



# Semi-finished Fluoropolymers: Hotmoulding

Vanéflon offers a wide choice of hot-moulded shapes in high performance plastic materials. Our optimized hot moulding process and the continuous control of raw materials and semi-finished products ensures the highest quality parts with **excellent chemical and mechanical properties.**

Our experienced and highly-trained team disposes over an ever extending range of tools to deliver customized products for your specific needs. Vanéflon – High Performance Plastics. High Performance Solutions.



- High Quality, certified raw materials
- Continuous quality process control
- In-house hot moulding process
- Tempering options for ultra-high precision machining
- Excellent chemical and mechanical characteristics
- Consistent high quality
- PCTFE | PFA | FEP | ETFE
- Certificates (3.1, FDA, 2.1,...)

PTFE | TFM® | PFA | PCTFE | FEP | ETFE  
PEEK | PPS | PI (Vespel®) | PEI | PEKK  
PVDF | PA | POM | PP | UHMPE





### Rods: PCTFE | PFA | ETFE | FEP

Øouter (mm)	tolerance		Weight (± kg)	
	+	-	540 mm	1000 mm*
3	0,30	0,00	-	0,02
4	0,30	0,00	-	0,03
5	0,30	0,00	-	0,05
6	0,40	0,00	-	0,07
7	0,40	0,00	-	0,09
8	0,40	0,00	-	0,12
9	0,40	0,00	-	0,15
10	0,40	0,00	0,10	0,18
11	0,80	0,00	-	0,24
12	0,80	0,00	-	0,28
13	0,80	0,00	0,17	0,32
14	0,80	0,00	-	0,37
15	0,80	0,00	-	0,42
16	0,80	0,00	0,27	0,48
18	0,80	0,00	-	0,60
20	0,80	0,00	0,46	0,73
22	1,20	0,00	-	0,91
23	1,20	0,00	-	0,99
25	1,20	0,00	0,68	1,16
28	1,20	0,00	-	1,45
30	1,20	0,00	0,97	1,65
35	1,20	0,00	1,30	2,27
40	1,20	0,00	-	2,94

\*For PCTFE only, available on request

### Sheets: PCTFE | PFA | ETFE | FEP

Length (mm)	Width (mm)	Thickness (mm)	Weight (±kg)	
			PCTFE   PFA   FEP	ETFE
540	290	4 (min.)	1,5	1,2
		5	1,8	1,5
		10	3,6	2,9
		15	5,3	4,3
		20	7,1	5,7
		25	8,8	7,1
520	520	5 (min.)	3,1	2,5
		10	6,1	4,9
		15	9,2	7,4
		20	12,2	9,9
		25	15,3	12,4

### sheets: PCTFE extra dimensions on request

Length (mm)	Width (mm)	Thickness (mm)	Weight (±kg)	
			PCTFE   PFA   FEP	ETFE
300	300	10	2,2	-
		15	3,3	-
		20	4,4	-
		25	5,5	-
500	500	10	6,1	-
		15	9,1	-
		20	12,1	-
		25	15,2	-

## Tubes: PCTFE | PFA | ETFE | FEP

Vanéflon is specialised in the manufacturing of hot-moulded tubes in PCTFE, PFA, ETFE and FEP.

Our ever extending range of **tools** covers tube diameters ranging from **Ø40 to Ø1100mm**. Let us select the tool that best suits your semi-finished material needs. For projects we can customise tools to your ideal tube dimensions, thus reducing scrap and costs.

### Physical properties Fluoro-Polymers

Property	Norm	Unit	PFA	FEP	PCTFE	ETFE	PVDF	ECTFE
Density	ISO 12086	g/cm <sup>3</sup>	2,14 - 2,17	2,12 - 2,17	2,1 - 2,16	1,7 - 1,75	1,75 - 1,78	1,67 - 1,7
Maximum continuous operating temperature	-	°C	260	205	170	150	150	150
Minimum continuous operating temperature	-	°C	-200	-100	-273	-100	-60	-75
Ball pressure hardness	DIN 53 456	N/mm <sup>2</sup>	25 - 30	23 - 28	65 - 70	34 - 40	62 - 68	55-65
Shore Hardness D	DIN 53 505	Sh. D	60 - 65	55 - 60	72 - 80	62 - 72	72 - 82	70 - 80
Water absorption	DIN 53 495	%	0,02	0,03	0	0,02	0,03	0,01
Coefficient of friction-v-steel - Dynamic	-	-	0,25	0,35	0,35	0,4	0,45	0,65
Elongation at break (23°C)	DIN 53455	%	250 - 350	250 - 350	30 - 120	200 - 350	20 - 80	30 - 120
Tensile strength (23°C)	DIN 53455	N/mm <sup>2</sup>	25 - 30	20 - 25	32 - 40	36 - 48	38 - 50	40 - 55
Tensile modulus (23°C)	DIN 53 457	N/mm <sup>2</sup>	600 - 700	350 - 700	1000 - 2000	500 - 1200	800 - 1800	1200 - 1800
Coefficient of thermal expansion (20-100°C)	-	1/K.10 <sup>-5</sup>	13	12	5	13	10	8
Thermal conductivity (23°C)	DIN 52 612	W/K.m	0,22	0,2	0,19	0,17	0,17	0,15
Dielectric strength	DIN 53 481	KV/mm	50 - 80	50 - 80	50 - 70	60 - 90	40 - 80	50 - 80



Contact:

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## Hotmoulding

Vanéflon has over 40 years of experience in the fabrication of hot moulded semi-finished products using prime raw materials from trusted suppliers. Our dedicated team is at your disposition to find the perfect material for your most demanding machining needs.

Our hot moulding production process allows us to manufacture Tubes, Rods and Plates with outstanding uniformity. Materials without cracks, air entrapments and bubbles are thus obtained. Gain advantage over your competitors through our know-how, materials and service.

### Benefit from our range of high performance hot moulded plastics:

- Compounds - PCTFE, PFA, FEP and ETFE on stock.
- Tubes - diameters from Ø40 to Ø1100mm
- Rods - diameters from Ø3 to Ø40mm
- Sheet - thickness from 4 to 25mm

### Benefit from our key competencies:

- Prototyping and customization capabilities
- Ever increasing range of moulding tools improvement.
- Application experience at your disposal
- Flexible production capabilities



## Vanéflon

Since 1976 Vanéflon produces high performance plastic semi-finished and machined parts. As a specialist in compression and hot-moulding in combination with high precision machining we offer tailor-made solutions for a wide range of industries. Our flexible, experienced and dedicated team stands in for customized material selection, engineering support and production thus guaranteeing consistent quality on every level. Modern machinery and continuous process optimization assure the cost-efficient execution of the most demanding tasks. Vanéflon's in-house expertise and high standards lead to reliable, flexible and cost-efficient solutions for demanding customers, who expect professional support, high quality products, fast response and short lead-times. Vanéflon is certified to ISO 9001 and offers various material certifications.