



SIMONA[®] Twin-Wall Sheets

The efficient solution for strong,
lightweight construction

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



Welding

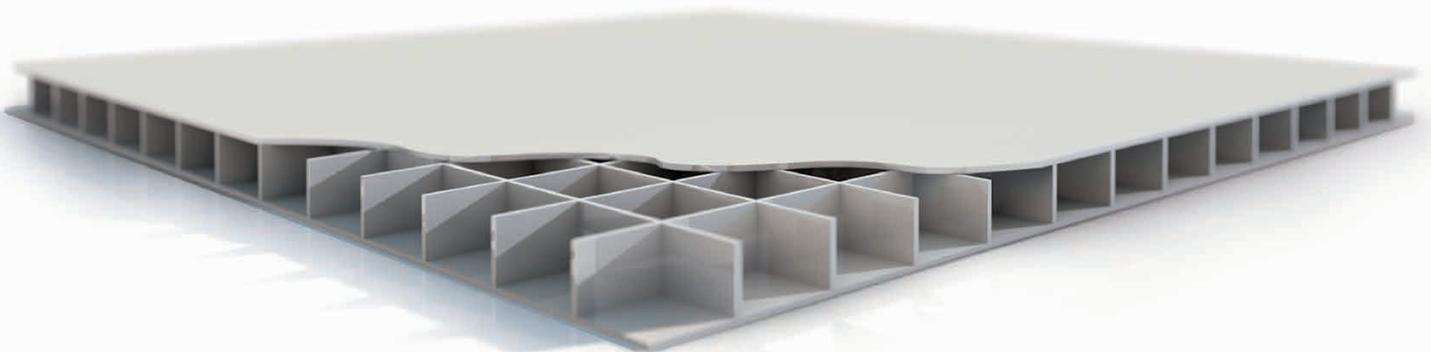


i For further information, please refer to our tech.info “SIMONA® Twin-Wall Sheets”.



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 30 or 40 mm)
- Easy handling (size: 2,000 x 1,000 mm)
- Excellent long-term properties
- Good weldability



i Our Technical Service Center 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

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

| | | | | |
|----|---|---------|------|------------------|
| 30 | 5 | 50 x 50 | 28.0 | 010028672 |
| 40 | 6 | 50 x 50 | 38.3 | 010028671 |

SIMONA® PP-C, grey

| | | | | |
|----|---|---------|------|------------------|
| 30 | 5 | 50 x 50 | 27.0 | 010028674 |
| 40 | 6 | 50 x 50 | 36.3 | 010028673 |

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-HKP, blue (top)/grey (bottom) and SIMONA® PE FOAM-HKP, white – available on request.

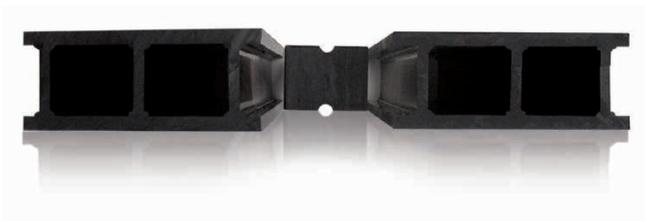
SIMONA® Flat Connections

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

| Length | Width | Thickness | Order number |
|--------|-------|-----------|--------------|
| mm | mm | mm | |

SIMONA® PE 100 Flat Connections, black

| | | | |
|-------|----|----|-----------|
| 2,000 | 50 | 39 | 010015428 |
|-------|----|----|-----------|



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 |
|-------|-----|----|---|---------|------------------|

SIMONA® PP-C Corner Elements, 90°, grey

| | | | | | |
|-------|-----|----|---|---------|------------------|
| 2,000 | 490 | 40 | 6 | 50 x 50 | 010030600 |
|-------|-----|----|---|---------|------------------|

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 | |

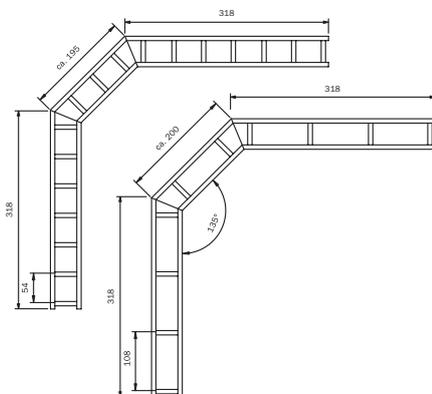
SIMONA® PE 100 Corner Elements, 90°, black

| | | | | | |
|-------|-----|----|---|-----|-----------|
| 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 |

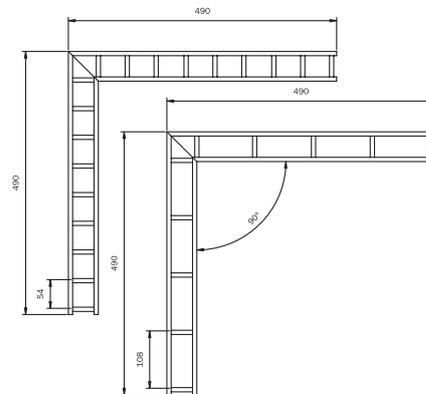
SIMONA® PP-H AlphaPlus® Corner Elements, 90°, grey

| | | | | | |
|-------|-----|----|---|-----|-----------|
| 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 | 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.