ALUTRIX®

The effective vapour barrier

INSTALLATION INSTRUCTIONS

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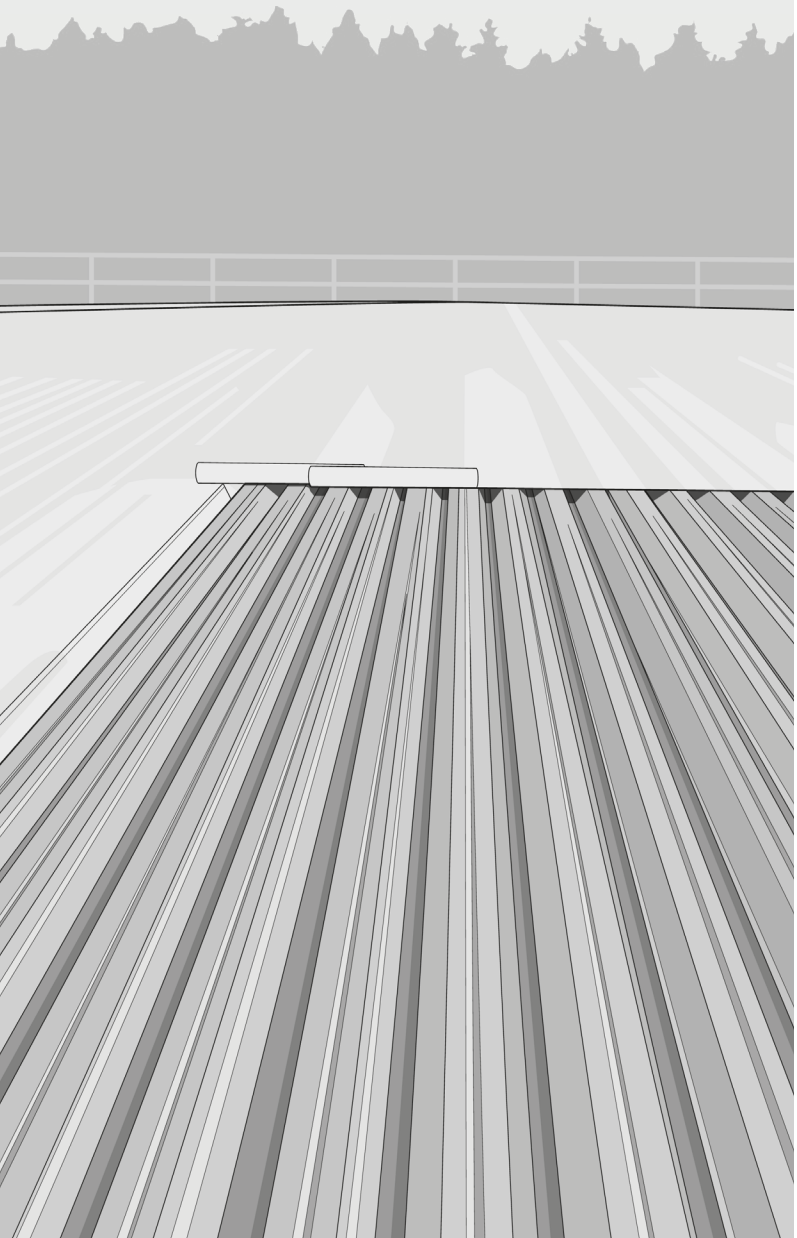
CARLISLE CM EUROPE

ALUTRIX® FR

ALUTRIX® 600



Foreword

These installation instructions provide information about the materials and are intended as a basis for preparing the planning and processing of ALUTRIX® aluminium vapour barrier membranes.

They support the installer in combination with practical training at our CARLISLE® ACADEMY and/or directly at the construction site. All of the essential installation steps are described in text form and are also illustrated with graphics, images, pictures and drawings.

Under some circumstances, other local conditions or material combinations not described here may affect the functionality. Please contact our Technical Department for specific and detailed substrate requirements and installation instructions for individual projects.

The information and product descriptions in this publication are based on our experience and test results and are correct to the best of our knowledge and belief. They are the basis for all of the solutions described here. Claims for compensation may not be derived from the contents of this publication. We reserve the right to make technically feasible design and structural modifications to our product range in accordance with our high standards regarding quality and continuous advancement. These installation instructions replace and supersede all previous editions, which thereby become invalid.

April 2017

Contents

1. Product overview and description of materials

1.1 General properties of the ALUTRIX® 600 and ALUTRIX® FR

- ALUTRIX® 600 and ALUTRIX® FR are 1.08 m wide, self-adhesive aluminium vapour barrier membranes.
- Both vapour barriers have an above-average tear strength, are puncture-resistant and can be walked on when applied to profiled steel decking.
- ALUTRIX® 600 and ALUTRIX® FR, in addition to their vapour barrier function (sd value > 1,500), also form an airtight layer compliant with to the German Energy Conservation Act.
- ALUTRIX® 600 and ALUTRIX® FR can be bonded from + 5 °C.

1.2 Special characteristics of ALUTRIX® FR

- ALUTRIX® FR has a thermal value of ≤ 10,500 kJ/m² or calorific value of ≤ 11,600 kJ/m² and therefore satisfies the requirement for fire-resistant / reduced fire load vapour barrier membranes as per DIN 18234 and the Industrial Buildings Directive.
- ALUTRIX® FR meets FM Standard Class No. 4470.

1.3 System accessories: FG 35 surface primer

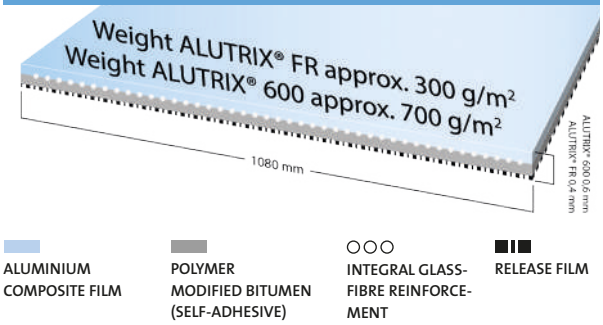
In combination with the ALUTRIX® vapour barrier membranes, FG 35 surface primer can be used on a wide range of substrates. FG 35 is a solvent containing primer based on synthetic rubber and resins. Please refer to the respective product data sheet for more detailed information.

1.4 System accessories: G 500 cleaner

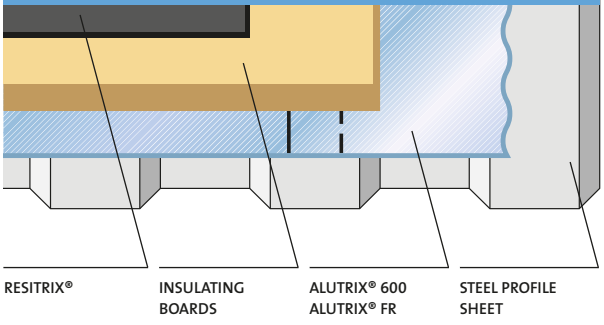
G 500 cleaner is suitable for degreasing metallic substrates and for cleaning lightly soiled surfaces.

Please be sure to comply with the safety instructions on the packaging labels and on the EC safety data sheet.

ALUTRIX® MATERIAL STRUCTURE



PROCESSING VERSION



2. Installation

2.1 General substrate requirements

The substrate must be dry, smooth, and free from dust and grease.

APPLICATIONS			ALUTRIX® 600	ALUTRIX® FR	FG 35	FG 35 PERCENTAGE OF AREA/ CONSUMPTION
Information on surface bonding*	Metallic materials:					
	• galvanised or un-coated substrates		yes	yes	yes	50 % / 100 g/m²
	• Plastic-coated substrates		yes	yes	no	-
	Engineered wood		yes	yes	yes	50 % / 100 g/m²
	Concrete materials without decking		yes **	no	yes	50 % / 100 g/m²
	Bitumen materials		yes	yes	yes	50 % / 100 g/m²

2.2 Important installation instructions

- Unroll
- Align
- Overlap of 50 mm
- Remove the release film
- Evenly press down on the surface, e.g. with a brush.
- Press on the seam evenly with a silicone roller
- On sectioned trapezoidal sheets, the longitudinal seam must be aligned with the upper corrugation.
- If there are transverse joints on trapezoidal profiles, an ALUTRIX® or metal strip must be positioned underneath to ensure problem free installation.
- In the case of a T-joint, a corner cut must be made on the middle, covered membrane edge (see illustration under point 4.).

* FOR LOOSE LAID ROOF SPECIFICATIONS USING MECHANICAL FIXINGS OR BALLAST, PRIMING WITHIN THE ROOF AREA IS NOT GENERALLY REQUIRED.
** ON DRY, SMOOTH AND CLEAN CONCRETE MATERIALS ONLY. MECHANICAL DAMAGE OR PERFORATIONS MUST BE AVOIDED.

2.3 Formation of vertical connections

- All of the vertical surfaces must be fully primed.
- Material or strip bonding of the details must be pressed on with the silicone roller.
- Separate strips are used to guide connections and terminations up to the upper edge of the insulating layer and roof penetration.

2.4 General installation instructions

- In accordance with the applicable technical regulations, temporary waterproofing with ALUTRIX® 600 / ALUTRIX® FR is not permitted.
  As a result, the vapour barrier membranes should be laid as immediately before the installation of follow-on layers as possible. Where there are unavoidable interruptions to work, the vapour barrier membranes can be left exposed to the elements for a maximum of 5 weeks.
  Under these conditions and at ambient temperatures below 10°C, all bonded seams need to be warmed from above with hot air (e.g. a hot air hand-held welding device) before being rolled out. The following parameters must be taken into account: welding device approx. 300 °C at approx. 5 m/min.
- Subsequent connection to ALUTRIX® 600 / ALUTRIX® FR is always possible with the G 500 cleaner.
- Bonded structures on the ALUTRIX® vapour barrier membranes must be designed with conventional PU insulating adhesives and hot bitumen. The relevant manufacturer's instructions must be complied with.

2.5 Notes on storing ALUTRIX® 600 and ALUTRIX® FR

In their original packaged condition, these products can be stored for 12 months. The material must be stored upright in a cool, dry place.

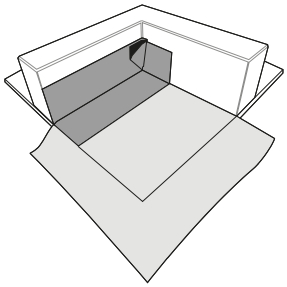
Protection from direct sunlight should be provided using the grey protective film or a light-reflective membrane. When working in strong sunlight in particular, make sure that rolls taken from the pallet are processed immediately and any rolls left over on the pallet are protected as described above.

3. Material details

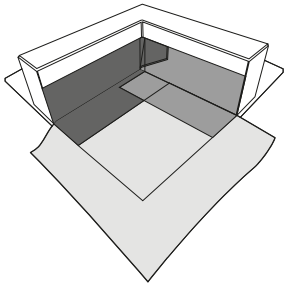
MATERIAL DETAILS	TESTING METHODS	ALUTRIX® 600	ALUTRIX® FR
Thickness	DIN EN 1849–2	0.6 mm	0.4 mm
Weight	DIN EN 1849–2	approx. 700 g/m²	approx. 300 g/m²
Packing units per pallet		20 rolls	30 rolls
Roll length	DIN EN 1848–2	40 m	
Roll width	DIN EN 1848–2	1.08 m	
Maximum tensile load longitudinal/transverse	DIN EN 12311–2	≥800 / 700 N/5 cm	
Resistance to tearing (nail shank) longitudinal/transverse	DIN EN 12310–1	200 N	
Cold-bending behaviour	DIN EN 495–5	- 20 °C	
Water tightness 4 bar/72 h	DIN EN 1928	tight	
Shear strength	DIN EN 12317–2	657 N/5 cm	
Fire behaviour	DIN EN 13501–1	Class E	
Steam permeability sd value	DIN EN 1931	> 1,500 m	
Visible defects	DIN EN 1850–1	none	
Stability under chemical attack	DIN EN 1847/1928	passed	
Stability under artificial ageing	DIN EN 1296	passed	
Impact load, procedures A and B	DIN EN 12691	150 and 1,500 mm	
Resistance to static load, procedures A and B	DIN EN 12730	20 kg and 20 kg	
Heating value / calorific value	DIN 51900–1	no requirement	≤ 10,500 kJ/m² / ≤ 11 600 kJ/m²
FM Approval	FM Standard Class No. 4470	no requirement	Class 1

4. Illustration of detailed versions

4.1 Formation of internal corners

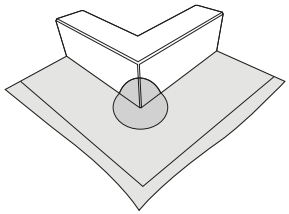


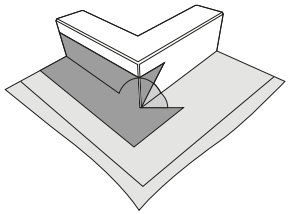
The first flashing strip must be laid with an inverted pleat.

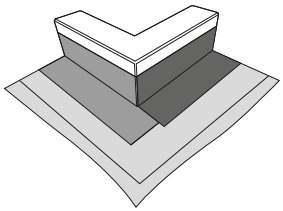


Guide the second flashing strips to the corner and stick the inverted pleat onto the flashing strips.

4.2 Formation of external corners





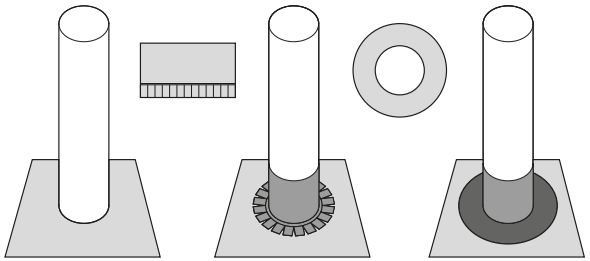


Bond the circle segment to the corner.

Extend the first flashing strips over the corner, trim them and fold them over.

Guide the second flashing strips to the corner.

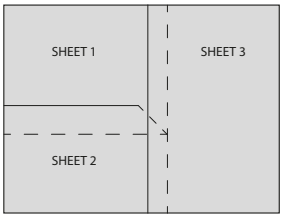
4.3 Pipe edging



Cut flashing strips at regular intervals of approx. 30 mm and guide them around the pipe.

Slip a ring segment over the pipe and bond it to the substrate.

4.4 T-joint formation



The second membrane must be given a corner cut.

Please follow the general installation instructions when performing the individual detailing work illustrated below.

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