

SIMONA



SIMONA[®] Twin-Wall Sheets

The efficient solution for strong,
lightweight construction

GLOBAL THERMOPLASTIC SOLUTIONS

SIMONA® Twin-Wall Sheets – High stability, low weight

Our R&D team is committed to the continuous development of our product range. Thanks to innovative technical adjustments, we have managed to further improve the efficiency and stability of our lengthways-ribbed twin-wall sheets. The result: a cross-ribbed twin-wall sheet with reduced wall thicknesses – currently the only twin-wall sheet on the market that is fully certified for tank construction based on independent monitoring by TÜV Süd. Both versions of SIMONA® twin-wall sheets are characterised by high rigidity, low specific weight and good thermal insulation. In addition, they are very easy to process and machine.

Design-specific advantages

- High rigidity and strength
- High break resistance
- Rectangular tanks possible without steel reinforcement
- Lighter weight than solid material due to cavities
- Excellent sound insulation (DIN EN ISO 140-3, certificates available on request)
- Low heat transfer coefficients (k-value/U-value) based on ISO 8301, EN 1946-3

Plastic-specific advantages

- High thermal insulation
- Good electrical insulation
- Good slip properties
- High wear resistance
- High chemical resistance
- Low water absorption
- Resistant to microorganisms

Excellent processability

SIMONA® Twin-Wall Sheets can be processed by the same methods as those used for solid materials.



Sawing



Drilling



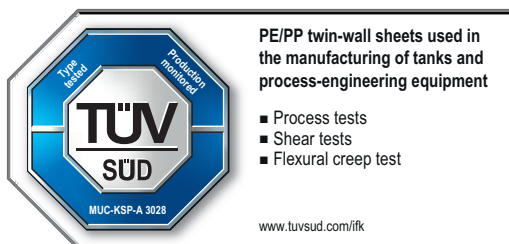
Milling



Screw fixing



Welding



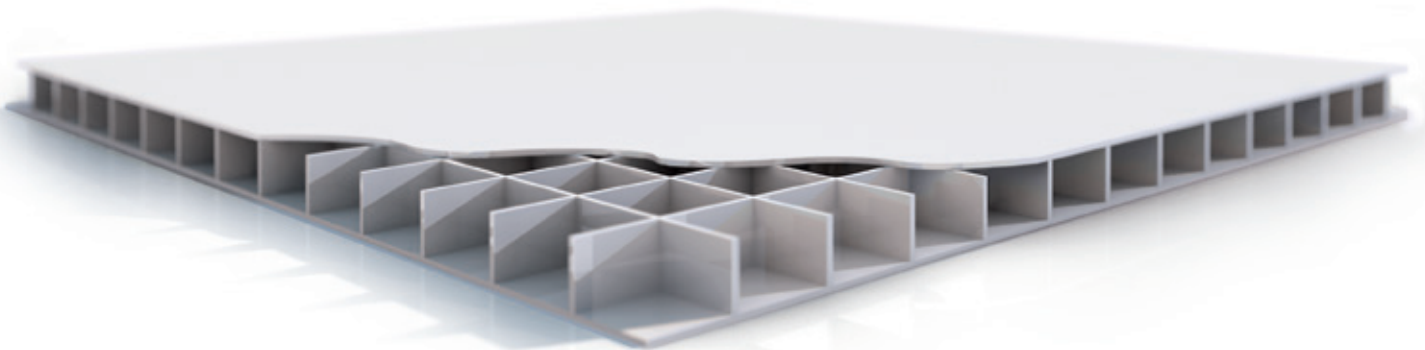
i For further information, please refer to our tech.info “SIMONA® Twin-Wall Sheets”.





SIMONA® Twin-Wall Sheet UV white

- Excellent weather resistance
- UV stabilisation
- Easy processing
- Long service life
- Less susceptible to build-up of heat in sunlight compared to black sheets
- Improved luminance inside open tanks, containers, etc. thanks to light-coloured outer walls



i Our Technical Service Centre team looks forward to assisting you:
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SIMONA® Twin-Wall Sheets – An unlimited number of potential applications

Apparatus, equipment, machines

- Rectangular tanks without steel reinforcement
- Tanks with thermal insulation functionality (e.g. covers for electroplating baths)
- Boat construction
- Floating pontoons for pipelines and supply lines at sea
- Storm-water retention basins
- Cooling water tanks
- Sound booths
- Spray booths
- Weather booths
- Safety tanks
- Water supply tanks
- Covers for rectangular tanks and circular tanks with large diameters (wrapped tube tanks)

Construction industry

- Walk-over swimming pool floors
- Lightweight shaft bottoms or concrete-lined for floats
- Shafts
- Protective ducts for pipelines and supply lines
- Sound barriers
- Ventilation ducts
- Banner elements for leisure and sports facilities

Agriculture

- Linings for transport stalls
- Medicinal baths for horses
- Partitions
- Air scrubbers

Environment

- Biofilters
- Wastewater engineering
- Sewage sludge treatment
- Flood protection structures
- Safety drip pans





Swimming pool construction



Overflow tanks



Spray booths



Sewage sludge treatment



Storage tanks / transport containers



Air scrubbers



Agriculture

SIMONA® Twin-Wall Sheets – Product range



Cross-ribbed SIMONA® Twin-Wall Sheets

Total thickness	Thickness outer skins	Web spacing	Weight	Order number
mm	mm	mm	kg/piece	2,000 x 1,000 mm

SIMONA® PE 100, black

40	6	50 x 50	38.3	010028671
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SIMONA® PE 100 UV, white

40	4	50 x 50	38.3	010032341
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SIMONA® PP-C, grey

40	6	50 x 50	36.6	010028673
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SIMONA® PPs, grey

40	6	50 x 50	36.3	010030171
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Lengthways-ribbed SIMONA® Twin-Wall Sheets

Total thickness	Thickness outer skins	Web spacing	Weight	Order number
mm	mm	mm	kg/piece	3,000 x 1,000 mm

SIMONA® PE 100, black

54	6	108	42.4	010011108
54	6	54	49.6	010011109
58	8	54	61.0	010011110

SIMONA® PP-H AlphaPlus®, grey

54	6	108	40.7	010011104
54	6	54	47.6	010011106
58	8	54	58.6	010011107

SIMONA® PPs, grey

54	6	108	41.7	010013859
54	6	54	51.0	010019358
58	8	54	61.0	010019359

SIMONA® PP-C-UV Twin-Wall Sheet, blue (top)/grey (bottom) and SIMONA® PE FOAM Twin-Wall Sheet, white – available on request.



SIMONA® Flat Connections

In order to simplify the extrusion welding of twin-wall sheets we offer connection profiles (flat connections).

Length	Width	Thickness	Order number
mm	mm	mm	

SIMONA® PE 100 Flat Connections, black

2,000	50	39	010015428
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Stock availability of products:

bold type = available immediately; light-faced type = available on request

Cross-ribbed SIMONA® Corner Elements

Length	Leg length	Total thickness	Thickness outer skins	Web spacing	Order number
mm	mm	mm	mm	mm	

SIMONA® PE 100 Corner Elements, 90°, black

2,000	490	40	6	50 x 50	010030599
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SIMONA® PP-C Corner Elements, 90°, grey

2,000	490	40	6	50 x 50	010030600
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Lengthways-ribbed SIMONA® Corner Elements

Length	Leg length	Total thickness	Thickness outer skins	Web spacing	Order number
mm	mm	mm	mm	mm	

SIMONA® PE 100 Corner Elements, 45°, black

1,500	318	54	6	108	010014259
1,500	318	54	6	54	010014263
1,500	318	58	8	54	010014267
3,000	318	54	6	108	010014261
3,000	318	54	6	54	010014265
3,000	318	58	8	54	010014269

SIMONA® PP-H AlphaPlus® Corner Elements, 45°, grey

1,500	318	54	6	108	010014283
1,500	318	54	6	54	010014287
1,500	318	58	8	54	010014291
3,000	318	54	6	108	010014285
3,000	318	54	6	54	010014289
3,000	318	58	8	54	010014293

Length	Leg length	Total thickness	Thickness outer skins	Web spacing	Order number
mm	mm	mm	mm	mm	

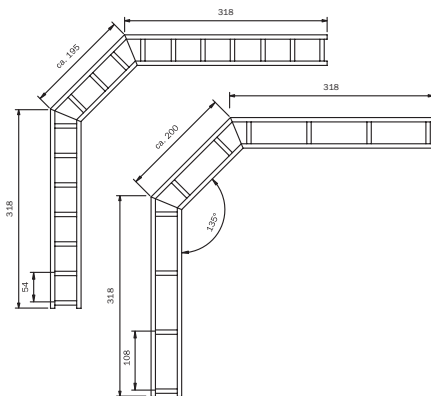
SIMONA® PE 100 Corner Elements, 90°, black

1,500	490	54	6	108	010014271
1,500	490	54	6	54	010014275
1,500	490	58	8	54	010014279
3,000	490	54	6	108	010014273
3,000	490	54	6	54	010014277
3,000	490	58	8	54	010014281

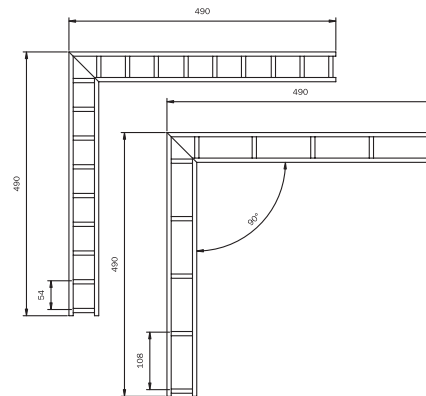
SIMONA® PP-H AlphaPlus® Corner Elements, 90°, grey

1,500	490	54	6	108	010014295
1,500	490	54	6	54	010014299
1,500	490	58	8	54	010014303
3,000	490	54	6	108	010014297
3,000	490	54	6	54	010014301
3,000	490	58	8	54	010014305

Standard Corner Element, 45°



Standard Corner Element, 90°



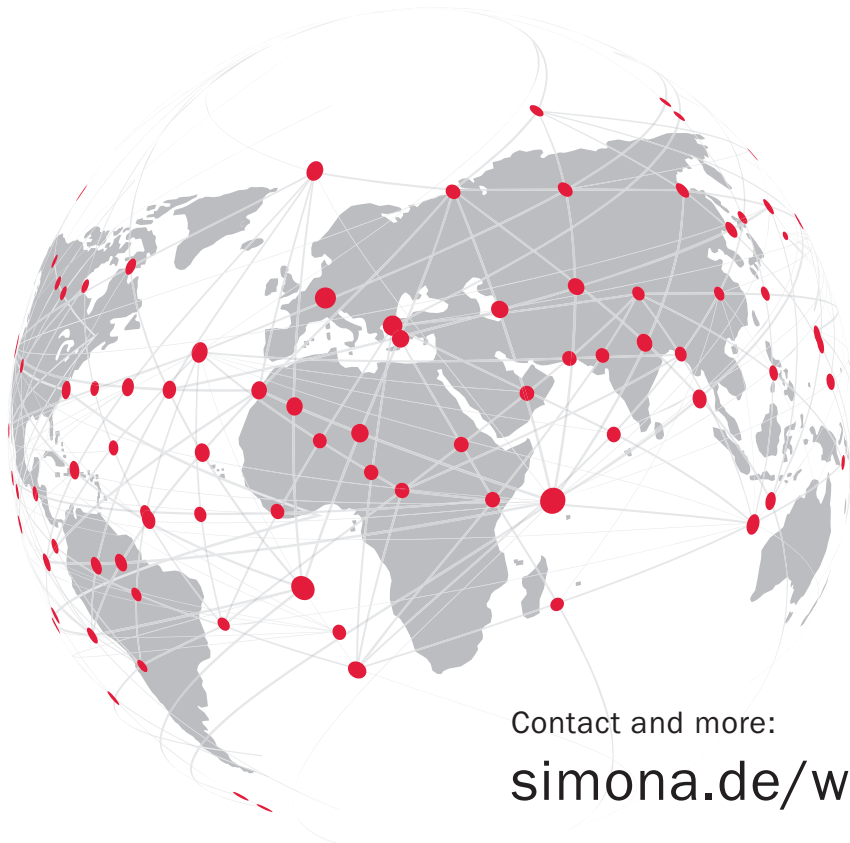
SIMONA® Twin-Wall Sheets – Material specifications

Material specifications

		SIMONA® PE 100 black	SIMONA® PE 100 UV white	SIMONA® PP-H AlphaPlus®	SIMONA® PP-C	SIMONA® PPs
Density, g/cm ³ , DIN EN ISO 1183		0.96	0.96	0.91	0.91	0.95
Impact strength, kJ/m ² , DIN EN ISO 179		no break	no break	no break	no break	no break
Fire behaviour, DIN 4102		normal flammability B2 (Self-assessment without test certificate)	normal flammability B2 (Self-assessment without test certificate)	normal flammability B2 (Self-assessment without test certificate)	normal flammability B2 (Self-assessment without test certificate)	Low flammability B1 (Test certificate available)
Temperature range, °C		-50 to +80	-50 to +80	0 to +100	-20 to +80	0 to +100
Chemical resistance		very good in contact with many acids, alkalis and solvents				
Food conformity	EU	✓	-	✓	-	-
	FDA	-	-	✓	✓	-

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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