SINTEF Technical Approval

TG 20457

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Valid until 01.06.2026

Provided listed on
www.sintefcertification.no

SINTEF confirms that

Weather Defence wind barrier

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

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2. Product description

Weather Defence wind barrier, in the following called Weather Defence, is a plaster board intended for use as a wind barrier. The board is a part of a wind barrier system which also includes SIGA Wigluv sealing tape and SINIAT WAB 41 screws.

The boards are made of a water repellent gypsum core reinforced with glassfibre and coated with synthetic non-woven liners.

The boards are 9.5 mm thick, and they are delivered in standard widths of 1200 mm and standard lengths from 2000 mm up to 3000 mm. Measures and tolerances are stated in Table 1. Fig.1 shows a principle diagram of the wind barrier system.

SIGA Wigluv sealing tape is a single sided tape with an acrylate adhesive.

Table 1
Dimensions and tolerances for Weather Defence according to EN 15283-1

Property	Value	Tolerance	Unit
Thickness	9.5	±.0.7	mm
Width	1200	+0/-4	mm
Length	2000 - 3000	+0/-5	mm
Density	895	± 50	kg/m³

3. Fields of application

The wind barriers system Weather Defence with SIGA Wigluv sealing tape and SINIAT WAB 41 screws can be used as a wind barrier on walls with frames of timber or steel with external ventilated cladding. Weather Defence can also be used in a conventional embodiment with timber laths on vertical board joints with external ventilated cladding.

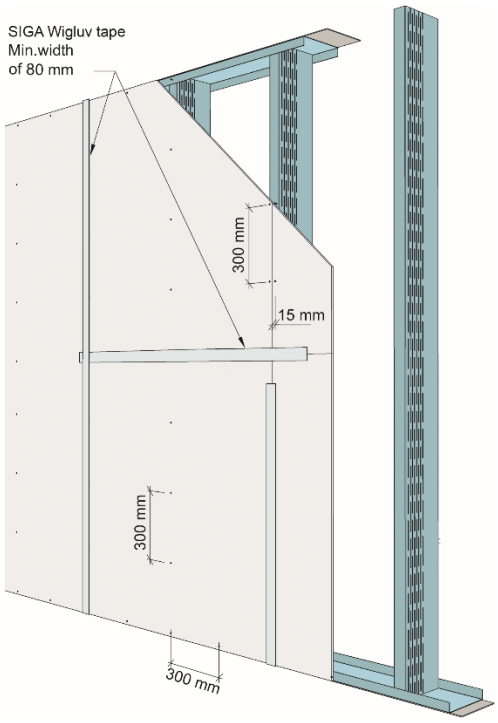

Fig. 1
Weather Defence mounted with SIGA Wigluv sealing tape on studs of sheet metal profiles.

The product can be used as wind barrier on walls in hazard class 1-6 and fire class 1, 2 and 3.

4. Properties

Product properties for Weather Defence and the wind barrier system are given in Table 2.

Load-carrying capacity
The wind barrier board alone cannot be considered to achieve sufficient wind bracing.

Properties related to fire
Weather Defence has a reaction to fire class A1 according to EN 13501-1.

Table 2
Product characteristics for Weather Defence

Property		Test method EN	DoP [1]	Control limit [2]	Unit
Air tightness material		12114	-	≤ 0.10	m^3/m^2h50Pa
Air tightness construction, joints sealed with tape		12114	-	≤ 0.10 [3]	m^3/m^2h50Pa
Rain tightness construction, joints sealed with tape		12865	-	600 [3]	Pa
Water vapour resistance	μ s_d-value	ISO 12572	9.5 ±10 % -	- ≤ 0.099 [4]	- m
Flexural strength	Longitudinal Transversal	15283-1	≥ 408 ≥ 160	≥ 408 [3] ≥ 160 [3]	N
Shear strength		15283-1 / 520	≥ 500	≥ 500	N
Water absorption		520	-	H1, ≤ 5 %	-
Resistance to wind suction		SP method	-	No visible deformations up to 2100 Pa [3]	-
Thermal conductivity		ISO 10456 / 15283-1	0.25	≤ 0.25	W/mK

[1] Declared value in DoP (Declaration of Performance)
[2] Control limit in connection to production control at the manufacturer and annual control at SINTEF
[3] Result from type testing
[4] Calculated from μ-value for a 9.5 mm board

Durability
The durability for wind barrier system Weather Defence with SIGA Wigluv sealing tape and SINIAT WAB 41 screws is considered to be satisfactory based on laboratory testing before- and after accelerated artificial climate ageing. The wind barrier system has been exposed for accelerated artificial ageing in 4 weeks in climate simulator according to NT Build 495. The durability for SIGA Wigluv's adhesion properties to the wind barrier board is determined based on accelerated artificial ageing 2 weeks in climate simulator followed by 12 weeks of heat ageing according to EN 1296.

Local conditions on the site affect the actual climate stress, which in turn depends on the amount of driving rain. Experience shows that heavy rain showers, and gusts of wind, pose a great danger of water intrusion and damage to the wind barrier system. Therefore, it is generally recommended to install exterior cladding as soon as possible after the wind barrier has been installed.

In places with a low driving rain load (less than 400 mm of driving rain per year), it is considered that the wind barrier system can be uncovered for up to one year before external cladding is installed. It is up to the contractor to assess the driving rain load, and local conditions, in each individual construction project, see also Byggforskserien (SINTEF Building Research Design Guides) 451,031 *Klimadata for dimensjonering mot regnpåkjenning* (Climate data for dimensioning of rain stress).

Air tightness
The airtightness of the wind barrier system makes it possible to fulfil any requirements regarding airtightness (n_{50}) given in the building regulations and in the Norwegian passive house standards before the vapour barrier is mounted.

5. Environmental aspects

Substances hazardous to health and environment
Weather Defence 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.

Waste treatment/recycling
Weather Defence shall be sorted as gypsum. The product shall be delivered to an authorized waste treatment plant for material recycling.

Environmental declaration
An environmental declaration (EPD) has been worked out according to EN 15804 for Weather Defence. For complete documentation see EPD no. 8-1199:2017, www.inies.fr

6. Special conditions for use and installation

Design considerations
The boards are attached to a timber frame or sheet metal profiles. The boards must only be used in such a way that they are protected by a rain shield in the finished structure.

Installation
Weather Defence is installed on studs with maximum centre distance c/c 600 mm. The boards are installed on a frame with screws of type SINIAT WAB 41 at intervals of maximum 300 mm in all board joints and in the middle section of the boards. The screw heads must be flush with the surface of the board. The distance from the screws to the edge of the boards must be at least 10 mm and at least 15 mm from edges where the gypsum core is exposed. For contact with base, windows, doors, roof, and bushings, see relevant instructions in Byggforskserien. A silicone sealant shall be used in junctions between Weather Defence and other framing materials.

In general, it is recommended to cover the wind barrier with an external cladding as soon as possible. However, it is considered that the wind barrier system can remain uncovered, as indicated in clause 4 "Properties", provided that the building is not subjected to large amounts of driving rain. It is also a prerequisite that all joints are protected with tape and that all board edges (for instance along the bottom, sides and top of the wall, and around wall penetrations) are protected against rain.

Screws
SINIAT WAB 41 screws with length of at least 42 mm must be used when fixing in wood. For steel studs, the screws must have a length of at least 32 mm.

Sealing of joints
SIGA Wigluv sealing tape, with a width of at least 50 mm, must be used. Horizontal joints must be sealed with two tape strips where the upper tape strip overlaps the lower tape strip with 25 mm before the vertical joints are sealed. The surface of the boards must be dust-free and dry before the tape is applied. The manufacturer's instructions must be followed.

Transport and storage
The boards shall be covered during transport and stored on a levelled support in dry conditions.

7. Factory production control

Weather Defence is produced by Siniat Ottmarsheim, Zone Industrielle, F-68490 Ottmarsheim, France.

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

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

Siniat Ottmarsheim has a quality system certified according to EN ISO 9001 by Lloyds Register, certificate 0025073, and an environmental management system certificated according to EN ISO 14001 by Lloyds Register, certificate no 0025072.

8. Basis for the approval

The evaluation of Weather Defence is based on reports owned by the holder of the approval.

9. Marking

Weather Defence is marked with product name, manufacturer and manufacturing time.

Weather Defence is CE-marked in accordance with EN 15283-1.

The approval mark for SINTEF Technical Approval TG 20457 may also be used.

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

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