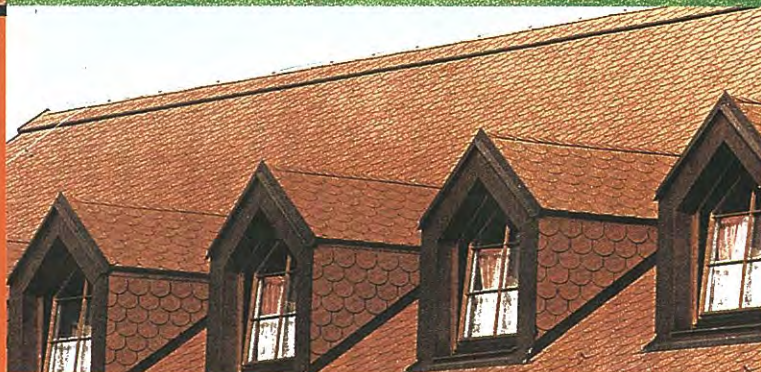


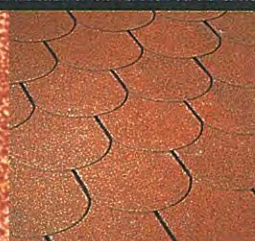
TOP - SHINGLE

ASTM D 3462

RECTANGULAR



BEAVER



TOP - SHINGLE



RECTANGULAR



Asphalt shingles are among the most popular roofing materials in the world: they have been widely used in North America for over a century and in Europe for over 50 years. The perfect roofing material for both residential and public buildings, asphalt shingles combine excellent aesthetical results with excellent value-for-money.



RECTANGULAR

TOP - SHINGLE



BEAVER

Easy and rapid to install, Top-Shingle provides long-lasting protection, in addition to unique resistance to virtually any weather condition. It is not damaged by foot traffic and its top coating made from ceramic granules, that do not fade in sunlight, guarantees color stability.



B
E
A
V
E
R

TOP-SHINGLE



RECTANGULAR



2103 - 20006 BRIK RED



2103 - 20020 2-TONE BROWN



2103 - 20001 RED



2103 - 20025 CLAY BROWN



2103 - 20070 2-TONE GREEN



2103 - 20050 DARK GREY



2103 - 20061 SLATE GREY



2103 - 20060 BLACK

Top-Shingle Rectangular is available in a colour palette that includes eight hues, all perfectly adaptable to the surrounding environment.



TOP - SHINGLE



BEAVER



2113 - 20060 BLACK



2113 - 20020 2-TONE BROWN



2113 - 20001 RED



2113 - 20075 GREEN



Top-Shingle Beaver is distinguished by a rounded profile and a design that takes its inspiration from traditional roofs. It comes in a range of four colours.

B E A V E R

TOP - SHINGLE

RECTANGULAR - BEAVER ACCESSORIES

Top-Shingle is complemented by a comprehensive range of accessories, which help create a functional and safe roof.



"Special" ventilation system:

Suitable for low-pitch roofs in areas prone to heavy snowfalls. Ventilation area 150 cm².



"Standard" ventilation system:

Suitable for any roofing solution. Ventilation area 150 cm².



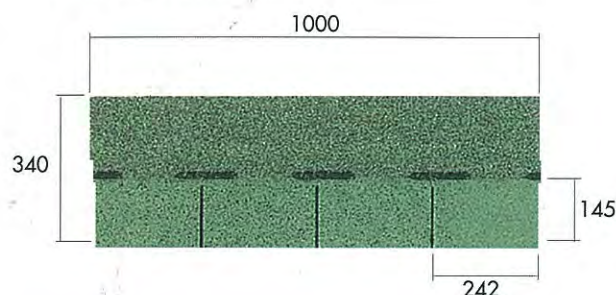
Bitustick

Cold-process adhesive for the application of the first row of shingles and of details around chimneys, ventilation vents, etc.

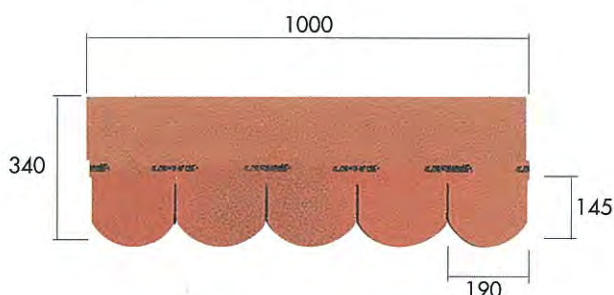
RECTANGULAR - BEAVER OTHER REALISATIONS



mod. RECTANGULAR



mod. BEAVER



TECHNICAL SPECIFICATIONS

Dimensions	100 x 34 cm
Thickness	3 mm
Shingle's for	6,9 n°/m ²
Coverage for bundle	3,50 m ²
Parcels for pallet	52
Exposure	14,5 cm
Weight	9,4 Kg/m ²
Glass fibre reinforcement	100 gr/m ²
Concealed thermoadhesive points	

CHEMICAL-PHYSICAL-MECHANICAL CHARACTERISTICS

	MEASUREMENT UNIT	VALUE	TEST METHOD
Longitudinal tensile strength	N/5 cm	>700	EN 544
Longitudinal elongation	%	>2	
Transverse tensile strength	N/5 cm	>450	EN 544
Transverse elongation	%	>2	
Nail resistance	N	>100	EN 544
Granule loss	-gr	<1,5	ASTM D4977

Glue points

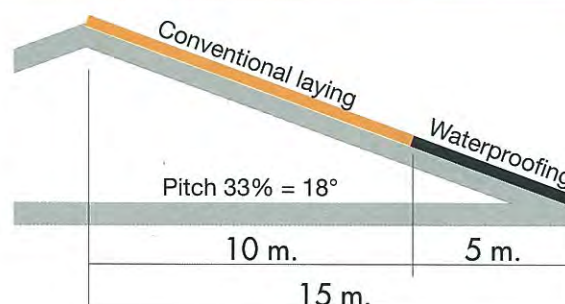
Thermoadhesive

MINIMUM ROOF PITCH

ROOF PITCH	ROOF LENGTH		
	da 0 - 5 m.	da 5 - 10 m.	da 10 - 15 m.
up to 25%	To be waterproofed		
from 25% to 30%	Conventional laying	To be waterproofed	
from 30% to 35%	Conventional laying		To be waterproofed
over 35%	Conventional laying		

Calculating the area to be waterproofed

Example of how to calculate a roof section to be waterproofed, in relation to roof length and pitch. In this example, roof length is 15 l.m. and roof pitch is 33%. The roof is waterproofed from the eaves up to 10 m from the ridge.



Maximum pitch allowed 85°

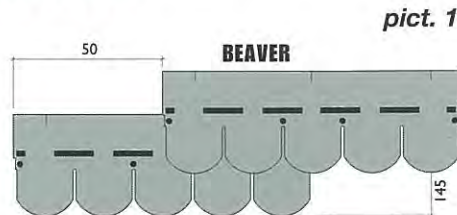
TOP SHINGLE INSTALLATION INSTRUCTION

pict. 1



RECTANGULAR

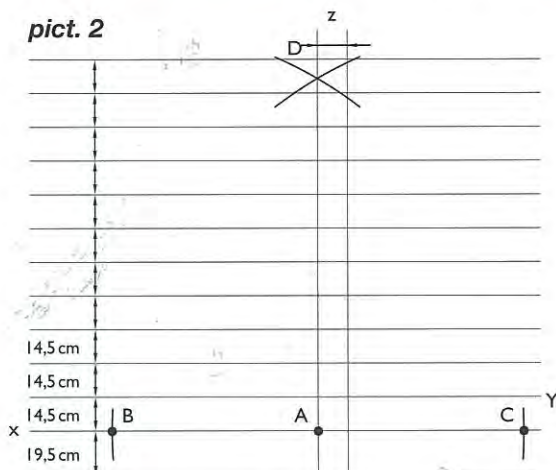
For a simple and correct installation of RECTANGULAR and BEAVER Top-Shingle be sure that the roof decking is smooth, continuous, clean, dry and seasoned. The decking can therefore be of wood (tongue and groove planks, plywood, cementboard, etc.) with a suitable support on top of the substructure (concrete, steel or similar).



pict. 1

BEAVER

pict. 2



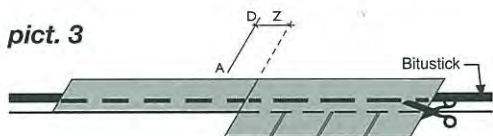
MARKING THE ROOF (pict. 2)

- Mark a line XY parallel to the gutter at a distance of 19,5 cm from the eaves (for straight roof);
- Determine the approximate center of the roof along this line, and mark this point A;
- Either sides A, mark points B and C at a distance of 150 cm;
- Using the chalk line as a compass, with one end on B, and at a distance in excess of AB, but less than BC (approx 200 cm), trace an arc approximately above A. Repeat this from point C. The intersection of these two arcs is point D;
- Snap a chalk line through AD to the apex of the roof, thus marking the center line;
- Snap another chalk line parallel to AD at a distance of 12,5 (50) cm (z);
- Starting from the line XY mark other horizontal lines at the distance of 14,5 cm going up to the ridge.

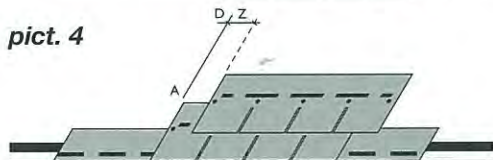
INSTALLATION (pict. 3/4)

- A line of Bitustick mastic is put down near to the eaves (as indicated in pict. 3).
- The starter course is obtained by trimming off the exposed area (14,5 cm) of the RECTANGULAR and BEAVER Top-Shingle, and nailing the remainder staggering them 12,5 (50) cm from line AD (as indicated in pict. 3);
- The first course is commenced following the line AD (pict. 4);
- The second course is commenced staggered 12,5 (50) cm (z) from AD;
- This pattern is carried on up the roof until it is completely covered;
- The cutting and the lining up of the shingles is facilitated by the reference marks (nicks) along the upper edge of the shingle.

pict. 3



pict. 4



FIXING

Galvanised, large headed roofing nails must be used with the shingles. The length of the nails depends on the thickness and type of decking. Nails can have smooth or ring shanks. You have to use 5 (4) nails for shingle (as indicated in pict. 1). The nails must however be positioned in such manner as to nail the shingle underneath as well. N.B. For pitches in excess of 160% (60 degrees), 8 (6) nails must be used.

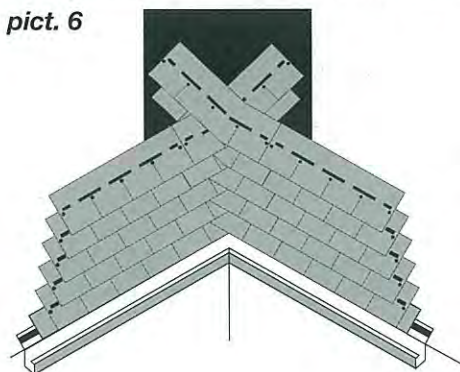
PITCH

Minimum pitch for installation with nails 25% or 14° - (30% or 17°). Pitches below this must first be waterproofed using Polyester membrane 4 torch-on-underlay, and the subsequent torching-on of the RECTANGULAR and BEAVER Top-Shingle. Pitches between 25% or 14° - (30% 17°) and 30% or 17° - (40% or 22°) with a length in excess of 5 m must be waterproofed with Polyester 4 underlay up to approximately 5 m from eaves, and in this area shingles must be torched-on.

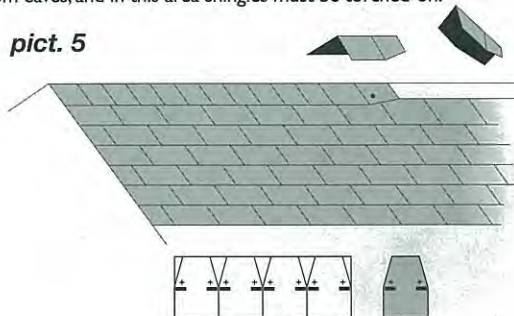
RIDGES

At the apex of the roof the shingles which protrude are bent over the ridge and nailed down. Ridge tiles are obtained by cutting the RECTANGULAR and BEAVER Top-Shingle into 4 (5) pieces (as indicated in pict. 5). The pieces thus obtained are bent and placed on the ridge. The ridge piece is held in place with 2 nails each. The nails are placed in the area that will be covered by the subsequent piece (pict. 5).

pict. 6



pict. 5



VALLEYS

The valley is protected by torching-on a Polyester membrane 4 underlay. The RECTANGULAR and BEAVER Top-Shingle are interwoven from each side of the valley, thus obtaining a "zipper" effect. Care must be taken that the shingles extend at least 25 cm from the centre line of the valley. In the area protected by the underlay the shingles must be torched-on. No nails must be placed within 40 cm of the centre line of the valley (pict. 6).

ACCESSORIES

All accessories such as flashings, trims, and penetrations such as chimney breasts can be carried out using traditional materials such as copper, galvanized or painted sheet metal.

N.B. ALL ITEMS BETWEEN BRACKETS REFER TO THE BEAVER TOP-SHINGLE