



Declaration of Performance

DoP Nr. 0793-CPR-8.1-21



1. Unique Identification code of the product-type: **Ornimat, Decoboard, Puro Plus and Colormat**
2. Type number: **KH 5,5, KH 7**
3. Intended use or uses of the construction product: **Wall cladding kit**
4. Manufacturer: **SVK nv, Aerschotstraat 114, B-9100 Sint-Niklaas, BELGIUM**
5. Authorised representative: -
6. System or systems of assessment and verification of constancy of performance: **System 2+**
7. Harmonised Standard: -
8. European evaluation document: **ETAG 034-1**
European Technical Assessment: **ETA-14/0284**
Technical Assessment Body: **UBAtc**
Notified Body: **0793 – Güteschutz Beton**
9. Declared Performance:

Mechanical resistance and stability (BWR 1)

No performance assessed

Safety in case of fire (BWR 2)

Essential characteristic	Performance
Reaction to fire	The cladding kit has been classified: - Ornimat, Decoboard: A2-s1, d0 - Puro Plus: A2-s1, d0 - Colormat: A2-s1, d0
Reaction to fire on rear side	Reaction to fire on the rear side has not been assessed
Fire resistance	No performance assessed

Hygiene, health and the environment (BWR 3)

Essential characteristic	Performance
Watertightness of joints	No performance assessed
Water permeability	No performance assessed
Water vapour permeability	No performance assessed
Drainability	No Drainability problems have been revealed from the study of the technical drawings
Release of dangerous substances	The product/kit shall comply with all relevant European and national provisions applicable for the uses for which it is brought to the market. The attention of the ETA-holder is drawn on the fact that for other uses or other Member States of destination there may be other requirements, which would have to be respected. For dangerous

	substances contained in the product but not covered by the ETA, the NPD option (no performance determined) is applicable. <u>Used wood:</u> The use of used wood is not foreseen. <u>Biocides:</u> If wood treated with wood preservatives is used, a marking "PT"(treated with wood preservatives) according EN 13986 is foreseen. <u>Flame retardant/fire retardant:</u> The use of flame retardant is not foreseen. <u>Formaldehyde:</u> The use of materials containing formaldehyde is not foreseen. <u>Pentachlorophenol:</u> The use of materials containing pentachlorophenol is not foreseen. <u>Man-made mineral fibres:</u> The use of carcinogen man made mineral fibres is not foreseen. <u>Ceramic fibres:</u> The use of ceramic fibres is not foreseen. <u>Cadmium:</u> The use of materials containing cadmium is not foreseen.
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Safety in Use (BWR 4)

Essential characteristic	Performance
Wind load resistance	The assessment is based on data from the wind suction and mechanical tests. The most critical case to be tested for wind load resistance is the largest panel for which the manufacturers' manual states that it can be affixed using 4 screws, as the screws have a lower resistance to pull-out as the undercut panels. This corresponds to a panel measuring 640 mm x 640 mm, mounted onto wooden rafters. The characteristic wind resistance is derived from the pull-out or pull-through resistance of the fixings. The results of the wind suction test were higher than the pull-out or pull-through resistance of the fixings, by a factor 1,45 to 2,85.
Wind suction	See Annex 3.4.2
Mechanical resistance	See Annex 3.4.3
Impact resistance	See Annex 3.4.5
Resistance to seismic actions	See Annex 3.4.6
Hygrothermal behaviour	See Annex 3.4.7

Protection against noise (BWR 5)

No performance assessed

Energy economy and heat retention (BWR 6)

No performance assessed

Sustainable use of natural resources (BWR 7)

No performance assessed

Aspects of durability and serviceability

Essential characteristic	Performance
Density	The density has been determined in accordance with EN 12467. The density is (oven dry): - Ornimat, Decoboard and Puro Plus: $\geq 1.700 \text{ kg/m}^3$ - Colormat: $\geq 1.600 \text{ kg/m}^3$
Minimum modulus of rupture	The minimum modulus of rupture has been determined in accordance with EN 12467. The minimum modulus of rupture is $\geq 24 \text{ MPa}$ (class 5) in wet condition
Pulsating load (for undercut fixing)	The resistance before and after pulsating loads, as well as the displacements recorded during this test for the Ornimat, Decoboard and Puro Plus panels, have been cited in paragraph 3.4.3.2.
Dimensional stability of external cladding element	As the panels conform to EN 12467, dimensional stability was favourably assessed.
Immersion in water	As the panels conform to EN 12467 class A, immersion in water was favourably assessed.
Freeze-thaw	As the panels conform to EN 12467 class A, resistance to freeze-thaw cycles was favourably assessed.
Chemical and biological attack	The panel material is not known to be of subject to specific chemical or biological attack.
Corrosion	All fixings are made of stainless steel of grade A2 (grade 1.4301 in accordance with EN 10088-1), which has excellent resistance to atmospheric corrosion, except in severe industrial and marine environments.
UV radiation	Only mechanical deterioration is considered; the decorative properties are not considered. The panels are resistant to UV.

10. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 9. This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

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Christian Schmidt

Managing Director

Engelskirchen, 10.10.2019

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Dipl.-Ing. Georg Miebach

Product Manager

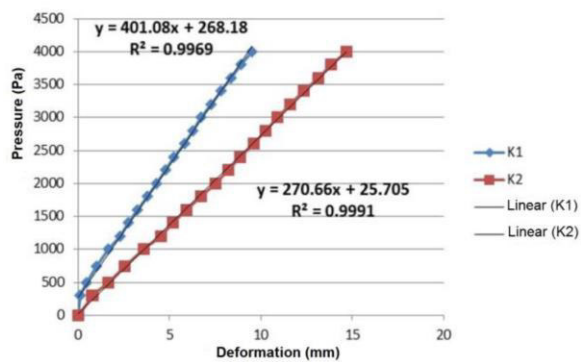
3.4.2 Wind suction

3.4.2.1 Orimat, Decoboard and Puro Plus panels

Photograph of the wind suction assembly



Graph deformation (horizontal axis)/pressure (vertical axis)



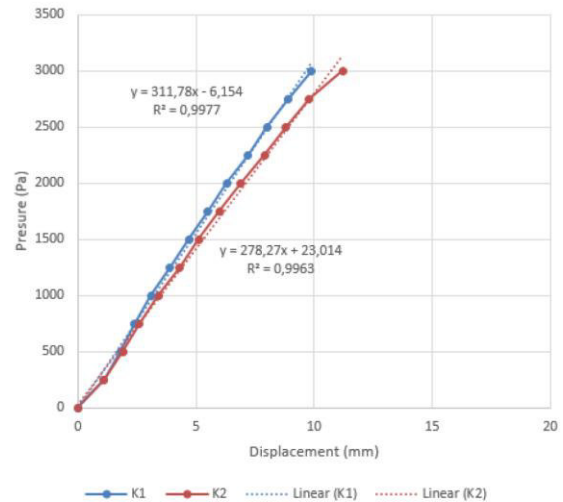
The load at which the test specimen fails is 4350 Pa, at which moment a panel breaks in a corner.

The test element included an EPDM profile between the substructure and the cladding element.

The deflection was measured up to a differential pressure of 4000 Pa. The maximum deflection was 9,5 mm (K1) and 14,7 mm (K2). After returning to a differential pressure of 0 Pa the deflection returned to less than 0,24 mm (K1) and less than 1,08 mm (K2).

3.4.2.2 Colormat panels

Curves "pressure - displacement"



The load at which the test specimen fails is 4867 Pa, at which moment a panel breaks in all four corners.

The test element did not include an EPDM profile between the substructure and the cladding element.

The deflection was measured up to a differential pressure of 3000 Pa. The maximum deflection was 9,9 mm (K1) and 11,2 mm (K2). After returning to a differential pressure of 0 Pa the deflection returned to less than 2,1 mm (K1) and less than 2,2 mm (K2).

3.4.3 Mechanical resistance

3.4.3.1 Family A (screws and rivets)

Table 1 – Mechanical resistance of fixings - screws

Mounting	Ring diameter (mm)	Mean (N)	Characteristic value (N)
Ornimat, Decoboard, Puro Plus			
Corner	180	296	270,4
Corner	270	186	153,4
Corner	350	154	137,7
Edge	180	1178	1000,3
Edge	270	804	687,5
Edge	350	743	617,2
Centre	180	2451	2322,9
Centre	270	1931	1691,0
Centre	350	1546	1361,9
Colomat			
Corner	180	834	808
Corner	270	635	591
Edge	180	1369	1066
Edge	270	1033	993
Centre	180	1820	1715
Centre	270	1454	1277

Table 2 – Mechanical resistance of fixings - rivets

Mounting	Ring diameter (mm)	Mean (N)	Characteristic value (N)
Centre	180	2508	2198,0

The mean value for rivets and screws are comparable, therefore the other fixing positions and ring diameters are not tested.

3.4.3.2 Family B (undercut screws)

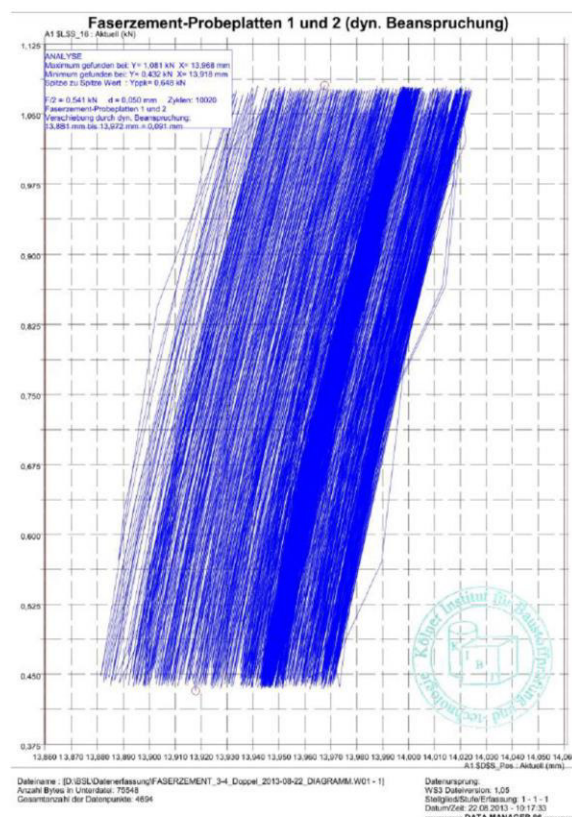
3.4.3.2.1 Ornimat, Decoboard and Puro Plus panels

For all supporting ring diameters, the mode of rupture is pull-out of the test specimen (cone rupture).

Table 3 – Mechanical resistance of fixings - screws

Mounting	Ring diameter (mm)	Mean (N)	Characteristic value (N)
Axial load			
Centre	135	1293	1136
Centre	300	1212	1071
Centre	400	1151	1068
Shear load			
Centre	–	4772	4385
Combined load (30 ° angle)			
Centre	400 mm	2114	1939
Combined load (60 ° angle)			
Centre	400 mm	1372	1144
Axial load after pulsating load			
Centre	135	1248	1097

The displacements during the pulsating load test have been continuously recorded.



The displacement before and after the pulsating loading is 0,091 mm.

3.4.3.2.2 Colomat panels

For all supporting ring diameters, the mode of rupture is pull-out of the test specimen (cone rupture or delamination).

Table 3 – Mechanical resistance of fixings - screws

Axial load			
Centre	135	1547	1249
Shear load			
Centre	–	4275	3806
Combined load (45 ° angle)			
Centre	200 mm	1481	882
Combined load (60 ° angle)			
Centre	200 mm	2356	1612
Axial load after pulsating load			
Centre	135	1598	1469

The displacements during the pulsating load test have not been recorded.

3.4.4 Resistance to horizontal point loads

The resistance to horizontal point loads has not been assessed.

3.4.5 Impact resistance – shatter properties

The categories given in the following table correspond to the degrees of exposure in use. They do not include an allowance for acts of vandalism.

Table 4 – Definition of use categories in accordance with ETAG 034-1

Use category	Description
I	A zone readily accessible at ground level to the public and vulnerable to hard body impacts but not subjected to abnormally rough use.
II	A zone liable to impacts from thrown or kicked objects, but in public locations where the height of the kit will limit the size of the impact; or at lower levels where access to the building is primarily to those with some incentive to exercise care.
III	A zone not likely to be damaged by normal impacts caused by people or by thrown or kicked objects.
IV	A zone out of reach from ground level

Based upon the obtained test results, the kit is assessed as being in:

- Ornimat, Decoboard and Puro Plus panels: category III;
- Colormat panels: category III

It has been established that the cladding element does not present sharp or cutting edges and its surfaces do not cause bodily injury, to the occupants or people nearby.

3.4.6 Resistance to seismic actions

European and/or National regulation shall apply.

3.4.7 Hygrothermal behaviour

As the panels conform to EN 12467 class A, hygrothermal behaviour was favourably assessed and the panel is known not to be subject to hygrothermal variation, such as:

- deterioration such as cracking or delamination of the cladding element that allows water penetration to the insulation
- detachment of the cladding element
- Irreversible deformation