MONTANA
A Tata Steel Enterprise

FELT COATINGS

Anti-condensation felt For the reduction of dripping condensation
Noise absorption felt To minimise the noise of rain and absorb condensation
Acoustic felt To optimise room acoustics with perforated profiles in the roof, walls and ceiling

TECHNICAL SPECIFICATIONS	ANTI CONDENSATION FELT	NOISE ABSORPTION FELT	ACOUSTIC FELT
• Use	• Self-adhesive felt for cold roofs. It absorbs condensation and releases the moisture back into the surrounding area.	• Self-adhesive felt for deadening the noise of rain and for noise absorption on metal roofs, as well as for absorbing condensation.	• Self-adhesive felt for improving acoustics and to prevent trickling of insulation in combination with perforated profiles in wall- and roof structure.
• Colour	• Grey blend	• Grey blend	• Black
• Thickness	• ca. 1.0 mm	• ca. 3.0 - 4.0 mm	• < 1.0 mm
• Material	• Polyester fibres	• Polyester fibres	• Polyester fibres
• Weight of membrane material	• 95 g/m² (±10%)	• 200 g/m² (±10%)	• 80 g/m² (±10%)
• Water absorption	• Pitch of roof 0° > 900 g/m² Pitch of roof 45° > 700 g/m² Pitch of roof 90° > 500 g/m²	• Pitch of roof 0° > 2500 g/m² Pitch of roof 45° > 1500 g/m² Pitch of roof 90° > 1000 g/m²	• not relevant
• Deadening noise of rain from metal plate to metal plate with felt	• From 71 dB to 69 dB -2 dB or -12% of what the human ear perceives.	• From 71 dB to 65 dB -6 dB or -30% of what the human ear perceives.	• not relevant
• Sound absorption α_S *according to EN ISO 354*	• 125 Hz 0.02 250 Hz 0.04 500 Hz 0.04 1000 Hz 0.12 2000 Hz 0.12 4000 Hz 0.42	• 125 Hz 0.13 250 Hz 0.27 500 Hz 0.21 1000 Hz 0.32 2000 Hz 0.47 4000 Hz 0.54	• SP 45A* / SP 111A** 125 Hz 0.41 / 0.73 250 Hz 0.81 / 0.94 500 Hz 0.57 / 0.91 1000 Hz 0.80 / 0.73 2000 Hz 0.79 / 0.51 4000 Hz 0.70 / 0.41
• Flammability *according to EN 13501-1*	• A2 - s1, d0 Non-flammable	• C - s1, d0 Hardly flammable	• A2 - s1, d0 Non-flammable
• Bacterial resistance *according to EN 14119: 2003-12*	• Index 0 = no infestation	• Index 0 = no infestation	• Index 0 = no infestation
• Possible profiles steel	• SWISS PANEL® SP 18 - SP 160	• SWISS PANEL® SP 30 - SP 160	• SWISS PANEL® SP 18, 27 and 42 SWISS PANEL® SP 45 - SP 160
• Possible profiles aluminium [1)]	• SWISS PANEL® SP 18, 27 and 42 SWISS PANEL® SP 20 - SP 41 SWISS PANEL® SP 45 + SP 80	• On request	• SWISS PANEL® SP 40 + SP 45 Other profiles on request

* Full perforated
** Perforated on web
[1)] The fleece structure may leave marks on the outside of the sheet.

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APPLICATION / DIRECTIONS

Area of application anticondensation and noiseabsorption felt
For single-layer weather protection roofs, to prevent dripping condensation. For double-layer, heat-insulated metal roofs, to avoid dripping into the heat insulation.

The membrane moisture buffer is not suitable for use above wet rooms or places where constant moisture with no ventilation or drying on roof areas from 500 – 900 g/m² is exceeded. Adequate ventilation is absolutely necessary so that the fleece can give off the stored moisture again over the course of the day and regenerate itself.

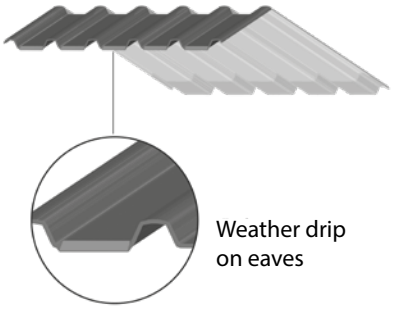
The non-woven fabric coating is absorbent, so it is important that there is an appropriate overlap (see picture). To make sure no moisture is sucked in from the outside, the outer cover web is free from fabric for a width of approximately 30 mm. For transverse joints or sheet overlaps and roof eaves, the non-woven fabric must be molten off and completely deactivated over a width of approximately 10 cm using a hot air gun, so as to avoid moisture being sucked in from the outside. Take care not to damage the profile coatings when using a hot air gun. You are expressly advised not to use gas burners to burn off the fleece. Montana Building Systems Ltd. offers this service in the factory in order to ensure proper deactivation of the fleece coating and to minimise work on the building site. Just enquire to us about this.

One have to take into account that the edges of the roof have to be covered with flashings and the roof ridge with a ridge cap.

In the case of a substructure with absorbent supports, such as timber purlins, it is advisable to cover the supports with bitumenized felt or other non-absorbent materials to avoid the accumulation of condensation over the support.

For a roof pitch of less than 20°, a drip nose is mandatory. This must be bent in the lower chord of the roof profile in a downward direction at an angle of 45°-60° (to be provided by the customer).

Single-sided overlapping felt-free



Weather drip on eaves

Melt with hot air gun

Areas of application for the acoustic felt
One of the main features of the acoustic felt is its considerable air/drag resistance, which is needed for effective noise reduction. Profiles fitted with acoustic fabric thus lead to an excellent improvement in room acoustics through substantially increased noise absorption. Depending on the type of profiles, the otherwise customary acoustic inserts are not necessary when building a roof structure with rib-perforated SWISS PANEL® profiles. If fibrous insulation materials are used in the roof structure, the acoustic felt also has the additional effect of a trickle protection function at the same time.

Fully perforated profiles with acoustic fabric are ideally suited as noise-absorbing wall elements to improve room acoustics. Examples of the sound absorption that can be achieved using acoustic non-woven fabric can be seen on the front page.

Due to the limited temperature resistance (melting point at approx. 260°C), the acoustic non-woven fabric cannot be combined with a hot glued vapour seal. As an alternative, the possibility of using a cold glued vapour seal or temperature-resistant acoustic inserts should be verified.

Unloading, storage and fitting
The SWISS PANEL® profiles with moisture buffer should generally be stored in a dry place, i.e. they should be covered appropriately on the site or be fitted straightaway. Unloading, handling or moving for protection of the sheets may only be done using lifting straps. To ensure that no damage occurs to the membrane when fitting, the profile sheets must be lifted and laid carefully.

In very general terms, clean gloves should always be worn when fitting the profile sheets. Slight soiling can be removed using water and a soft brush.

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