

SINTEF Technical Approval

TG 2006

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SINTEF confirms that

Huntonit Sutak

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

Byggma ASA
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2. Product description

Huntonit Sutak are 3.2 mm thick hard fibreboards used as roofing underlays. Huntonit Sutak Standard is either asphalt-impregnated on the rough side or impregnated with wax through the entire board. Huntonit Sutak Plan is wax-impregnated on the plain smooth side.

The product is traded in Denmark as "Huntonit Undertag".

The clips used for installing Huntonit Sutak are manufactured by warm galvanized steel.

Table 1
 Standard formats for Huntonit Sutak Standard and Huntonit Sutak Plan

Property	Type	Test method	Value	Tolerance	Unit
Thickness	Standard	EN 324-1	3,2	± 0,3	mm
	Plan				
Density	Standard	EN 323	> 900	-	kg/m ³
	Plan				
Width	Standard	EN 324-1	1240	± 2mm/m	mm
	Plan		1250 1600		
Length	Standard	EN 324-1	1600	± 2mm/m	mm
	Plan		2100 2450		
Grammage	Standard	-	2,9	± 0,4	kg/m ²
	Plan				

3. Fields of application

Huntonit Sutak is intended to use as roofing underlay in sloped timber roofs with roofing tiles, steel sheets or similar positioned on counter battens and battens. The product fulfils requirements as vapour open roofing underlay. In thermal insulated roofs a separate wind barrier layer needs to be used.

Huntonit Sutak can be used as roofing underlayer on roofs in buildings in hazard class 1-6 and fire class 1, 2 and 3.

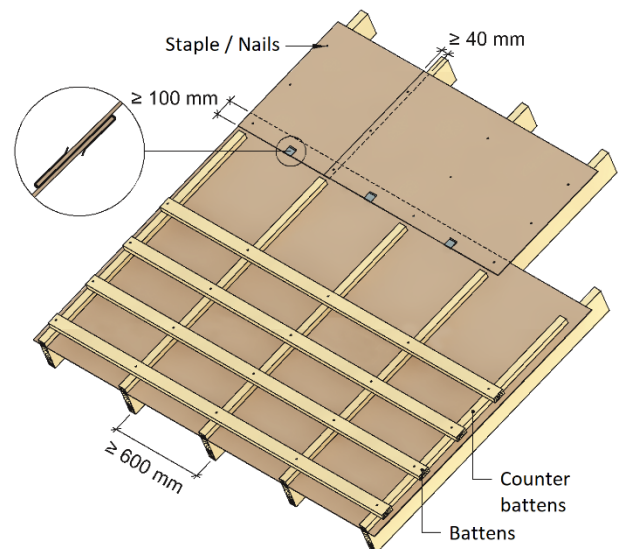


Fig. 1
 Huntonit Sutak installed in bond pattern. Use of clips in the joints simplifies installation and reduces penetration of rain and snow.

Huntonit Sutak should not be used in areas with harsh weather conditions, where hazard for penetrating downpour of snow or rain is given. It should also not be used in case the roofing itself has no satisfying tightness. Danger of penetrating downpour is highest with roof slopes over approximately 30 degrees.

Huntonit Sutak Plan can be used, together with Huntonit Luftespalte (SINTEF Technical Approval no. 2245), as wind barrier.

4. Properties

Material and construction characteristics

Table 2 shows important material and construction characteristics of Huntonit Sutak. The boards are in conformity with the requirements for fibreboards type HB.H according to EN 622-2.

Safety in case of fire

Reaction to fire performance for Huntonit Sutak, according EN 13501-1, has not been determined.

SINTEF is the Norwegian member of European Organisation for Technical Assessment, EOTA, and European Union of Agrément, UEAtc

Table 2
Product properties for Huntonit Satak Standard and Huntonit Satak Plan.

Property	Test method	Satak Standard with asphalt		Satak Standard with wax		Satak Plan		Unit
		DoP ¹⁾	Control limit ²⁾	DoP ¹⁾	Control limit ²⁾	DoP ¹⁾	Control limit ²⁾	
Water tightness 24 h, 20 mm water pressure	EN 14964 12467	Approved	Passed	Approved	Passed	Approved	Passed	-
Water vapour resistance, s_d value 50/93 % RF, 23 °C	ISO 12572	≤ 0.36	≤ 0.36	≤ 0.40	≤ 0.40	≤ 0.28	≤ 0.28	m
Condense absorption 30° roof slope	NT Build 304	0.3	0.3 ³⁾	-	-	0.4	0.4 ³⁾	kg/m ²
Swelling of thickness	EN 317	≤ 25	≤ 25	≤ 25	≤ 25	≤ 25	≤ 25	%
Tensile strength perpendicular to plane	EN 319	≥ 0.60	≥ 0.60	≥ 0.60	≥ 0.60	≥ 0.60	≥ 0.60	N/mm ²
Bending strength	EN 310	≥ 35	≥ 35	≥ 35	≥ 35	≥ 35	≥ 35	N/mm ²
Thread through resistance	SP-Method 0487	> 2.2	> 2.2 ³⁾	> 2.2	> 2.2 ³⁾	> 2.2	> 2.2 ³⁾	kN
Tensile strength perpendicular to plane after boiling	EN 622-2	≥ 0.30	≥ 0.30	≥ 0,30	≥ 0,30	≥ 0.30	≥ 0.30	N/mm ²
Formaldehyde class	EN 717-1	E1	E1	E1	E1	E1	E1	-
Bracing, R_D	EN 594	-	-	-	-	-	77.1 ³⁾⁴⁾	N/mm ²

¹⁾ Manufacturers Declaration of Performance, DoP

²⁾ Control limit shows values, product has to satisfy during internal factory production control and audit testing

³⁾ Result from type testing

⁴⁾ Force per square meter roof construction, in serviceability limit state, which moves the construction horizontal about 1 mm. Moving need to be evaluated.

Rain tightness

Huntonit Satak is tested according to NT Build 118 and found satisfactory under the given conditions for use and installation.

Thread trough

Huntonit Satak is considered to have sufficient resistance against accidental "tread through" during the construction period provided they are installed as described in chapter 6.

Durability

Huntonit Satak is tested for accelerated artificial climate ageing according to NS 8140, and for resistance against moisture exposure according to EN 1087-1, both with a satisfactory result.

Experience from many years of this type of fibreboards, used in their field of use, has shown that they have satisfactory durability. It is provided that the boards are not exposed to moisture conditions like dammed water.

5. Environmental aspects

Substances hazardous to health and environment

Huntonit Satak 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

Huntonit Satak shall be sorted as wood. The boards shall be delivered to an authorized waste treatment plant for energy recycling.

Environmental declaration

No environmental declaration (EPD) has been worked out for Huntonit Satak

6. Special conditions for use and installation

Design considerations

Maximum distance between roof trusses, rafters etc. is c/c 600 mm. The roof pitch must be min. 18°.

Installation

The boards are installed in bond pattern, see figure 1. Huntonit Satak Standard impregnated with asphalt shall be installed with the rough side facing upwards. Huntonit Satak Standard impregnated with wax and Huntonit Satak Plan shall be installed with the plain smooth side facing up. Furthermore, the manufacturers installation instructions and the principles in SINTEF Building Research Design Guide 525.866 *Undertak* must be followed.

Overlap in the transverse direction of the roof pitch shall be min. 100 mm. Overlap parallel to the roof pitch shall be min. 40 mm. To ensure satisfactory side overlap the roof trusses and rafters have to be installed rectilinear with accurate distance.

Clips shall be used in joints in transverse direction in order to reduce penetration of rain and snow, see figure 1.

To achieve the given thread through resistance, the boards must be fixed with 2.8 – 25 mm or 2.8 – 35 mm slate nails, placed with 150 mm spacing along the board edges. The principles given in SINTEF Building Research Design Guide, instruction 525.866 shall be followed.

At roof penetrations, all edges shall be supported, and all joints shall be tightened by flashings, gaskets etc. which are continuously clamped or glued to the board.

Transport and storage

The boards must be transported and stored under dry conditions.

7. Factory production control

Huntonit Sutak is produced by Huntonit AS, Venneslavegen 233, 4700 Vennesla, Norway

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

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

Huntonit AS has a quality system which is certified according to EN ISO 9001 by Intertek Certification AB, certificate No. 0064243.

Huntonit AS has an environmental control system which is certified according to EN ISO 14001 by Intertek Certification AB, certificate No. 0064244.

8. Basis for the approval

The evaluation of Huntonit Sutak is based on reports owned by the holder of the approval.

The evaluation of design and technical solutions are based on recommendations given in SINTEF Building Research Design Guides.

9. Marking

Pallets of Huntonit Sutak shall be marked according to requirements in EN 13986 with manufacturers name, product name/technical class, date of production and reference to declaration of performance.

Huntonit Sutak is CE-marked in accordance with EN 13986 and EN 14964.

The approval mark for SINTEF Technical Approval TG 2006 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



Hans Boye Skogstad
Approval Manager