



## VILLAS W-400

**1. Product trade name:** Top bitumen sheet VILLAS W-400

**2. Technical specification:**

PN-EN 13707 + A2:2012 IDT. EN 13707:2004 + A2:2009

Flexible sheets for waterproofing – Reinforced bitumen sheets for roof waterproofing –  
Definitions and characteristics

**3. Manufacturer:** ICOPAL Sp. z o.o., 98-220 Zduńska Wola ul. Łaska 169/197, Poland

**4. Description of the product:**

bitumen sheet with cardboard reinforcement, coated with bitumen with filler, top side is finished with  
slate, bottom side is finished with sand.

**5. Type of application:** top layer, for multilayer applications in roof waterproofing

**6. Method of application:** with bitumen glue

**7. Information for users:**

Conditions of application:

the roofing sheet should be applied on a roof when the temperature does not fall below + 5 °C. It should  
not be applied: on a wet roof surface, on a roof covered with ice, during rain or snow falls or during  
strong wind.

Conditions of usage:

waterproofing made with the use of VILLAS W-400 should be done according to a technical project  
complying with binding building regulations and detailed guidelines included in the manual issued by  
the producer.

Storage:

the rolls should be stored in rooms and should be protected against moisture and exposure to sunlight  
or source of heat. The rolls should be stored on an even surface in upright position, in one layer.

Transport:

the rolls should be transported in covered trucks, in upright position in one layer, protected against  
falling over and any other damage. Rolls should be placed in a way preventing their dislocation during  
transport.



**8. Product performance:**

	<b>Characteristic</b>	<b>Test method/ Classification</b>	<b>Units</b>	<b>Value or statement</b>
1.	Visible defects	EN 1850-1	-----	no visible defects
2.	Length (*)	EN 1848-1	m	≥ 15,0
3.	Width (*)	EN 1848-1	m	≥ 1,0
4.	Straightness	EN 1848-1	-----	deviation: ≤20 mm / 10 m or proportional for other lengths
5.	Mass	EN 1849-1	kg/m <sup>2</sup>	2,4 ± 0,1
6.	Watertightness	EN 1928 Method A	-----	resistant to 10 kPa
7.	Reaction to fire	EN 13501-1	-----	Class E
8.	Tensile properties: maximum tensile strength -longitudinal direction, -transverse direction	EN 12311-1	N/50 mm	550 ± 100 300 ± 100
9.	Tensile properties: elongation -longitudinal direction, -transverse direction	EN 12311-1	%	3 ± 2 3 ± 2
10	Dimensional stability	EN 1107-1 Method A	%	≤ 0,5
11.	Flexibility at low temperature	EN 1109	°C	+ 5 /Ø30 mm
12.	Flow resistance at elevated temperature	EN 1110	°C	70
13.	Artificial ageing by long term exposure to elevated temperature	EN 1110 EN 1296	°C	100 ± 10
14.	Adhesion of granules	EN 12039	%	20 ± 10
15.	Water vapour transmission properties	EN 13707	-----	μ=20 000

(\*) there is a possibility to produce the sheet of different length and/or width on condition that the length and/ or width specified in tests is not lower than declared