Installation Instructions siding.

Façade profiles

No warranty in case of non-compliance

Up-to-date installation instructions and drawings: www.werzalit.com

Version 04/2015
The **chipboard core** consists of processed timber. The only material used is untreated pulp wood in the form of wood shavings, thinning material and round timber from sustainable native forestry. We do not use imported timber, especially from tropical climates.

The **binding agent** used is a thermosetting artificial resin approved for outside use by the building inspection authorities.

As a **timber preservative** we use an ecofriendly boron-based product approved by the building inspection authorities. It does not contain lindane or PCPs.

The **flame-resistant** version uses a blend of boric acid and borax as a fire-proofing coat.

No isocyanates, phosphates or halogens are added.

Paper impregnated with melamine resin is integrally moulded to form a priming coat when making the chipboard core.

A pure water-based acrylate is used as a surface coating. The pigments used are free of poisonous heavy metals (no lead, chromium or cadmium).

Rejects may not be burnt in small-scale incinerators (heating boilers, furnaces, fireplaces) under the German legislation governing small-scale incinerators. There are no restrictions governing its incineration in industrial wood burning plants under 4.BImSchV No.8.2 [German law concerning the protection against harmful effects on the environment].

Rejects fall into Category AII of the German legislation governing waste timber.

As regards the **disposal** of rejects or removed material, it may, as a general rule, be classed as domestic refuse or bulky refuse and taken to the landfill site or waste incineration plant, but please comply with the requirements specified by your local waste disposal company.

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### Technical Specifications

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<td><strong>Values</strong></td>
<td><strong>Unit</strong></td>
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<td><strong>1. Density</strong></td>
<td>800 – 950</td>
<td>kg/m³</td>
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<td><strong>2. Bending strength</strong></td>
<td>40 – 45</td>
<td>N/mm²</td>
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<td><strong>3. Modulus of elasticity</strong></td>
<td>4000 – 6000</td>
<td>N/mm²</td>
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<td><strong>4. Transverse tensile strength, perpendicular to surface</strong></td>
<td>2.0 – 3.0</td>
<td>N/mm²</td>
</tr>
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<td><strong>5. Screw withdrawal resistance</strong></td>
<td>800 – 1300</td>
<td>N</td>
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<td><strong>6. Moisture expansion after immersion in water at 20 °C</strong></td>
<td>0.3 – 0.6</td>
<td>%</td>
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<tr>
<td><strong>after 24 hrs</strong></td>
<td>3.0 – 5.0</td>
<td>%</td>
</tr>
<tr>
<td><strong>7. Moisture content</strong></td>
<td>5 – 10</td>
<td>%</td>
</tr>
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<td>-50 to +70</td>
<td>°C</td>
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<td>+120</td>
<td>°C</td>
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<td><strong>under transient load</strong></td>
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<td></td>
<td></td>
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<tr>
<td><strong>Standard version: B2 = normal flammability</strong></td>
<td></td>
<td></td>
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<tr>
<td><strong>10. Longitudinal deformation due to moisture/thermal load</strong></td>
<td>1 – 3</td>
<td>mm/m</td>
</tr>
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<td><strong>11. Thermal conductivity λ 10</strong></td>
<td>0.20</td>
<td>W/mk</td>
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<td><strong>12. Water vapour permeability</strong></td>
<td>5 – 15</td>
<td>m</td>
</tr>
<tr>
<td><strong>Diffusion-equivalent air layer thickness</strong></td>
<td></td>
<td></td>
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<td><strong>13. Cross-cut test</strong></td>
<td>GT 0A – GT 1A</td>
<td></td>
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<tr>
<td><strong>14. Scratch resistance</strong></td>
<td>0.5 – 1.5</td>
<td>N</td>
</tr>
<tr>
<td><strong>15. Light resistance</strong></td>
<td>Level 8</td>
<td></td>
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<td><strong>16. Chemical resistance</strong></td>
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<td><strong>18. Colour tolerance at measuring geometry 0°/45°, standard illuminant “C”</strong></td>
<td>Δ E &lt; 1</td>
<td></td>
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<tr>
<td><strong>19. Shock resistance</strong></td>
<td>Shock-proof</td>
<td></td>
</tr>
</tbody>
</table>

1) 4 mm particle board screw inserted into hole 3 mm Ø and 10 mm deep  
2) Maximum potential longitudinal expansion with extreme variations in weather  
3) GT 0A is the best and GT 4A the worst rating
Cladding

Profile Dimensions – Calculating Requirements – Guidelines

Calculating the required quantity (Calculation values exclude cutting waste)

<table>
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<th>Technical data</th>
<th>Standard length</th>
<th>Profile width</th>
<th>Profile thickness</th>
<th>Coverage width</th>
<th>Coverage length</th>
<th>Required quantity/m²</th>
<th>Fire protection class</th>
<th>Surface</th>
<th>Weight/m²</th>
<th>Façade screw 3.5 x 30, stainless steel A2 at max. fastening spacing = 625 mm</th>
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<tr>
<td>siding 152</td>
<td>3660 mm</td>
<td>approx. 172 mm</td>
<td>10 mm (tongue), 18 mm (groove)</td>
<td>152 mm (+1/-1 mm)</td>
<td>max. 3660 mm</td>
<td>6.58 linear m</td>
<td>B2* flat-textured, coloured finish</td>
<td>approx. 12.0 kg</td>
<td>11 pcs./m²</td>
<td></td>
</tr>
<tr>
<td>siding 202</td>
<td>3660 mm</td>
<td>approx. 220 mm</td>
<td>10 mm (tongue), 18 mm (groove)</td>
<td>approx. 202 mm (+1/-1 mm)</td>
<td>max. 3660 mm</td>
<td>approx. 5.0 linear m</td>
<td>B2* pearl texture, coloured finish</td>
<td>approx. 12.0 kg</td>
<td>8 pcs./m²</td>
<td></td>
</tr>
</tbody>
</table>

*Standard: normal flammability

Subframe for cladding profiles
When planning the subframe, it is essential to factor in the increased wind suction at the edges of the building walls in accordance with DIN 1055 Part 4.

In these areas, the Werzalit cladding profiles must be fixed at a reduced clearance of max. 300 mm, with additional battens providing support on the base.

DIN specifications here are displayed in simplified form and as a rule of thumb only. The precise data is available in DIN 1055 Part 4 dated March 2006. The dimensions of the building are of course definitive when determining Area A with an increased wind suction load (external pressure coefficients).

Example:
Windward side e = 15 m
Cladding side d = 8 m
Area with increased wind suction A = e/5 = 3 m
Batten distance for Area A max. 300 mm
“Standard area” B = d-e/5 = 5 m
Batten distance for Area B max. 625 mm

Should 2 opposing wind directions (e.g. West/East) prevail, Area A will of course also have to be determined for the other side of the cladding wall. In our example, Area B would then be only 2 m wide.

Fire prevention
Cladding profiles are building materials which have to meet the requirements laid down in the German building regulations (LBO) in respect of their behaviour in fire.

In the case of buildings up to 22 m high (to comply with UK Building Regulations up to 18 m high) it is generally permissible to use cladding profiles of low flammability or normal flammability assigned to construction materials classes B1 and B2 respectively.

More detailed information can be obtained from your local building or fire prevention authority.
Cladding

Installation of façade profiles siding 152 and siding 202

A Subframe
1. siding 152/siding 202 façade profile
2. Cladding screw 3.5 x 30, stainless steel A2
3. Support batten 30 x 50 mm, distance 625 mm max.
4. Joint with 2 screws 4 x 60, stainless steel A2
5. Counter batten at least 40 x 60 mm
6. Wall plug and screw approved by building inspection authorities
7. Double-thickness insulating layer, compression-proof

B Fixing clearances
X = 3 supports or more max. 625 mm
X = 2 supports only max. 300 mm
Max. overhang at sides when laid freely (not interconnected) 100 mm

C Means of fastening
Use only Werzalit cladding screws 3.5 x 30, stainless steel A2. Always place screws in the centre of the punched holes.

D Shiplap configuration
Butt joints must be worked in a shiplap configuration, min. offset 675 mm. Do not lay the butt on a support batten.

E Butt joint
Allowance must be made for an expansion joint of 6 mm at the overlaps designed in the manufacturing process.
1. siding 152/siding 202 façade profile
2. Overlap
3. Rear ventilation gap, at least 20 mm and max. 50 mm
**A** Start of installation at base
1. siding 152/siding 202 façade profile
2. Starter profile P
3. Ventilation profile
4. Continuous ventilation opening

**Recommendation:** The wood sub-framework is better protected against splashing water with a max. 20 mm projection of the starting profile P. Recommendation according to the Technical Guidelines for Carpentry: Profile spacing of 300 mm to smooth floors, 150 mm to a gravel layer and approx. 20 mm to a metal grate. Avoid designs that allow moisture build-up.

**B** Connection to roof
1. siding 152/siding 202 façade profile
2. Ventilation profile
3. Continuous vent hole

**C - D** Internal corner
1. siding 152/siding 202 façade profile
2. Joint tape
3. Aluminium internal corner profile (alternative)

**E - F** External corner
1. siding 152/siding 202 façade profile
2. External corner C, aluminium (two-part)
3. Aluminium external corner profile (alternative)
4. Cylinder sheet screw 3,9 x 16, stainless steel A2

The external corner C consists of lower assembly and cover profile.
The cover profile will be clipped on and saved with cylinder sheet screws in the higher area of the profile. Pre-drilling ø 3,2 mm.

**G** Side connection in recess
1. siding 152/siding 202 façade profile
2. Cover trim 30/20, aluminium
3. Seal

**H** Side connection
1. siding 152/siding 202 façade profile
2. Aluminium external corner profile, alternative external corner C, aluminium
3. Cover trim 30/20, aluminium
4. Seal
Connection at window lintel

1. siding 152/siding 202 façade profile
2. Connecting profile F, aluminium
3. Z profile 1, aluminium
4. Plastic external corner profile 1 (cut off lower piece)
5. Plastic ventilation profile
6. Lining panel (alternative)
7. Continuous ventilation opening

Connecting profiles F are mitred at the point where the reveal meets the lintel.

The Z profile 1 covers the vertical connecting profiles F.

Connection at window parapet

1. siding 152/siding 202 façade profile
2. Plastic ventilation profile
3. Z profile 2, aluminium
4. External window sill
5. Continuous vent hole

Connection at window reveal

1. siding 152/siding 202 façade profile
2. Connecting profile F, aluminium
3. Seal, e.g. using Compriband
4. Aluminium external corner profile
5. External window sill
Arguments in favour of non-bearing, curtain-type cladding for external walls ventilated at the rear
• Conservation of energy
• Weather-resisting barrier
• Style and presentation
• Added value to building

Installation process
The Selecta cladding profiles must be stored level in their packaging in a dry place before installation.

Machine sawing
Fine-cut tungsten carbide tipped saw blades, (tooth pitch approx. 10–15 mm), tooth formation: alternate top bevel or hollow tooth, flat top.

Handsawing
A well-sharpened saw with small set teeth is adequate.

Fixing the cladding profiles
Use only Werzalit cladding screws 3.5 x 30, stainless steel A2. The profiles are affixed in the centre through the pre-punched holes. The screws may only be screwed in until the screw head rests against the surface.

Visible fastening
Only with Werzalit universal screws H 6 x 45, stainless steel A2.
Drill hole ø 9 mm, (due to possible longitudinal deformation of cladding profiles)

Fastening of all connecting profiles
Use only Werzalit cladding screws 3.5 x 30, stainless steel A2.

NB: Load-bearing structures, such as outside awning blinds, trellises, etc., must not be fastened directly to the cladding or its subframe. A separate subframe must be provided.

Expansion
The linear deformation of the cladding profiles is approx. 1–3 mm/m, depending on humidity and temperature. Allowance must be made for expansion joints of 6 mm and 10 mm respectively on profile connections.

Sealing the cut edges
Cut edges must be sealed pore-free using Werzalit edge sealant.
Exception: Cut edges with sufficient

Subframe
The cladding profiles are generally affixed to a timber subframe. Some of the standard procedures regarding this framework are set out below:

a) The wood must be classified as S10 (or MS10) quality in accordance with DIN 4074.
b) The individual cross section must be selected in accordance with DIN 1052, Part 1.
c) The timber must be treated in conformity with DIN 68800, wood preservation in building construction.
d) The subframe must be affixed with wall plugs and screws approved by the building inspection authorities as specified by the manufacturer.
e) The support battens must be affixed to the counter battens with at least two wood screws, stainless steel A2, arranged diagonally at each crossover point.
f) The subframe must be aligned flush and plumb. Dimensional tolerances should be taken from DIN 18202 Part 2 and Part 4.

Insulation
The insulation must be dimensioned in conformity with the new German Energy Conservation Act (EnEV) introduced in December 2004. Appropriate methods must be used to fit the insulating material, e.g. insulation anchors, as specified by the manufacturer. The insulation must be laid to create a windproof seal to prevent cold air from entering behind. We therefore recommend double-thickness cladding with lapped butts. The insulation must fit tight to the wall.

Rear ventilation
Rear ventilation gap, min. 20 mm. The rear ventilation shaft may not be constricted by battens or otherwise periodically. The ventilation openings and vent holes must have a continuous minimum width of 20 mm and a maximum width of 50 mm.

If you have any further questions, our Building Service department would be pleased to advise you.

Subject to modifications as dictated by technical advances.