

# Algoflon® F 7

Polytetrafluoroethylene  
Solvay Specialty Polymers

Message:

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 Information			
Features	Good chemical resistance		
Uses	Mixing		
	Additive		
Agency Ratings	FDA 21 CFR 177.1550		
Appearance	White		
Forms	Powder		
Processing Method	Compression molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	2.17		ASTM D792
Average Particle Size <sup>1</sup>	15	µm	Internal method
Contractility-Radial	3.0	%	ASTM D4894
Volume density	410	g/l	ASTM D4894
Tensile Elongation at Break	400	%	
Tensile Strength	44.0	MPa	ASTM D4894
Electrical	Nominal Value	Unit	Test Method
Dielectric Strength	75	kV/mm	ASTM D149
Additional Information			

#### 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. Temperatures that are too high 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.

#### 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 Solvay sales representative or the website:  
[www.solvayspecialtypolymers.com](http://www.solvayspecialtypolymers.com)

#### NOTE

1. Laser diffraction

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