

TRASPIR METAL

3D MATS FOR METAL ROOFS



CERTIFIED NOISE REDUCTION

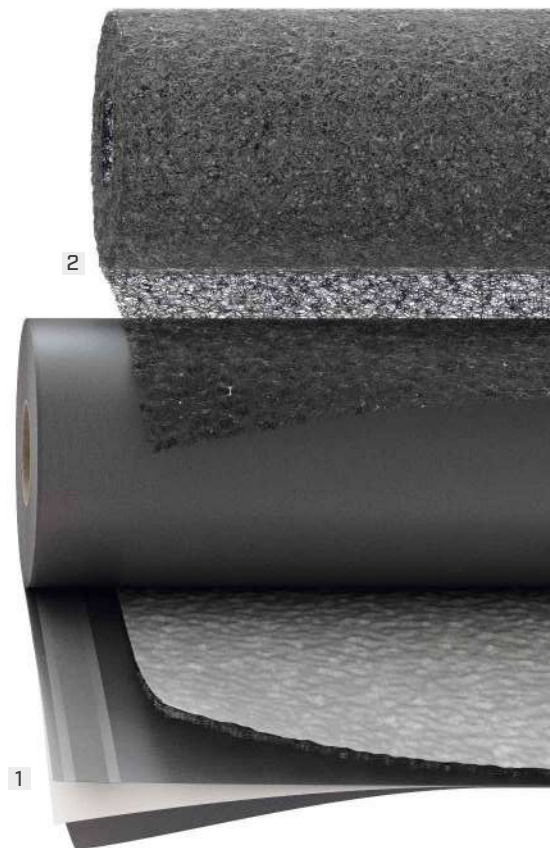
The 3D mats guarantee reduction of airborne and heavy rain noises. Values tested and certified.

PROTECTIVE FELT

The breathable membrane with 3D grid includes a fifth layer that blocks impurities and improves ventilation.

HIGH DENSITY 3D GRID

The 3D mat has high mechanical strength and is also appropriate for aluminium sheet metal.



CODES AND DIMENSIONS

CODE	description	tape	H [m]	L [m]	A [m ²]	H [ft]	L [ft]	A [ft ²]	
1 TTTMET610	TRASPIR 3D COAT TT	TT	1,35	33	44,55	4.43	108.27	479.54	4
2 NET350	NET 350	-	1,25	50	62,5	4.11	164	672.75	4



SAFE VENTILATION

The breathable membrane TRASPIR 3D COAT comes with a 3D grid and a protective felt on the surface, that prevents the entry of impurities and improves ventilation.

VERSATILE

Also ideal in combination with BYTUM or TRASPIR to create a micro-ventilation layer in both wall and roof installations.

RECOMMENDATIONS FOR INSTALLATION

TRASPIR 3D COAT



1 HAMMER STAPLER 47, HAMMER STAPLER 22, HAND STAPLER, STAPLES

3D NET



CHIMNEY DETAIL WITH TRASPIR 3D COAT



1 MARLIN, CUTTER

2 TRASPIR NET 160, TRASPIR EVO 160, TRASPIR 200, TRASPIR EVO SEAL 200, TRASPIR EVO 220, TRASPIR ADHESIVE 260, TRASPIR DOUBLE NET 260, TRASPIR EVO 300, TRASPIR DOUBLE EVO 340

3 ROLLER

4 EASY BAND, FLEXI BAND, FLEXI BAND UV, FACADE BAND, PLASTER BAND

TRASPIR 3D COAT TT

COMPOSITION

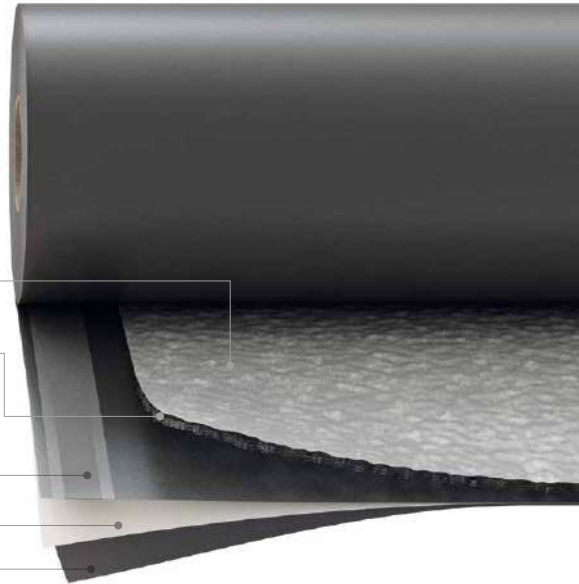
protection layer
non-woven PP fabric

middle layer
3-dimensional PP mat

protection layer
non-woven PP fabric

middle layer
PP breathable film

bottom layer
non-woven PP fabric



TECHNICAL DATA

Properties	standard	value	USC conversion
Mass per unit area	EN 1849-2	610 g/m ²	1.2 oz/ft ²
Thickness	EN 1849-2	8 mm	315 mil
Water vapour transmission (Sd)	EN 1931	0,02 m	174.825 US perm
Maximum tensile force MD/CD	EN 12311-1	325 / 225 N/50mm	37 / 26 lb/in
Elongation MD/CD	EN 12311-1	45 / 70 %	-
Resistance to nail tearing MD/CD	EN 12310-1	185 / 195 N	42 / 44 lbf
Watertightness	EN 1928	class W1	-
Temperature resistance	-	-30 / 80 °C	-22 / 176 °F
Reaction to fire	EN 13501-1	class E	-
Resistance to penetration of air	EN 12114	< 0,02 m ³ /(m ² h50Pa)	< 0.001 cfm/ft ² at 50Pa
Thermal conductivity (λ)	-	0,3 W/(m·K)	0,17 BTU/h·ft·°F
Specific heat	-	1800 J/(kg·K)	-
Density	-	approx. 65 kg/m ³	approx. 0.04 oz/in ³
Water vapour resistance factor (μ)	-	approx. 33	approx. 0.1 MNs/g
VOC content	-	< 0,02 %	-
UV stability ⁽¹⁾	EN 13859-1/2	3 months	-
Exposure to weather ⁽¹⁾	-	2 weeks	-
Water column	ISO 811	> 250 cm	> 98.4252 in
After ageing:			
- watertightness	EN 1297 / EN 1928	class W1	-
- maximum tensile force MD/CD	EN 1297 / EN 12311-1	285 / 195 N/50mm	33 / 22 lb/in
- elongation	EN 1297 / EN 12311-1	35 / 30 %	-
Flexibility at low temperatures	EN 1109	-30 °C	-22 °F
Void ratio	-	95 %	-
Variation of the sound reduction index ΔR _w	ISO 10140-2 / ISO 717-1	1 dB	-
Variation in overall A-weighted sound intensity level from heavy rain noise ΔL _{iA}	ISO 140-18	approx. 4 dB	-
Impact sound attenuation index ΔL _w	ISO 140-8	28 dB	-

⁽¹⁾ For the correlation between laboratory tests and actual conditions, see page 199.

3D NET

COMPOSITION

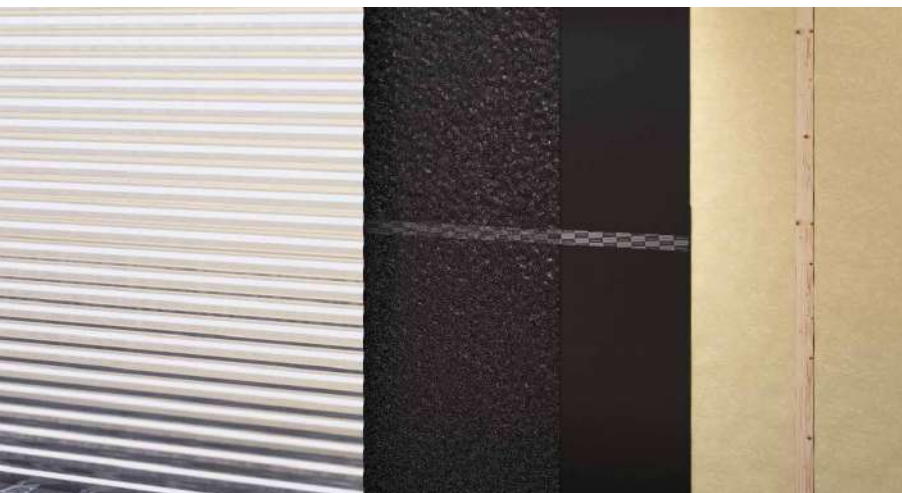
3D grid
3-dimensional PP mat



TECHNICAL DATA

Properties	standard		
Mass per unit area	EN 1849-2	350 g/m ²	1.15 oz/ft ²
Thickness	EN 1849-2	7.5 mm	295 mil
Maximum tensile force MD/CD NET	EN 12311-1	1,3 / 0,5 N/50mm	0.15 / 0.06 lb/in
Elongation MD/CD NET	EN 12311-1	95 / 65 %	-
Temperature resistance	-	-40 / 80 °C	-40 / 176 °F
Reaction to fire	EN 13501-1	class F	-
Density	-	approx. 35 kg/m ³	approx. 0.02 oz/in ³
VOC emissions	-	< 0,02 %	-
UV stability ⁽¹⁾	EN 13859-1/2	3 months	-
Exposure to weather ⁽¹⁾	-	4 weeks	-
Void ratio	-	95 %	-
Variation of the sound reduction index ΔR_w	ISO 10140-2 / ISO 717-1	1 dB	-
Variation in overall A-weighted sound intensity level from heavy rain noise ΔL_{IA}	ISO 140-18	4 dB	-
Impact sound attenuation index ΔL_w	ISO 140-8	28 dB	-

⁽¹⁾ For the correlation between laboratory tests and actual conditions, see page 199.



DURABILITY

When installed on a continuous support, it promotes micro-ventilation of metal roofs, preventing corrosion.

AIRBORNE ACOUSTIC INSULATION AND NOISE GENERATED BY HEAVY RAIN

The test sample is identified by a 5,60 x 3,65 m timber roof positioned between an emitting room (PHOTO 1) and a receiving room, able to emit and record the sound stress applied during the tests.

Shown below are the layers tested in the two versions: the first with the TRASPIR METAL and the second with the sheet metal directly on the plank.

- 1 0,6 mm thick zinc plated steel metal sheet
- 2 8 mm thick TRASPIR METAL membrane
- 3 20 mm thick pine beads
- 4 60 mm thick pine battens
- 5 Rothoblaas breathable membrane
- 6 22 mm thick 200 kg/m³ timber fibre
- 7 180 mm thick 110 kg/m³ timber fibre
- 8 Rothoblaas vapour control layer
- 9 20 mm thick pine beads
- 10 200 mm thick laminated pine beam

EMITTING ROOM



RECEIVING ROOM











TESTS PERFORMED

The following measuring tests have been performed on both layers, with and without TRASPIR METAL:

1. Airborne acoustic insulation according to EN ISO 10140-2:2010 and EN ISO 717-1:2013 on roof. The result is a soundproofing power index of R_W for the layer. Accordingly, the higher the value the better the acoustic insulation.
2. Noise generated by heavy rain according to EN ISO 140-18:2007: in this test you obtain a value indicating the sound pressure level L_{IA} recorded in the receiving room during the pounding of water, simulated by a tank placed over the sample.



PHOTO 1: Photo of sample, emitting room side

RESULTS		WITHOUT MEMBRANE		WITH MEMBRANE	
1.	 AIRBORNE NOISE	  $R_W = 43 \text{ dB}$	Increase of sound insulation by 1 dB	  $R_W = 44 \text{ dB}$	
2.	 HEAVY RAIN	  $L_{IA} = 36,9 \text{ dB}$	Reduction of noise from rain up to 4.2 dB	  $L_{IA} = 32,7 \text{ dB}$	

NOTE: The full test report is available from the Rothoblaas technical department.