

# Algoflon® F 7

## polytetrafluoroethylene

Algoflon® F 7 is a fine cut homopolymer PTFE powder that is white, granular and non-free flowing. It is designed for normal compression molding and in particular molding of large billets for low thickness skived tapes down to 1 mil (25 µm).

Algoflon® F 7 exhibits high bulk density, optimum isotropic behavior and very good mechanical and electrical properties.

Main features of Algoflon® F 7 are:

- Optimum mechanical properties
- Optimum isotropic properties
- Very good electrical properties
- Excellent surface finishing
- Excellent skivability

### General

Material Status	• Commercial: Active	
Availability	• Asia Pacific	• Europe
Features	• Chemical Resistant	
Uses	• Additive	• Blending
Agency Ratings	• FDA <sup>1</sup>	
Appearance	• White	
Forms	• Powder	
Processing Method	• Compression Molding	

Physical	Typical Value	Unit	Test method
Specific Gravity	2.17		ASTM D792
Average Particle Size <sup>2</sup>	15	µm	Internal Method
Bulk Density	410	g/l	ASTM D4894
Shrinkage - Radial	3.0	%	ASTM D4894

Mechanical	Typical Value	Unit	Test method
Tensile Strength	44.0	MPa	ASTM D4894
Elongation at Break	400	%	

Electrical	Typical Value	Unit	Test method
Dielectric Strength	75	kV/mm	ASTM D149

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### Additional Information

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#### Processing

- Algoflon® F 7 is processed according to methods generally used for normal compression molding. Prior to use, the powder must be conditioned above 19°C/66°F.
- The processing involves typically two steps: preforming and sintering. Initially the powder is compacted into a preform. This is then sintered using precise sintering (heating and cooling) cycle to take the temperature above the PTFE crystalline melting point to attain the final article. The preforming pressure, dwell time at maximum sintering temperature and cooling rate are all established according to the shape and size of the final item.

#### Storage and Handling

- Algoflon® PTFE fine cut powders must be stored and handled carefully to achieve defect free molding. Before use the temperature of the powder must be conditioned above 19 °C / 66 °F (between 21-27 °C / 70-81 °F). Below this temperature, the powder is difficult to mold without cracks. Too high temperatures should also be avoided to prevent powder lumping and poor flow.
- 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.
- Each drum contains two bags liner made of polyethylene resin. The external bag liner is used only to protect the PTFE powders against external contamination. It is recommended to remove and isolate the external liner before handling and opening the internal layer which is in contact with the PTFE powders.

#### Safety and Toxicology

- Before using Algoflon® PTFE fine cut 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

- Algoflon® F 7 is packaged in 25 kg nonreturnable drums. Each drum contains two bag liners made of polyethylene resin.

#### Additional Technical Information

- For Material Safety Data Sheet or additional technical information, consult your Syensqo sales representative.
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## Notes

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

<sup>1</sup> Please contact your account manager to request a food contact statement.

<sup>2</sup> Laser diffraction

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Safety Data Sheets (SDS) are available by emailing us or contacting your sales representative. Always consult the appropriate SDS before using any of our products.

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