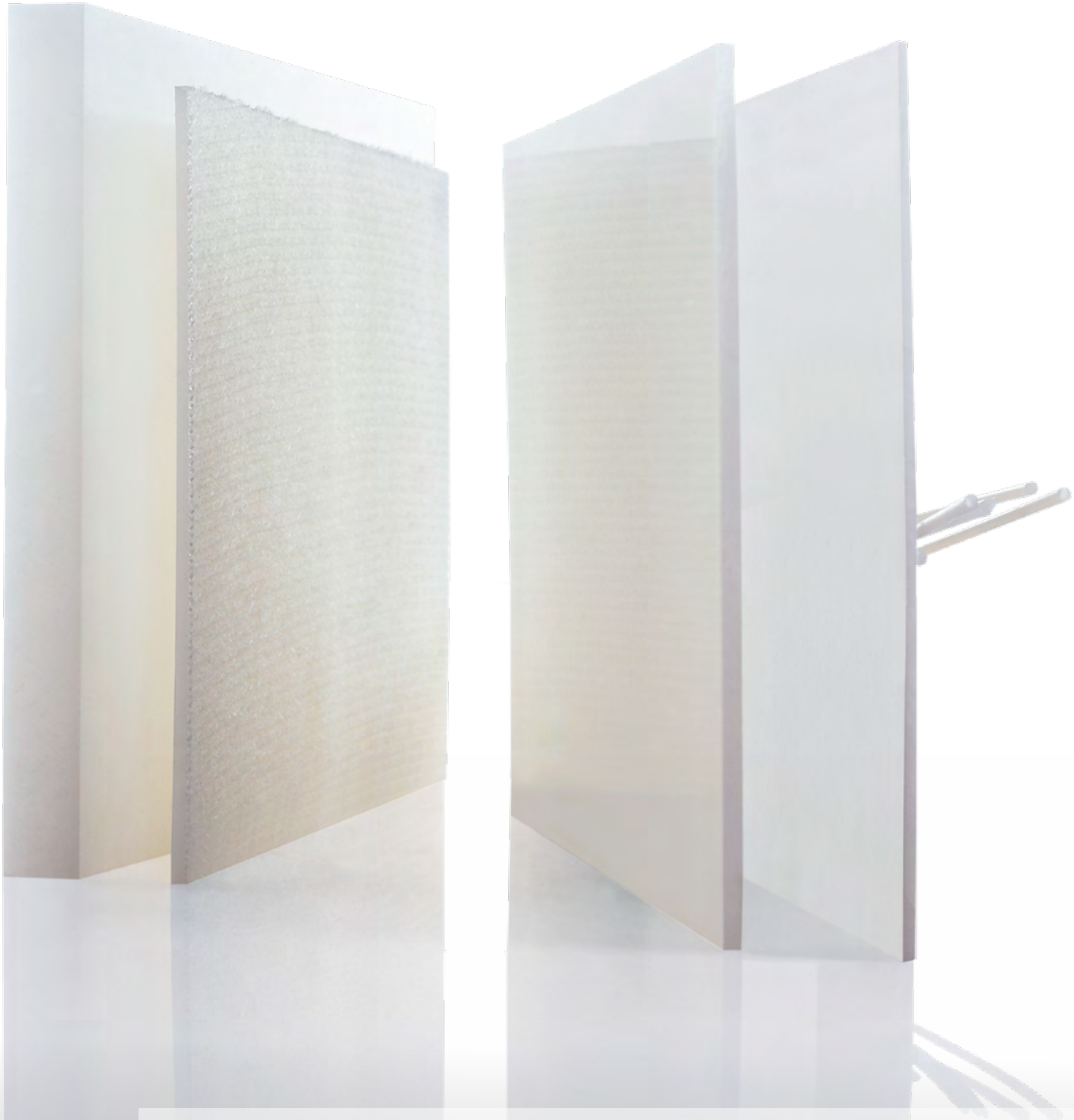


SIMONA



SIMONA[®] PFA

High-performance plastics for corrosion protection

GLOBAL THERMOPLASTIC SOLUTIONS

SIMONA® PFA – High-performance plastics for corrosion protection

SIMONA has extended its existing product range of partially fluorinated materials, such as PVDF, ECTFE and ETFE, to include fully fluorinated semi-finished parts. They include the high-performance plastics PFA-M and PFA.



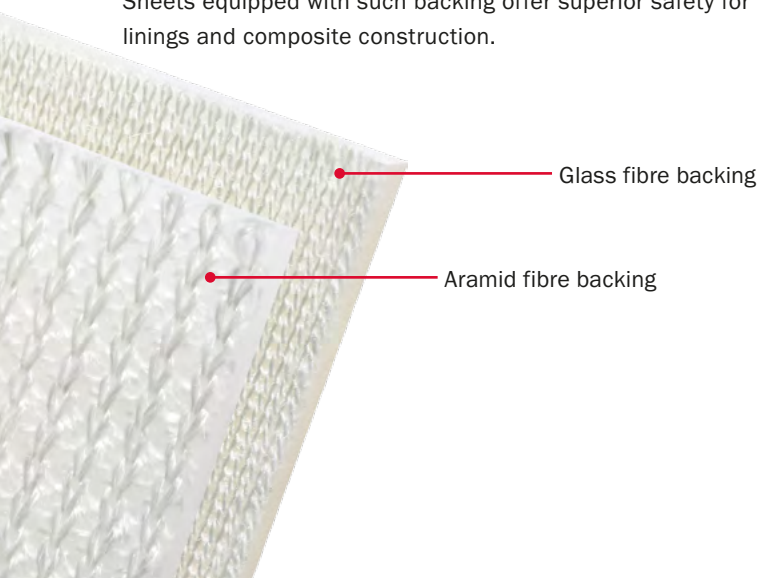
Fully fluorinated SIMONA® Semi-Finished Parts are used primarily in highly demanding operating conditions, e. g. in the area of heavy-duty corrosion protection. Combining the benefits of excellent chemical resistance with high temperature stability, they contribute directly to the overall durability and reliability of applications.

Owing to their properties, fluoroplastics are predestined for use in the chemical and electroplating industry and the electrical and semiconductor industry as well as in the field of medical and nuclear technology or power and environmental technology.

SIMONA® PFA-M and PFA sheets can be supplied without any backing as well as with a glass fibre or aramid fibre backing. Sheets equipped with such backing offer superior safety for linings and composite construction.

Broad scope of application

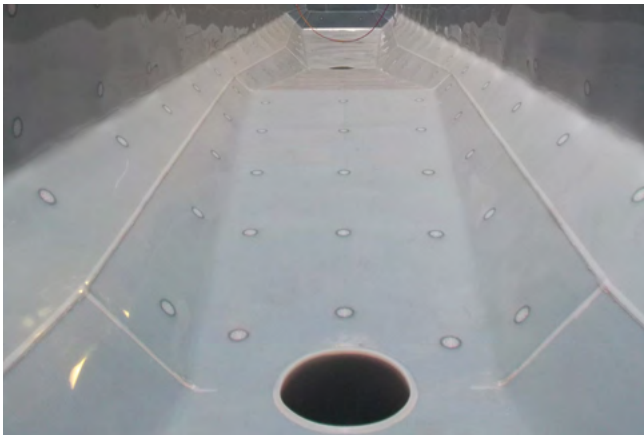
- Drainage channels
- Extraction and filtration systems
- Absorbers
- Pickling systems
- Chemical piping
- Containers
- Sealing washers
- Diaphragm seals
- Storage and reaction tanks
- Pumps
- Stirring devices
- Tank linings
- Absorption towers und spray-tower scrubbers
- Ventilators, heat exchangers
- Cyclone systems
- Centrifuges



SIMONA® PFA-M

SIMONA® PFA-M is a copolymer based on tetrafluoroethylene and perfluorinated methyl vinyl ether. Offering the advantage of high flexural resistance, this material can be used in a wide range of applications within the chemical process industry. Its upper temperature limit is 225 °C.

Thanks to its excellent stress crack resistance and extremely smooth surface, SIMONA® PFA-M is the perfect choice when it comes to ensuring the lowest possible decrease of pressure together with reduced caking of solids and efficient cleaning.



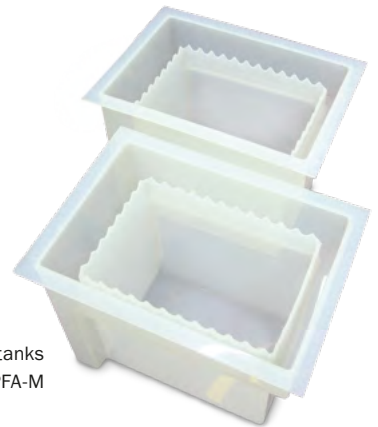
Anchor point lining of a chimney flue made of SIMONA® PFA

SIMONA® PFA

SIMONA® PFA is a copolymer based on tetrafluoroethylene and perfluorinated propyl vinyl ether. This material is used primarily in areas of application requiring exceptional thermal stability, low levels of leaching (semiconductor industry) or high stress crack resistance.

Of all the thermoplastic fluoropolymers, PFA has the highest chemical resistance. At 260 °C, it also has the highest upper temperature limit.

SIMONA® PFA is deployed mainly in the field of heavy-duty corrosion protection, e.g. as a lining for channel anchor points in flue gas desulphurisation systems.




Thermoformed tanks made of SIMONA® PFA-M


Product range

	SIMONA® PFA-M	SIMONA® PFA-M-AK/-GK	SIMONA® PFA	SIMONA® PFA-AK/-GK
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Pressed sheets (sizes/thicknesses in mm)

	590 x 590	25 - 80	-	-
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Extruded sheets and rolls (sizes/thicknesses in mm)

	1,500 x 1,500	-	-	5 - 8	0,8
	3,000 x 1,500	-	-	-	2.3 - 2.8
	2,440 x 1,220	1.5 - 20	1.5 - 4	-	-
	10,000 x 1,500	-	-	0.8 - 3.8	0.8 - 3.8
	15,000 x 1,500	-	-	0.8 - 2.8	1.5 - 2.3
	15,240 x 1,220	2.3 - 4	1.5 - 4	-	-
	20,000 x 1,500	-	-	0.8 - 2.3	-
	Colours	natural	natural (backed)	natural	natural (backed)

Welding rods (thicknesses in mm)

	2.0 kg coil, round rod	-	-	3 - 4	-
	2.3 kg coil, round rod	3 - 4	-	-	-
	Colours	natural	-	natural	-

Other sizes, thicknesses and colours available on request. AK = aramid fibre backing; GK = glass fibre backing
Please contact our sales department for further details concerning availability: sales@simona.de

SIMONA® PFA – Material specifications

Werkstoffkennwerte

	SIMONA® PFA-M	SIMONA® PFA
Density, g/cm ³ , DIN EN ISO 1183	2.15	2.15
Yield stress, MPa, DIN EN ISO 527	12	15
Tensile modulus of elasticity, MPa, DIN EN ISO 527	440	450
Notched impact strength, kJ/m ² , DIN EN ISO 179	without break	without break
Elongation at break, %, DIN EN ISO 527	250	250
Mean coefficient of linear thermal expansion, K ⁻¹ , ISO 11359-2	1.4 x 10 ⁻⁴	1.4 x 10 ⁻⁴
Fire behaviour, DIN 4102	B1 low flammability (Self-assessment without test certificate)	B1 low flammability (Self-assessment without test certificate)
Thermal conductivity, W/m · K, DIN 52612	0.20	0.21
Specific surface resistance, Ohm, DIN IEC 60093	10 ¹⁵	10 ¹⁵
Temperature range, °C	-160 to +225	-190 to +260

All specifications are deemed to be approximate values in respect of the specific material and may vary depending on the processing methods used. In general, data specified applies to average values measured on extruded sheets with a thickness of 4 mm. In the case of sheets manufactured by means of pressing, testing is generally performed on sheets with a thickness of 20 mm. Deviations from the values specified are possible if the sheets in this thickness are not available. In the case of backed sheets, all technical specifications relate to the non-backed base sheets. Information presented herein is not necessarily applicable to other products (e.g. pipes, solid rods) of the same material or products that have undergone downstream processing. Suitability of materials for a specific field of application must be assessed by the party responsible for processing or the end-user. All technical specifications presented herein are designed merely to provide assistance in terms of project planning. They do not constitute a guarantee of specific properties or qualities.

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