PRODUCT CERTIFICATE

Certificate No C263/03
Updated on 3.12.2008

Katepal Oy

manufactures

Super-

KL, Katrilli, Jazzy, Rocky and Foxy Bitumen Shingles and Ridge/Eaves Sheets

Bitumen shingles (4 E 2) manufactured by Katepal Oy are used on roofs with a minimum slope of 1:5 (about 12 °). The shingles and ridge/eaves sheets are manufactured of **SBS modified bitumen** with glass fiber non-woven reinforcement. The appearance of the roofing can be chosen from a number of colors and shapes. The initial type tests (ITT) characteristics of the bitumen roofing have been tested at Technical Research Centre of Finland (VTT) according to the European Standard EN 544:2006. A summary of the characteristics is presented below:

Characteristic	**Testing Method**	**Unit**	**Requirement in standard EN 544:2006**	**Result**
Mass of constituents[1] - product - bitumen[2] - granules	EN 544 point 4.1.1 EN 544 point 4.1.2	g/m²	 ≥ 1300 Continuous surface	 4315 1430 PASS
Geometrical properties - width, W - Height, H - slit height, h_1	EN 544 point 4.2.1	mm	 Max 1200 Min 250	 1000 317 133
Tensile strength - longitudinal - transversal	EN 544 point 4.3.1 EN 12311-1	N/50 mm	 Threshold value ≥ 600 Threshold value ≥ 400	 815 675
Nail shank tear resistance	EN 544 point 4.3.2 EN 12310-1	N	Threshold value ≥ 100	180
Water absorption	EN 544, point 4.4.1	%	< 2	0,8
Resistance to UV-radiation	EN 544 point 4.4.2 EN 1297-1 (60 cycles)		No cracking or fissuring	PASS
Resistance to blistering	EN 544, point 4.3.3		No surface blistering	PASS
Flow resistance at elevated temperature	EN 544, point 4.4.4 EN 1110	mm	Threshold value ≤ 2 mm at 90 °C	1,2
Adhesion of granules	EN 544, point 4.4.5 EN 12039	g	MLV 2,5	< 1
Adhesive area	EN 544	%	-	50 %
External fire properties	ENV 1187 (test 1) ENV 1187 (test 2)		B_{ROOF} (t1) B_{ROOF}(t2)	PASS[3] PASS[3]

[1)] Exposed area of the shingle [2)]Soluble in trichloroethylene.

[3)] The B_{ROOF}-classification is valid on wooden and on noncombustible substrates with and without a bituminous underlay sheet.

According to the results all the characteristics of Katepal bitumen shingles fulfill the CE-marking requirements **of the EN 544 standard.**
This VTT certificate is valid until 2.12.2013 on condition that the product is not essentially changed and the manufacturer and VTT have a valid quality control contract. Inquiries concerning the validity of the certificate may be addressed to VTT. Other conditions are listed on the reverse side of the certificate.

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P R O D U C T C E R T I F I C A T E

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Where reference is made in this certificate to any regulations, publications, standards or other documents, it shall be construed as a reference to such publication in the form of which it is in force at the date of this certificate.

The manufacturer is responsible for the quality and continuous quality control of the product. In granting this certificate, VTT does not accept responsibility to any person or body for any loss or damage incurred in respect of personal injury arising as direct or indirect result of the use of this product.