

**POLYTETRAFLON®
ROLLCOVERS
MADE FROM FEP - PFA**

**PLASTICS
WITHOUT
LIMITATIONS
MADE IN GERMANY**



POLYTETRA



POLYTETRAFLON® ROLLCOVERS MADE FROM FEP - PFA

Plastics and fluoroplastics in particular have been our field of activity for 30 years now. We are considered as reliable partners in the industry because of our experience, creativity and the extensive consultation services provided by us.

We not only offer a complete range of products, but focus also on comprehensive consultation services in the technically challenging field of thermoplastics. We will offer you our support in finding solutions to your application. Just let us know your demands, so that you can benefit from our long-term experience in this area.

► Products and industries

Polytetra GmbH is one of the few international manufacturers of rollcovers made from FEP or PFA fluoroplastic.

Our special strength lies in application-related technical consulting and remittance work that includes the professional finishing of rollers supplied by the customer.

Our rollcovers are used world-wide wherever hot, sticky or staining products are to be redirected, for instance, in the textile, paper, packaging and food industry.

► Materials and production

POLYTETRAFLON® Rollcovers are manufactured from specially selected fluoroplastics. Stretched through a special heating process, they shrink when subjected to renewed heat treatment almost to the size of the previous original diameter.

As compared to conventional coatings made from PTFE, POLYTETRAFLON® Rollcovers made from FEP or PFA have the decisive advantage of a very smooth surface (no microporosity). During the production process the user profits from the achieved antiadhesiveness of the roller. Layer thicknesses of maximum 100 µm only can be obtained with customary coatings.



► For additional information on the Internet, see:

www.polytetra.com

Do you have any queries?
For consultation:
+ 49 (0)2166 / 95 90 - 0
Email: sales@polytetra.com

► Processing

The use of POLYTETRAFLON® Rollcovers, in sharp contrast, yields wall thicknesses of up to 0.50 mm, 0.64 mm and 1.50 mm. Thus, a possible unevenness of the rollers can be levelled out.

Besides, FEP and PFA rollcovers are physiologically harmless, and therefore, ideally suited for use in the food products industry. The excellent chemical resistance allows easy cleaning even with aggressive chemicals.

Wall thicknesses that can be manufactured, depending on the material: 0.50 mm, 0.64 mm and 1.50 mm.

You're looking for special wall thicknesses? Please contact us. We look forward to every challenge.

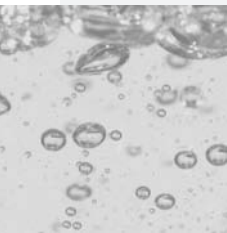
POLYTETRAFLON® Rollcovers are fabricated in etched and non-etched variants. An etched design allows an additional pasting of the rollcover on the roller. The etching creates a chemical roughening of the surface, which results in a much better bonding of the cover with the carrier. We always recommend the use of etched rollcovers.

Our service includes the heat-shrinking of rollers supplied by you in our company. In addition, we also provide training on the proper mounting of our rollcovers at customer premises, or here at our factory in Moenchengladbach. Heat-shrinking on contract basis in our company is possible up to a roller weight of 1.4t.

For heavy rollers, we mount the rollcover at customer premises.

Important parameters such as roller type, roller length (shell length measured without journal), roller diameter, surface of the roller (shore hardness and temperature resistance in case of rubber-coated rollers), use temperature, chemical load, linear pressure and rotation speed are to be clarified before order placement.

The length of the rollcover should be at least 20% more than the shell length of your roller in view of the manufacturing process and the occurring longitudinal shrinkage.



POLYTETRAFLON®
STANDARD ROLLCOVERS MADE FROM FEP
WALL THICKNESS 0.50 MM



► **POLYTETRAFLON®-ROLLCOVERS MADE FROM FEP**
Wall thickness 0.50 mm

Nominal widths			Shrinking range in mm		
mm	/	Inch	min.	/	max.
25		1	22	-	26
32		1 ¹ / ₄	27	-	32
38		1 ¹ / ₂	33	-	43
51		2	44	-	53
64		2 ¹ / ₂	54	-	67
76		3	68	-	74
89		3 ¹ / ₂	75	-	92
102		4	93	-	108
127		5	109	-	130
152		6	131	-	150
178		7	151	-	176
203		8	177	-	203
229		9	204	-	241
267		10 ¹ / ₂	242	-	266
305		12	267	-	302
330		13	303	-	343
355		14	344	-	416
420		16 ¹ / ₂	417	-	466

POLYTETRAFLON® FEP rollcovers of 0.50 mm wall thickness are produced absolutely seamlessly up to a nominal width of 16 1/2 inch. You´re looking for other nominal widths? Please contact us.

Wall thickness data is nominal; effective wall thicknesses vary slightly, depending on the shrinkage.

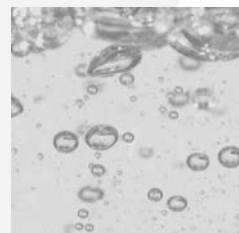
Please get in touch with us if your rollers are at the limit range regarding diameter and shrinking range. Special manufacturing processes enable the implementation of intermediate sizes. Benefit from our consultancy.

POLYTETRAFLON® Rollcovers can be manufactured in lengths of 900 – 9,000 mm.

Please note that the length of the rollcover should be approx. 20% more than the shell length of your rollers on account of the manufacturing process and the occurring longitudinal shrinkage.

Depending on the application, a roller cover etched on the inside and pasted additionally should be used. Benefit from our know-how!

**POLYTETRAFLON®
SPECIAL ROLLCOVERS MADE FROM FEP
WALL THICKNESS 1.50 MM**



▶ **POLYTETRAFLON®-SPECIAL ROLLCOVERS MADE FROM FEP**
Wall thickness 1.50 mm

POLYTETRAFLON® FEP rollcovers of special wall thickness 1.50 mm are produced absolutely seamlessly up to a nominal width of 17 inch. For deviating nominal widths, please contact us.

Wall thickness data is nominal, effective wall thicknesses vary slightly, depending on the shrinkage.

Please get in touch with us if your rollers are at the limit range regarding diameter and shrinking range. Special manufacturing processes enable the implementation of intermediate sizes.

Nominal widths			Shrinking range in mm		
mm	/	Inch	min.	/	max.
127		5	117	-	142
152		6	143	-	164
178		7	165	-	195
203		8	196	-	233
229		9	234	-	253
254		10	254	-	298
279		11	299	-	341
305		12	342	-	382
382		15	383	-	413
432		17	414	-	464

▶ **PROPERTIES OF POLYTETRAFLON® ROLLCOVERS MADE FROM FEP**

Mechanical	Unit	Value
Water intake	%	< 0.01
Tensile strength	MPa	21
Thermal		
Temperature resistance	°C	< 205
Shrink temperature	°C	100 - 200
Continuous use temperature	°C	120 - 140
Heat conductivity	W/m*K	0.19
Coefficient of linear expansion	K ⁻¹	8-14
Electrical		
Dielectric strength (0.1 mm film)	kV/mm	50-80
Dielectric constant (1 MHz)		2.1
Specific volume resistance	Ω*cm	> 10 ¹⁸

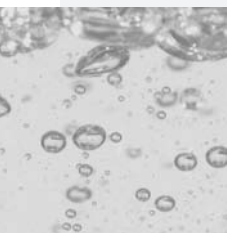
Important:

Use temperature, rotation speed and linear pressure must always be considered in its interdependence. Our Technical Sales Department will be glad to advise you.

▶ For additional information on the Internet, see:

www.polytetra.com

Do you have any queries?
For consultation:
+ 49 (0)2166 / 95 90 - 0
Email: sales@polytetra.com



**POLYTETRAFLON®
ROLLCOVERS MADE FROM PFA
WALL THICKNESSES 0.50 MM AND 0.64 MM**

PFA can hardly be differentiated from FEP optically, though it has essentially higher bending fatigue strength. Use of POLYTETRAFLON® Rollcovers made from PFA is therefore recommended e.g., in so-called Banana rollers in which spot loads occur. Moreover, the temperature resistance is conspicuously higher than in FEP. For rubber-coated rollers that are operated at the higher temperature range in particular, we recommend the use of rollcovers made from PFA.

► **POLYTETRAFLON®-ROLLCOVERS MADE FROM PFA**

Wall thickness 0.50 mm

Nominal widths			Shrinking range in mm		
mm	/	Inch	min.	/	max.
25		1	25	-	30
32		1¼	31	-	36
38		1½	37	-	43
51		2	44	-	53
64		2½	54	-	66
76		3	67	-	79
89		3½	80	-	89
102		4	90	-	109
127		5	110	-	132
152		6	133	-	157
178		7	158	-	178
203		8	179	-	211
229		9	212	-	234
257		10½	235	-	269
305		12	270	-	307
380		15	308	-	411

► **POLYTETRAFLON®-ROLLCOVERS MADE FROM PFA**

Wall thickness 0.64 mm

Nominal widths			Shrinking range in mm		
mm	/	Inch	min.	/	max.
38		1½	36	-	42
51		2	47	-	52
76		3	71	-	80
89		3½	81	-	90
102		4	91	-	103
115		4½	104	-	121
127		5	122	-	143
152		6	144	-	165
178		7	166	-	190
203		8	191	-	222
229		9	223	-	249
267		10½	250	-	282
305		12	283	-	318
330		13	319	-	371

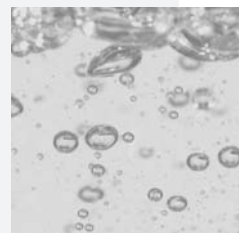


POLYTETRAFLON® PFA Rollcovers of standard wall thickness 0.50 mm are produced absolutely seamlessly up to a nominal width of 15 inch, and in the special wall thickness of 0.64 mm up to a nominal width of 13 inch. You're looking for other nominal widths? Please get in touch with us if your rollers are at the limit range regarding diameter and shrinking range. Special manufacturing processes enable the implementation of intermediate sizes. Benefit from our consultancy.

POLYTETRAFLON® Rollcovers can be manufactured in lengths from 900 to 9,000 mm.

Depending on the application, we recommend the use of rollcovers etched on the inside and pasted additionally to the roller. Benefit from our know-how!

**POLYTETRAFLON®
SPECIAL ROLLCOVERS MADE FROM PFA
WALL THICKNESS 1.50 MM**



POLYTETRAFLON® Rollcovers of special wall thickness 1.50 mm are produced absolutely seamlessly up to a nominal width of 14 inch. Please contact us for deviating nominal widths.

The wall-thickness data is nominal, effective wall thicknesses vary slightly, depending on the shrinkage.

► **POLYTETRAFLON®-SPECIAL ROLLCOVERS MADE FROM PFA**
Wall thickness 1.50 mm

Nominal widths			Shrinking range in mm		
mm	/	Inch	min.	/	max.
152		6	165	-	187
178		7	188	-	219
203		8	220	-	245
254		10	246	-	279
279		11	280	-	312
305		12	313	-	380
356		14	381	-	451

► **PROPERTIES OF POLYTETRAFLON®-ROLLCOVERS MADE FROM PFA**

Mechanical	Unit	Value
Water intake	%	< 0.03
Tensile strength	MPa	28
Thermal		
Temperature resistance	°C	< 280
Shrink temperature	°C	100 - 200
Continuous use temperature	°C	160 - 200
Heat conductivity	W/m*K	0.24
Coefficient of linear expansion	K ⁻¹	10-16
Electrical		
Dielectric strength (0.1 mm film)	kV/mm	50-80
Dielectric constant (1 MHz)		2.1
Specific volume resistance	Ω*cm	> 10 ¹⁸

Important:

Please specify the exact diameter and shell length of your rollers in your query. On account of the manufacturing process and the occurring longitudinal shrinkage, you must order at least 20% extra rollcover length as compared to the shell length of the roller. The use temperature, rotation speed and linear pressure must always be considered in its interdependence.

You can download a technical questionnaire for clarification of details from: www.polytetra.com.



**YOU ARE INTERESTED IN
HEAT-SHRINK TUBING MADE FROM
PTFE - FEP - PFA OR IN
THICK-WALLED PTFE COVERS?**
PLEASE GET IN TOUCH WITH US
MENTIONING YOUR APPLICATION REQUIREMENT.
WE SHALL BE GLAD TO ADVISE YOU.



POLYTETRA GmbH • Hocksteiner Weg 40 • D-41189 Mönchengladbach
Telephone: + 49 (0)2166 / 95 90 - 0 • Fax: + 49 (0)2166 / 95 90 - 55
E-Mail: info@polytetra.com • Internet: www.polytetra.com

POLYTETRA

All the data in this catalogue is based on the state of knowledge at the time of printing and is not binding. We reserve the right to undertake further developments and make technical modifications and adaptations as per the changing standards, norms and directives at any point of time, also without prior notification. All the described product features depend on the intended application and the environmental conditions prevalent at the time of use. In case of any new application, the user must carry out an application-specific test after consulting us. The photos and texts (also in extracts) printed in our catalogue may be duplicated or used only with our express approval. No liability will be assumed by us or our dealers in connection with the information provided in this brochure. Any contracts shall be concluded exclusively on the basis of our AGB (Standard Business Conditions). Print version: 07/2012 © 2012 Polytetra GmbH.