



### (FILLED PTFE) COMPOSITIONS & FILL DESCRIPTIONS

CONSISTS OF	DEFINITION OF FILL
5% Glass Fiber 10% Glass Fiber 15% Glass Fiber 20% Glass Fiber 25% Glass Fiber 30% Glass Fiber	Milled glass fibers have the least effect on chemical and electrical properties and add greatly to the mechanical properties of unfilled PTFE. Addition of glass improves compressive properties by as much as 40% and improves wear resistance greatly. These compounds resist acids and oxidation but can be attacked by alkali.
30% Graphite 5% Graphite 10% Graphite 15% Graphite 20% Graphite 25% Graphite	Graphite has good chemical resistance to corrosive environments and exhibits good initial wear and rubbing/sliding characteristics in dry and water applications. Commonly blended with carbon and PTFE.
25% Bronze 40% Bronze 60% Bronze	This filler has better wear, creep resistance, and higher thermal conductivity than glass fiber with PTFE. The compound is easily machined, but has poor chemical resistance in the presence of acids and alkali. Useful in applications which undergo high mechanical loads or high-speed rubbing contacts where the bronze filler supplies the strength and conductivity to carry away excess, unwanted heat.
5% Molybdenum Disulfide	This filler is used frequently in combination with others to increase surface hardness, stiffness, and to reduce the starting

	coefficient of friction and steady-state wear. Its effect on electrical and chemical properties is negligible.
5% Carbon 10% Carbon 15% Carbon 20% Carbon 25% Carbon 33% Carbon	Carbon has good chemical resistance to corrosive environments. It exhibits good initial wear and rubbing or sliding contact characteristics, both dry and water applications. It is frequently used in piston rings to reduce cylinder wall wear by entrapping abrasive foreign particles in their relatively soft surfaces.
10% Carbon-Graphite 20% Carbon-Graphite 25% Carbon Graphite	These fillers are used both separately and together in PTFE compounds.
5% Calcium Fluoride 10% Calcium Fluoride 15% Calcium Fluoride	ALTERNATIVE TO GLASS FILL.
15% Glass Fiber, 5% Moly 20% Glass Fiber, 5% Moly, 5% Carbon-Graphite 23% Glass Fiber, 2% Moly 25% Glass Fiber, 5% Moly	SEE ABOVE FOR INDIVIDUAL DEFINITIONS.
10% Glass Fiber, 10% Graphite 5% Glass Fiber, 5% Graphite 20% Glass Fiber, 5% Graphite	SEE ABOVE FOR INDIVIDUAL DEFINITIONS.
10% Glass Fiber, 5% Carbon 5% Glass Fiber, 10% Carbon	SEE ABOVE FOR INDIVIDUAL DEFINITIONS.
40% Bronze, 5% Moly 40% Bronze, 10% Moly 55% Bronze, 5% Moly 65% Bronze, 5% Moly	SEE ABOVE FOR INDIVIDUAL DEFINITIONS.

## TYPICAL PHYSICAL PROPERTIES OF VIRGIN PTFE PRODUCTS

PTFE Material	Virgin	Virgin "Super" PTFE	Reprocessed	Virgin PTFE blended with:				
	None	None	None	Glass Fiber	Bronze	Graphite	Carbon	Glass, MoS2
Filler	None	None	None	Glass Fiber	Bronze	Graphite	Carbon	Glass, MoS2
Filler Content By Weight	0%	0%	0%	25%	40%	10%	10%	23%, 2%
PROPERTIES								
Specific Gravity	2.16	2.16	2.16	2.22	3.30	2.13	2.13	2.25
Tensile Strength @ Break (PSI)	3,000	4,500	1,500	2,500	2,300	2,700	2,800	2,500
Elongation @ Break	200%	800%	75%	50%	60%	60%	50%	50%
Shore D Hardness	54	54	56	63	65	57	62	64
Dielectric (Volts/Mil)	1300	2100	600	-	-	-	-	-

## COMMON SPECIFICATIONS FOR AND PTFE PRODUCTS

Specifications	Type Of Specification for PTFE and Teflon ®
*AMS 3651	PTFE RODS, TUBES, SHEETS, SHAPES <i>(See AMS 3652 thru AMS 3669)</i>
AMS 3652	PTFE FILM
AMS 3656	PTFE EXTRUSIONS
AMS 3658	PTFE EXTRUSIONS
AMS 3659	PTFE EXTRUSIONS
AMS 3660	PTFE MOLDINGS

AMS 3661	PTFE FILM
AMS 3662	PTFE FILM
AMS 3667	PTFE SHEET, MOLDED
AMS 3668	PTFE MOLDINGS
AMS 3669	PTFE SHEET, MOLDED
AMS 2491	SURFACE TREATMENT OF PTFE
*MIL-P- 22241	PTFE SHEET & FILM ( <i>See ASTM D3293 &amp; ASTM D3308</i> )
*MIL-P- 19468	PTFE RODS, MOLDED & EXTRUDED ( <i>See ASTM-D1710</i> )
ASTM D1710	PTFE ROD
ASTM D3293	PTFE MOLDED SHEET
ASTM D3294	PTFE MOLDED SHEET OR SHAPES
ASTM D3308	PTFE SKIVED TAPE

\* Note: These specifications have been deleted. See replacement specifications for current information.

**Call Professional Plastics at (888) 995-7767 or  
E-Mail [sales@proplas.com](mailto:sales@proplas.com)  
Order Online at [www.professionalplastics.com](http://www.professionalplastics.com)**