

8.2 PP

Material specifications PP

	SIMONA® PP-DWU AlphaPlus®	SIMONA® PP-DWST	SIMONA® PP-EL-S	SIMONA® PPs	SIMONA® PP-C	frislyen® JN 480	
Technical data							
Density, g/cm ³ , DIN EN ISO 1183	0.915	0.905	1.170	0.950	0.910	0.905	
Yield stress, MPa, DIN EN ISO 527	33	32	25	32	26	32	
Elongation at yield, %, DIN EN ISO 527	8	8	7	8	7	8	
Tensile modulus of elasticity, MPa, DIN EN ISO 527	1,700	1,400	1,400	1,600	1,200	1,400	
Impact strength, kJ/m ² , DIN EN ISO 179	no break	no break	no break	no break	no break	no break	
Notched impact strength, kJ/m ² , DIN EN ISO 179	9	7	5	6	45	7	
Ball indentation hardness, MPa, DIN EN ISO 2039-1	70	70	66	70	50	70	
Shore hardness D, DIN EN ISO 868	72	70	70	72	67	70	
Mean coefficient of linear thermal expansion, K ⁻¹ , DIN 53752	1.6 x 10 ⁻⁴	1.6 x 10 ⁻⁴	1.6 x 10 ⁻⁴	1.6 x 10 ⁻⁴	1.6 x 10 ⁻⁴	1.6 x 10 ⁻⁴	
Thermal conductivity, W/m-K, DIN 52612	0.22	0.22	—	0.22	0.22	0.22	
Fire behaviour	DIN 4102	normal flammability	normal flammability	normal flammability	low flammability 2 to 20 mm ^①	normal flammability	normal flammability
	UL 94			V-0: >4 mm ^①			
Dielectric strength, kV/mm, DIN IEC 60243-1	52	58	—	22	52	58	
Specific surface resistance, Ohm, IEC 60093	10 ¹⁴	10 ¹⁴	≤10 ⁶	10 ¹⁴	10 ¹⁴	> 10 ¹⁴	
Temperature range, °C	0 to +100	0 to +100	0 to +80	0 to +100	-20 to +80	0 to +100	
Chemical resistance	excellent in contact with many acids, alkalis and solvents						
Physiologically safe	BfR	✓	✓		✓	✓	
	EU	✓	✓		✓	✓	
	FDA	✓	✓		✓	✓	
Processing							
Welding	yes	yes	yes	yes	yes	yes	
Gluing, GRP coating	possible with backed sheets						
Spray painting, printing	only possible after pre-treatment						
Warm bending	good	good	good	good	good	possible	

① Test certificate available