

Fluoropolymer POLYFON PTFE Compound-Series

PRODUCT INFORMATION

POLYFLON PTFE Compound-Series is a molding powder with a broad application range, made by blending molding powder POLYFLON PTFE and fillers, to improve the mechanical properties while maintaining the excellent properties of POLYFLON PTFE.

Grade	Filler	Filler content	Specific gravity	Tensile strength (cross direction)	Elongation (cross direction)	Hardness	Shrinkage rate	Other possible combinations	Benefits	Applications
		-	ASTM D4894	ASTM D4894	ASTM D4894	Needle type	Internal method			
		%	-	MPa	%	Shore D	%			
Reference	Non-filler	-	2.17	31	310	57	3.0	-	-	-
15GL	Glass fiber	15	2.22	23	300	62	2.4	Molybdenum disulfide Carbon Graphite	<ul style="list-style-type: none"> - High heat resistance and dimensional stability - Excellent abrasion resistance in addition to high pressure resistance and rigidity - Reduced cold flow and dielectric properties - Good chemical resistance to organic solvents 	<ul style="list-style-type: none"> - Suitable for a variety of environmental situations - Not suitable for soft metal parts unless glass fill is very low - Use in water may cause uneven abrasion
25GL	Glass fiber	25	2.25	18	270	64	2.1			
25CAR	Hard carbon	25	2.10	Min.15	Min.90	63	2.5	Graphite	<ul style="list-style-type: none"> - High pressure resistance with increased hardness - Hydrochloride resistance 	<ul style="list-style-type: none"> - Ideal for water applications and recommended for medium and high loads - Compressor ring, V-ring, and packing
25CAR/R	Soft carbon	25	2.10	18	190	63	2.6			

Grade	Filler	Filler content	Specific gravity	Tensile strength (cross direction)	Elongation (cross direction)	Hardness	Diametric shrinkage	Other possible combinations	Benefits	Applications
		-	ASTM D4894	ASTM D4894	ASTM D4894	Needle type	Internal method			
		%	-	MPa	%	Shore D	%			
Reference	Non-filler	-	2.17	31	310	57	3.0	-	-	-
15GR	Graphite	15	2.16	20	200	61	2.4	-	- The wear resistance is about 5 times better than homo PTFE - Less wear when used on soft metals	- Piston band for shock absorber
15GL5M	Glass fiber + molybdenum disulfide	15+5	2.26	20	260	62	2.5	-	- Improvement of friction properties in comparison with compounds containing glass fiber only	- Dynamic seal - Lip seal and shaft seal
40BRR	Amorphous bronze (antioxidation)	40	3.08	26	270	65	2.2	Carbon fiber Graphite and others	-Prominent pressure resistance and hardness -Excellent abrasion resistance	- Recommended for hydraulic and pneumatic systems - Not suitable for water/insulation applications
10CF	Carbon fiber	10	2.09	22	250	62	2.1	-	- A small amount results in very high abrasion resistance - Abrasion is minimized when lubricated with water	- Seal for power steering box (hydraulic pressure) - Sealing ring of high-pressure piston for compressor
20CER	Ceramics	20	2.03	18	200	62	5.5	Carbon	- Prominent pressure and abrasion resistance - Suitable for food use	- Alternative to glass and carbon fiber compounds
10R	PPS Cross-linked PPS	10	2.05	22	260	59	3.0	Carbon fiber Graphite	- Dimension is stable even when exposed to heat - Excellent abrasion resistance - Reduced cold flow -Low aggressiveness to counterpart materials	- Self-lubricating bearing and sealing - Compressor ring and high-speed rotary radial seal - Backup ring and bushing - Packing set
10R MOD*		10	2.05	22	330	59	3.0			

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		%	-	MPa	%	Shore D	%			
Reference	Non-filler	-	2.17	31	310	57	3.0	-	-	-
10PEEK	PEEK	10	2.04	22	280	59	4.0	-	- Dimension is stable even when exposed to heat - Excellent abrasion resistance	- Compressor ring and high-speed rotary radial seal - Backup ring, bushing, and packing set
15RJ	Polyimide	15	1.94	15	200	60	3.7	-	- Self-lubrication effect - Extremely long-term abrasion resistance	- Self-lubricating bearing, piston ring, and sealing element - Skived film and sheet
10EK	Aromatic polyester	10	2.07	22	320	60	2.5	Carbon fiber molybdenum disulfide	- Low abrasion material suitable for soft metals - Excellent abrasion and friction behaviors	- High-speed rotary radial seal, self-lubrication, and slide bearing - Compressor ring, spring load seal, and bushing
15KV	Aramid fiber	15	1.98	13	200	60	2.5	-		

*Based on modified PTFE:

All compounds can also be formulated using a modified PTFE base.

Different applications are available for different molding methods:

- NFF (non-free-flowing: fine powder form) : compression molding
- FF (free-flowing: granular form) : compression, semi-automatic, and isostatic molding
- FF/HD (FF: granular form + high bulk density) : compression and automatic molding

The above numeric values are representative and not guaranteed.

For more information, visit our website.

DAIKIN INDUSTRIES, LTD.

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