

# EXPOSED ROOF SYSTEM IN TPO

Warm roof: with sealing element placed on top of the insulation element

## MECHANICAL FASTENING SYSTEM SUBSTRATE IN CORRUGATED SHEET



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### ■ SUPPORTING ELEMENT or SUBSTRATE

The substrate must:

1. Be smooth, sound, clean and free from debris and irregularities that may cause damage to the layers above
2. Be stable over time
3. Be chemically compatible with the roofing system components
4. be suitable for mechanical fixing
5. have an adequate slope. A flat or sub-horizontal roof must have a slope ranging from 1.5 and 5%.

### ■ VAPOUR BARRIER

It depends upon the hygrometry of the underlying structures. For further details please refer to the booklet "Vapour Barrier".

A vapour retarder may consist of:

- loose laid system: **VAPOR FLAG** or **VAPOBAC**.
- self adhered system **SOPRAVAP STICK-ALU** (also recommended for covering metal sheet overlaps).

### ■ INSULATION ELEMENT

- Mechanically fixed by means of screws for metal decks.
- Compatible with the warm roof system.
- It must have an adequate compressive resistance (UNI EN 826).
- The insulation boards should be fully bonded in order to avoid unabsorbed water and allow the overlaps to be adequately hot air welded by means of automatic equipment.

### ■ SEALING ELEMENT

**FLAGON EP/PR SC**, synthetic liner in polyolefin TPO/FPO modified reinforced with a polyester mesh, resistant to tearing under wind stress, resistant to ultraviolet rays, to puncturing, to weathering, and to root growth. It has signal layer and it is heat welded on the sheet overlaps.

It's BROOF T2 certified membrane according to UNI EN 13501-5 and UNI ENV 1187 fire classification from external fire exposure (*note 1*).

Mechanical fixing by means of self-drilling screws for metal decks and distribution plates (*note 2*).

The perimeter fixing at the base of the upstand must be performed with **Flag pre-drilled bar** in galvanized sheet iron.

Insert **Flag anti-puncturing joint** at the junction between two adjacent bars and hot-weld the tear prevention curb **FLAGOFIL TPO**.

### ■ PROTECTION

Where pedestrian traffic and pedestrian transit for maintenance operations is possible, the system must be protected by means of **FLAGON WALKWAY TPO**.

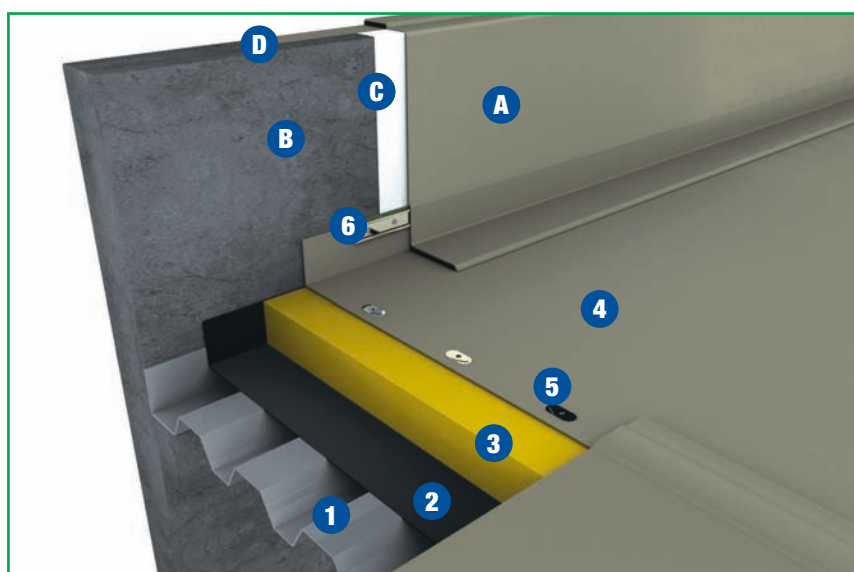
**Note 1:** to meet the requirements of a waterproof roof system BROOF T3 certified in accordance with UNI EN 13501-5 and UNI ENV 1187, a certified PVC membrane together with all the accessories approved by Flag must be applied.

**Note 2:** the membrane mechanical fixing to be used must be in accordance with UNI EN 1991-1-4:2005 provided by the manufacturing company.

### FLAGON EP/PR SC\*

	STANDARD SYSTEM	OPTIMUM SYSTEM	REINFORCED SYSTEM
Sealing Element	EP/PR SC - 1.5 mm	EP/PR SC - 2.0 mm	EP/PR SC - 2.4 mm
Insulation Element	YES	YES	YES
Vapour Barrier	YES	YES	YES
Slopes	1.5 % ≤ P ≤ 5 %	1.5 % ≤ P ≤ 5 %	1.5 % ≤ P ≤ 5 %

\*If a fire certificate in accordance with UNI EN 13501-5 and UNI ENV 1187 is not required, standard FLAGON EP/PR can be used.



#### Horizontal surface

1. Metal deck
2. Vapour Barrier
3. Insulation element
4. **FLAGON EP/PR SC**
6. Membrane fixing elements
7. Perimeter fixing by pre-drilled bar

#### Vertical surface

- A. **FLAGON EP/PR SC**
- B. h<50 cm FLEXOCOL TPO vertical gluing layer  
h>50 cm mechanical fixing
- C. Separating layer in non-woven felt (non-adhered roof system)
- D. Possible finishing elements:
  - Flagmetal termination strip and flashing
  - Flagmetal strip under cap
  - Flagmetal perimeter profile

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