

SINTEF Building and Infrastructure confirms that

Stonepanel® and Stonepanel® Sky

has been found to be fit for use in Norway and to meet the provisions regarding product documentation given in the regulation relating to the marketing of products for construction works (DOK) and regulations on technical requirements for building works (TEK), with the properties, fields of application and conditions for use as stated in this document

1. Holder of the approval

CUPA DANMARK A/S

Birkholmvej 4, Østød

4320 Lejre

DANMARK

www.cupadanmark.com

2. Product description

Stonepanel®, Fig. 1, and Stonepanel® Sky, Fig. 2, are panels made of natural stone bonded to a cement mortar base which is reinforced with a glassfibre mesh.

Stonepanel® Sky has, unlike Stonepanel®, an incorporated mechanical anchor of stainless steel 2,6 mm loop wire embedded into the concrete base for mechanical fixing to the base.

The panels are produced in 10 different versions by means of different rocks and dimensions as listed Table 1.

3. Fields of application

Stonepanel® and Stonepanel® Sky can be used as decorative cladding system on solid walls made of concrete, concrete sandwich elements, insulated light weight concrete masonry or brick masonry. The cladding system may be used both on new and existing buildings.

All the different panels can be used both outdoor and indoor.

4. Properties

Load-carrying capacity

The anchor embedded in the concrete base of Stonepanel® Sky has a calculated pull-out design capacity of 0,64 kN.

Properties related to fire

Reaction to fire has not been determined.

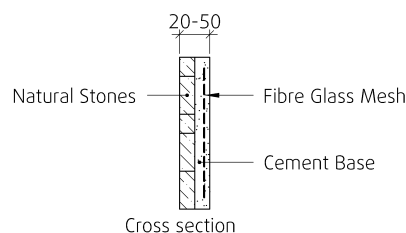
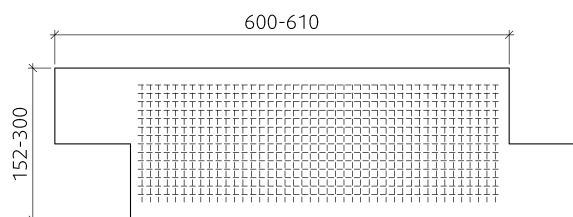
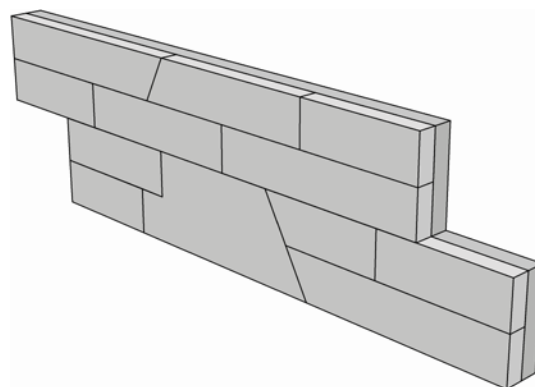


Fig. 1
Front and rear view of Stonepanel®, and a cross section of the panel

Durability

Freeze-thaw tests show that Stonepanel® and Stonepanel® Sky have sufficient frost resistance for outdoor exposure in Norway.

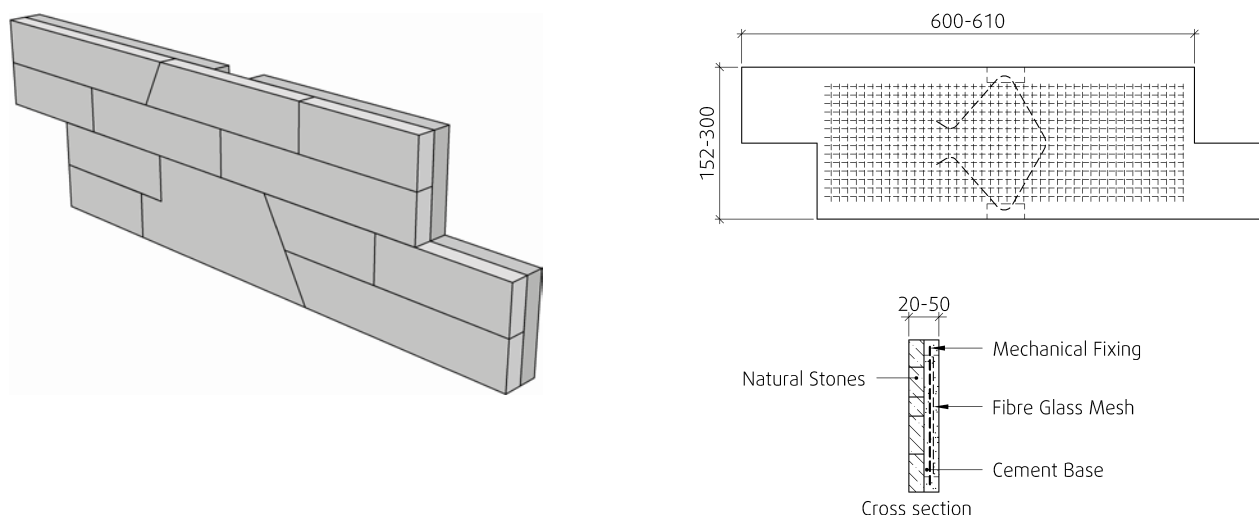


Fig. 2
Front and rear view of Stonepanel® Sky, and a cross section of the panel

Table 1
Stonepanel® and Stonepanel® Sky. Dimensions, tolerances and weight.

Product name	Rock type*	Size of the panels (l x w in mm)	Weight [kg]	Thickness of panels (mm)
Stonepanel® Orient Gold	Marble	610 x 152	7	30 - 40
Stonepanel® Multicolor	Slate	610 x 152	7	30 - 40
Stonepanel® Granit	Granitic gneiss	600 x 200	11.5	40 - 50
Stonepanel® Norway Rustic	Gneiss	600 x 200	11.5	40 - 50
Stonepanel® Black Slate Thin	Schist	610 x 152	7.5	20 - 45
Stonepanel® Black Slate	Schist	610 x 152	7	30 - 40
Stonepanel® Black Slate Norway	Schist	600 x 200	7	30 - 40
Stonepanel® Nordic	Calcareous rock (03) + Gneiss (43)	600x200	11.5	40 - 50
Stonepanel® Norway Rustic XXL	Gneiss	600x300	15,5	40 - 50
Stonepanel® Granit XXL	Granitic gneis	600x300	14,5	40 - 50

* Based on Petrographic analysis

5. Environmental aspects

Substances hazardous to health and environment

The product contains no hazardous substances with priority in quantities that pose any increased risk for human health and environment. Chemicals with priority include CMR, PBT or vPvB substances.

Effect on indoor environment

The products are not regarded as emitting any particles, gases or radiation that have a perceptible impact on the indoor climate, or that have any significant impact on health.

Waste treatment/recycling

Stonepanel® and Stonepanel® Sky shall be sorted as concrete based products at the building/demolition site. The product shall be delivered to an authorized waste treatment plant where it can be material-recovered.

Environmental declaration

No environmental declaration has been worked out for the product.

6. Special conditions for use and installation

Installation

Stonepanel® and Stonepanel® Sky have to be mounted to the substructure by means of a mortar adhesive tested according to EN 1348:1997. The mortar shall have documented sufficient resistance against freezing and thawing, and have an adhesion strength to the current substructure of at least 1,2 N/mm² after heat ageing.

As a security precaution to avoid falling panels in the case of mortar failure, all panels installed over 2 m from the ground (both outdoors and indoors) shall be mechanically fixed by the anchor in addition to mortar adhesive.

Mechanical fixing to the substructure

All parts of the mechanical fixing of the panels between the mechanical anchor embedded into the cement mortar base and the wall, must be made of stainless steel and have a minimum pull out design capacity of 1,0 kN.

Heavy objects like large signboards etc. must be fixed directly to the substructure.

Wind load resistance

Wind load resistance shall be calculated and designed according to EN 1991-1-4, including the Norwegian National amendment.

Substructure

The substructure (concrete, concrete sandwich elements, insulated light weight concrete masonry or brick masonry) must be in accordance with existing regulations.

Substructures with a rough surface must be leveled to ensure that the mortar gets full contact during installation.

Stonepanel® and Stonepanel® Sky shall not be installed on a substrate of brick masonry with a lime plastered surface.

7. Factory production control

The product is produced by Chuang Yi Stone CO. LTD, Yi County, Baoding, China.

The holder of the approval is responsible for the factory production control in order to ensure that the product is produced in accordance with the preconditions applying to this approval.

The manufacturing of the product is subject to continuous surveillance of the factory production control in accordance with the contract regarding SINTEF Technical Approval.

8. Basis for the approval

This approval is based on verification of product properties from type testing, documented in the following reports:

- SINTEF Building and Infrastructure. Report 3D0625.03/90053, dated 2009-04-20 (testing of stone material)
- SINTEF Building and Infrastructure. Report 3D0625.03/90054, dated 2009-11-04 (testing of panels)
- SINTEF Building and Infrastructure. Report 3D0373.43, dated 2011-05-20 (durability and water absorption)

9. Marking

Stonepanel® and Stonepanel® Sky shall be marked on the packaging with the logo of Stonepanel®, and details from the manufacturing process (reference number, size, number of pieces per bundle and weight per unit). The approval mark for SINTEF Technical Approval No. 2563 may also be used.



Approval mark

10. Liability

The holder/manufacturer has sole product responsibility according to existing law. Claims resulting from the use of the product cannot be brought against SINTEF beyond the provisions of Norwegian Standard NS 8402

for SINTEF Building and Infrastructure

Marius Kvalvik
Approval Manager