

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 length-ways-ribbed twin-wall sheets. The result: a new cross-ribbed twin-wall sheet with reduced wall thicknesses. Both designs within the SIMONA® Twin-Wall Sheet range offer the advantages of high rigidity, low specific weight, and good thermal insulation. What is more, they combine the benefits of simple handling and processing.

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



Cutting



Welding



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



Cross-ribbed SIMONA® Twin-Wall Sheet

- Isotropic core structure
- 50 mm web spacing, 5 mm web thickness
- Easier to process (due to reduction in thickness to 40 mm)
- Easy handling (size: 2,000 x 1,000 mm)
- Excellent long-term properties
- Good weldability



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 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

Miscellaneous

- Alternative product to aluminium twin-wall profiles





Swimming pool construction



Overflow tanks



Outdoor whirlpool



Storage tanks / transport containers

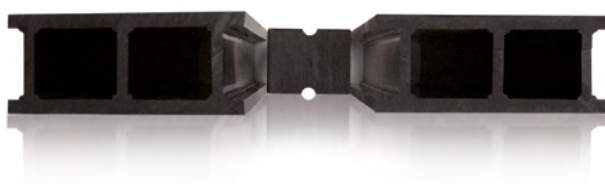


Air scrubbers



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® PP-C, grey

40	6	50 x 50	36.3	010028673
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Stock availability of products:

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

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

Stock availability of products:

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

SIMONA® PP-C-UV-HKP, blue (top)/grey (bottom) and

SIMONA® PE FOAM-HKP, white – available on request.

SIMONA® Flat Connections

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

SIMONA® PE 100 Flat Connections, black

Length	Width	Thickness	Order number
mm	mm	mm	
2,000	50	39	010015428

SIMONA® Corner Elements

SIMONA® PE 100 Corner Elements, 45°, black

Length	Leg length	Total thickness	Thickness outer skins	Web spacing	Order number
mm	mm	mm	mm	mm	
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® PE 100 Corner Elements, 90°, black

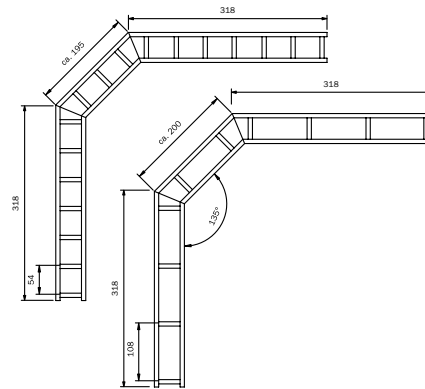
Length	Leg length	Total thickness	Thickness outer skins	Web spacing	Order number
mm	mm	mm	mm	mm	
1,500	490	54	6	108	010014271
1,500	490	54	6	54	010014275
1,500	490	58	8	54	010014279
3,000	490	54	6	108	010014273
3,000	490	54	6	54	010014277
3,000	490	58	8	54	010014281

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

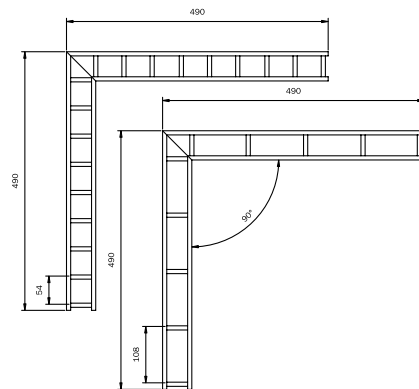
Length	Leg length	Total thickness	Thickness outer skins	Web spacing	Order number
mm	mm	mm	mm	mm	
1,500	318	54	6	108	010014283
1,500	318	54	6	54	010014287
1,500	318	58	8	54	010014291
3,000	318	54	6	108	010014285
3,000	318	54	6	54	010014289
3,000	318	58	8	54	010014293

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

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

i Our Technical Service Center team looks forward to assisting you:
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SIMONA® Twin-Wall Sheets – Material specifications

Material specifications

		SIMONA® PE 100	SIMONA® PP-H AlphaPlus®	SIMONA® PP-C	SIMONA® PPs
Density, g/cm ³ , DIN EN ISO 1183		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
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)	Low flammability B1 (Test certificate available)
Temperature range, °C		-50 to +80	0 to +100	-20 to +80	0 to +100
Chemical resistance		very good in contact with many acids, alkalis and solvents			
Physiologically safe	BfR	✓	✓	✓	-
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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