction
Uses	• Gaskets • Industrial Applications	• Liners • Tape
Agency Ratings	• FDA 21 CFR 177.1550	
Appearance	• White	
Forms	• Powder	

Physical	Typical Value	Unit	Test method
Specific Gravity	2.18		ASTM D792
Average Particle Size	450	µm	Internal Method
Bulk Density	500	g/l	ASTM D4895
Shrinkage - @ RR 20:1	33	%	Internal Method

Mechanical	Typical Value	Unit	Test method
Tensile Strength	30.0	MPa	ASTM D4895
Elongation at Break	400	%	ASTM D4895

Thermal	Typical Value	Unit	Test method
Thermal Instability Index	< 25.0		ASTM D4895

Additional Information	Typical Value	Unit	Test method
Reduction Ratio - range	10.0 to 300		Internal Method
Rheometer Pressure - @ RR 100:1	8.00	MPa	ASTM D4895

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Processing

- Algoflon® DF 120 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. According to desired final items, further processing steps like drying and sintering are needed for pipe liner production while calendaring, removal of lubricant and stretching are generally carried out to make final products such as tapes and other general porous items. The mixing, preforming, extrusion, heating and stretching steps must all be carefully controlled to produce defect free products.

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 adding lubricant. 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 120 F is packaged in 25 kg non returnable drums.

Additional Technical Information

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

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



SafetyDataSheets(SDS)areavailablebyemailingusorcontactingyoursalesrepresentative.AlwaysconsulttheappropriateSDSbeforeusinganyof our products.

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