



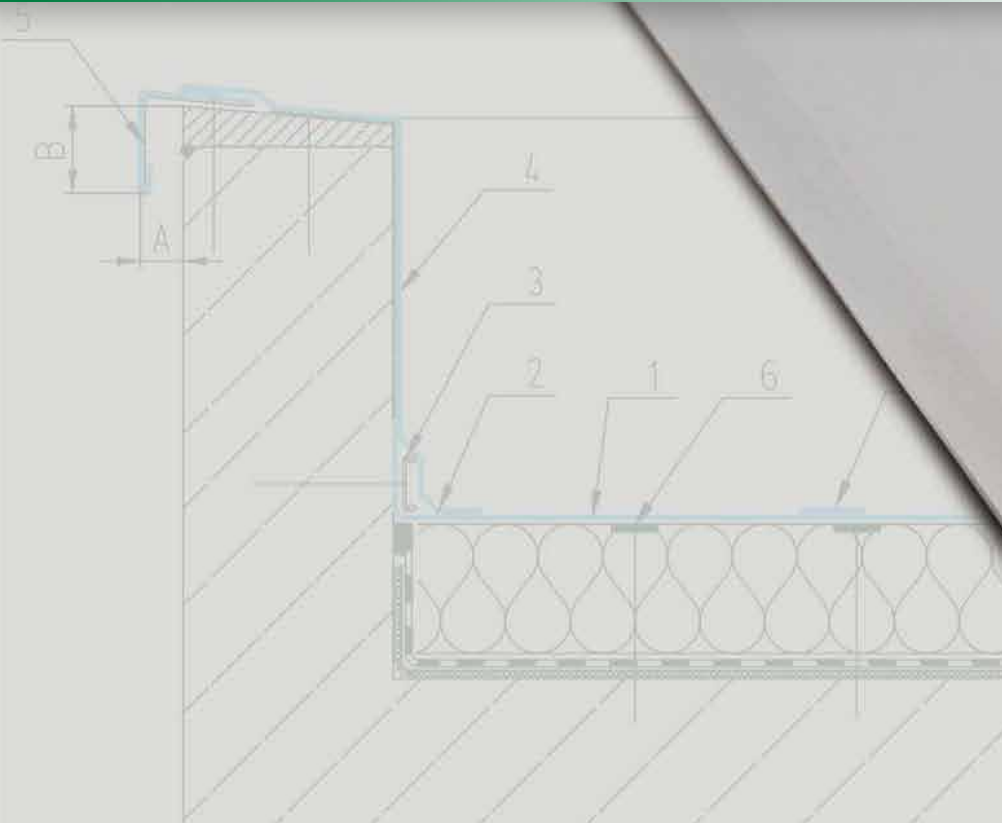
## AUSTROPLAN TPO

### ROOF LINERS



**agru**

Worldwide Competence  
in Plastics



- Made of environmentally friendly TPO
- High flexibility
- Resistant to root penetration
- Tearproof and weather resistant
- Maintenance free
- Long lifetime
- Easy and safe installation
- System solution from one supplier



roof system with AUSTROPLAN TPO roof liner gravel ballasted



AUSTROPLAN FVK fastened roof system

## Worldwide Competence in Plastics

AGRU Kunststofftechnik GmbH is a successful, Austrian family business with worldwide activities in production and distribution of high-grade thermoplastic products.

With more than 50 years of experience, consequent pursuit of quality and a wide product range, AGRU has become a global player on the thermoplastic sector.

The brand AGRU is inseparably tied to flexibility and customer orientation and is always exerted to provide optimal solutions for the customer.

## Development by professionals

The innovative AUSTROPLAN TPO liners made of special thermoplastic polyolefines with elastomer properties can be used at all kinds of flat roofs.

# AUSTROPLAN TPO ROOF LINERS



AUSTROPLAN TPO roof liners are fabricated in different thicknesses with a controlled colored top layer as well as a black bottom layer to comply with any requirements for various applications.

## The long-lasting roof system

AUSTROPLAN TPO roof liners comply with any demands made on flat roofs and building sealings and are homogeneously jointed by welding using hot-air-welding-machines.

The optimal installation of the Austroplan TPO roof liners is guaranteed up to an outside temperature of +5°C.

The innovation: homogenous liner edge means a significant advantage for hot-gas welding.

## Our roof liner offers many advantages

Lining of roofs with AUSTROPLAN TPO liners offers a number of advantages compared to other roof-sealing systems and materials:

- Excellent weather behavior incl. permanent solar radiation
- Free of volatile plasticisers
- Resistance against root penetration (FLL-tested)
- Resistant against microorganisms
- Compatible to EPS/XPS heat-insulating boards
- Direct installation on bitumen
- High resistance against hail damage
- High dimensional stability
- Excellent welding performance
- Homogenous liner edge





thickness (mm)	roll dimension	AUSTROPLAN products type			
		FVK	FG+V	FG	FH
1,2	2,0 x 25m	FVK		FG	FH
1,5	2,0 x 20m	FVK	FG+V	FG	FH
1,8	2,0 x 15m	FVK		FG	
2,0	2,0 x 15m	FVK		FG	

## Available accessories

For Austroplan TPO roof liners these accessories are available:

### Available accessories:

- Homogenous (H)
- Increased fire resistance (F)
- Reinforced with glass fibre/fleece backed (F G+V)
- Reinforced with glass fibre (G)
- Reinforced with polyester scrim and glass fibre (F VK)
- Co-extruded black/grey
- Co-extruded black/dark grey
- Fire-proof/increased fire resistance

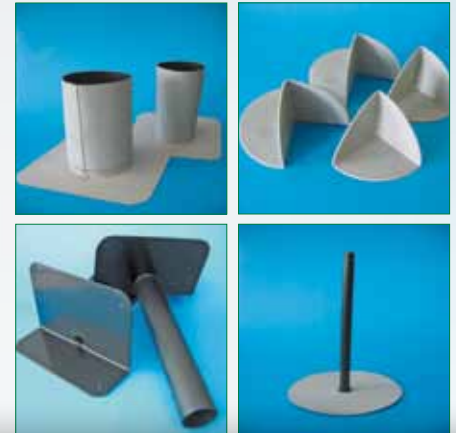
Specific material thicknesses and roll dimensions as well as different surface colors are fabricated on customers request after prior technical discussion with AGRU.

The AUSTROPLAN TPO roof liners are subject to the CE-marking of the European-Construction-Products-Directive.

### AUSTROPLAN preformed parts

Various preformed parts are available for details, which are homogeneously welded with the AUSTROPLAN TPO roof liner.

- Liner coated galvanised steel plates to be bent for roof trims
- Preformed corners, rainwater outlets, flashings, adhesives and cleaners,...



# AUSTROPLAN PRODUCT RANGE



installing of prefabricated roof elements



lining of utility system with ballast

### Areas of application

The AUSTROPLAN TPO program for the sealing of flat roofs offers a competent and complete solution for the following roof systems:

- Flat roof liners with mechanical fixing and left uncovered (free weathered)
- Bonded roofs
- Loosely laid flat roof liners with ballast (gravel, concrete slabs,...)
- Liners for green roofs
- Liners for utility systems
- Reroofing of defective membranes
- Covering of prefabricated roof elements

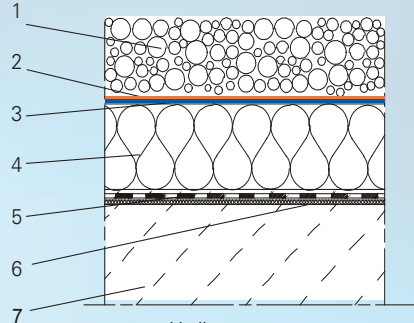
## Gravel ballasted roof system

An AUSTROPLAN TPO roof liner sealed and gravel ballasted flat roof, complies with all requirements for permanently sealed flat roofs.

AUSTROPLAN TPO roof liners are perfectly suitable for the use under gravel ballast, are resistant to root penetration and to microorganisms.



The individual layers of the gravel ballasted roof system are loosely laid and ballasted with gravel against uplifting caused by wind suction forces.



1. Gravel ballast
2. Protective membrane subject to the requirement of the international standards
3. AUSTROPLAN FG
4. Thermal insulation
5. Vapour barrier
6. Compensation layer
7. Supporting substructure



gravel ballast roof systems

# AUSTROPLAN SEALING SYSTEMS



grassed roof system with AUSTROPLAN TPO roof liners



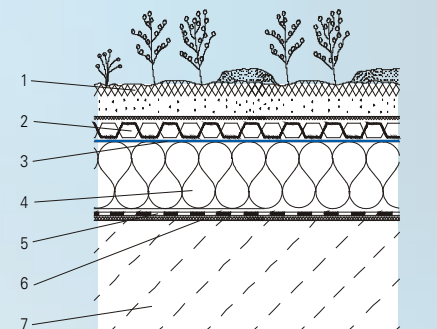
## Green roof systems

A flat roof sealed with AUSTROPLAN TPO roof liner and with vegetation is a roof system that is permanently resistant to root penetration and microorganisms.

Furthermore these roofliners feature excellent ecological balance values as followed:

- Free from volatile plasticisers
- No chlorine
- No heavy metals
- No root toxicants
- No herbicides and no pesticides

The individual layers of the roof system with vegetation are loosely laid and covered with a substrate as well as the vegetation.



1. Substrate/vegetation
2. Draining system/filter/protective membrane
3. AUSTROPLAN FG
4. Thermal insulation
5. Vapour barrier
6. Compensation layer
7. Supporting substructure



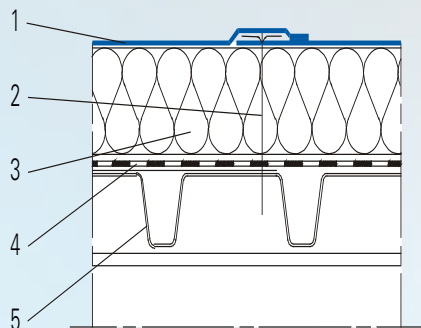
## Fastened roof system

Since additional protective layers such as gravel ballast with a minimum weight per unit area of 80 kg/m<sup>2</sup> are no longer required. This technology is an advantage for the building of production facilities with light-gauge roof systems.

The individual layers of the mechanically fastened AUSTROPLAN TPO roof system are loosely laid and fastened by means of fixing elements in the supporting substructure against wind suction.

Roof systems with AUSTROPLAN TPO roof liners, mechanical fastened or fully adhered offer following advantages:

- Low weight per unit area
- Reduction of additional protective layers
- UV-resistant
- Mechanically resistant
- Dimensionally stable
- Easily inspected



1. AUSTROPLAN FVK
2. Fixing element
3. Thermal insulation
4. Vapour barrier
5. Supporting substructure

AUSTROPLAN roof liners are easily mechanically fastened



# AUSTROPLAN SEALING SYSTEMS



bonded roof system with AUSTROPLAN FG+V



applying the roof sheet adhesive

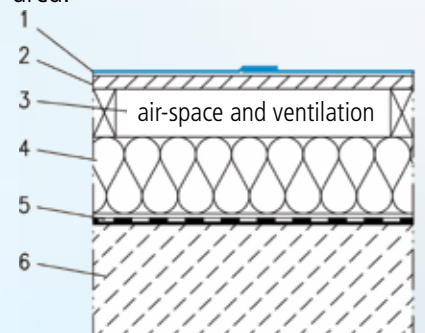
## Bonded roof system

The fleece backed AUSTROPLAN TPO FG+V roof liner is a special type for flat roof sealing which can be partially or fully bonded to the underground construction.

The fleece-covered roof liner is a special flat roof waterproof membrane variant, which is stuck together part- or full-laminar with the underground. The high flame protected AUSTROPLAN TPO FG liners are additionally laminated with 300 g fleece on the back side.

This method applies where common installation methods are not possible due to constructional conditions, e.g. where a mechanical fastening is not applicable or a ballasted roof is not possible because of the staticload.

This universal system can be applied for new buildings as well as for renovations and is quite independent from the slope and construction design of the roof area.



1. AUSTROPLAN FG+V
2. Top wood boarding
3. Air space
4. Thermal insulation
5. Vapour barrier
6. Substructure

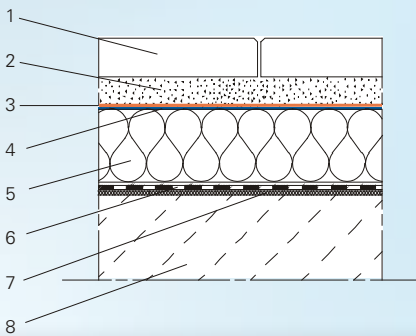
## Utility systems

Moisture barriers made with AUSTROPLAN TPO roof liners comply with any demands made on permanently water-proof flat roofs and building sealings.

The AUSTROPLAN TPO sealing systems laid beneath utility layers must be provided with suitable slipping and protection layers.



terrace with AUSTROPLAN sealed with roof liners and laid out with concrete plates



1. Concrete slabs
2. Split or gravel
3. Protective membrane subject to the requirements of the international standards
4. AUSTROPLAN FG or FG-V
5. Compression-proof thermal insulation
6. Vapour barrier
7. Compensation layer
8. Supporting substructure



reorganized business building with AUSTROPLAN TPO roof liner sealed

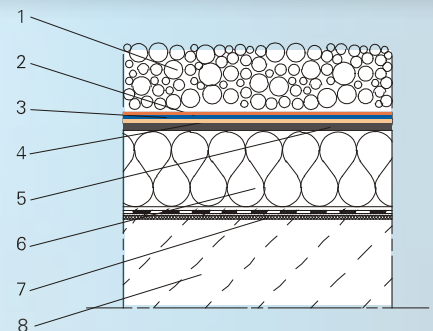


## The roof system for reroofing

The AUSTROPLAN TPO roof liner is perfectly suited for refurbishing of existing flat roofs. Additionally the combination fabric of glass fibre fabric and scrim offers best mechanical strengths.

A frictional connection between the existing sealing layer and the AUSTROPLAN TPO roof liner must be avoided.

The loosely laid AUSTROPLAN TPO roof liners are weighed down with a load against uplift (caused by wind suction forces) or are mechanically fastened.



1. Gravel
2. Protective membrane subject to the requirements of the international standards
3. AUSTROPLAN FG, FG+V or FVK
4. Fleece
5. Existing sealing system
6. Thermal insulation
7. Vapour barrier
8. Supporting substructure



# BUILDING ENGINEERING

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