

**DESCRIPTION:** Insulation board with a core of rigid polyurethane (PIR) foam covered with aluminium foil of 50µm on both sides, used as a thermal insulation for buildings in warm flat roofs under membrane waterproofing systems.

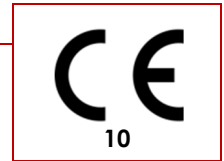
**PHYSICAL FEATURES:**

| Weight (kg/m <sup>2</sup> )                                | PANEL THICKNESS (mm) |      |      |                   |      |      |
|--|----------------------|------|------|-------------------|------|------|
|  | 40                   | 50   | 60   | 70 <sup>(3)</sup> | 80   | 100  |
| Width: 1.200 mm  | 1,28                 | 1,60 | 1,92 | ---               | 2,56 | 3,20 |
| Length: 2.500 <sup>(1)</sup> mm or 2.225 <sup>(2)</sup> mm |                      |      |      |                   |      |      |

<sup>(1)</sup> Std. for road shipments. (Ask for other sizes).

<sup>(2)</sup> Std. for sea shipments. (Ask for other sizes).

<sup>(3)</sup> Not authorized thickness.



EN 13165:2012

**TECHNICAL FEATURES:**

| CONCEPT   | SYMBOL  | NORM REF.   | DECLARED VALUE ± Tolerance:                           | UNIT                  | LEVEL/CLASS DECLARED       | NOTES                                    |
|---|---|-------------|---|-----------------------|----------------------------|--|
| Width   | b   | EN 822      | 1200 ±7,5   | mm                    | --                         | --                                       |
| Length  | l   | EN 822      | 2500 ±10  | mm                    | --                         | --                                       |
| Thickness   | d   | EN 823      | 40 ±2   | mm                    | T2                         | --                                       |
|   |   |             | 50 ±3   |                       |                            |  |
|   |   |             | 60 ±3   |                       |                            |  |
|   |   |             | ---   |                       |                            |  |
|   |   |             | 80 +5,-3  |                       |                            |  |
|   |   |             | 100 +5,-3   |                       |                            |  |
| Squareness  | S <sub>b</sub>  | EN 824      | < 5   | mm/m                  | --                         | On length and width                      |
| Flatness  | S <sub>max</sub>                                      | EN 825      | ≤ 10  | mm                    | --                         | On length                                |
| Thermal conductivity  | λ <sub>D</sub>  | EN 12667    | 0,023   | W/m*k                 | --                         | --                                       |
| Thermal resistance  | R <sub>D</sub>  | EN 12667    | 1,70  | m <sup>2</sup> *K/W   | --                         | Thk. = 40 mm                             |
|   |   |             | 2,15  |                       |                            | Thk. = 50 mm                             |
|   |   |             | 2,60  |                       |                            | Thk. = 60 mm                             |
|   |   |             | ---   |                       |                            | Thk. = 70 mm                             |
|   |   |             | 3,45  |                       |                            | Thk. = 80 mm                             |
|   |   |             | 4,35  |                       |                            | Thk. = 100 mm                            |
| Dimensional stability<br>(Under specified conditions: R.H. and T)<br><sup>(4)</sup> (48 ± 1)h at (70 ± 2)°C and (90 ± 5)% HR<br><sup>(5)</sup> (48 ± 1)h at (-20 ± 3)°C | Δε <sub>l</sub><br>Δε <sub>b</sub><br>Δε <sub>d</sub> | EN 1604     | Δε <sub>l</sub> ≤3 <sup>(4)</sup> ≤0,5 <sup>(5)</sup> | %                     | DS (70.90)2<br>DS (-20,-)2 | Thk. < 80 mm                             |
|   |   |             | Δε <sub>b</sub> ≤3 <sup>(4)</sup> ≤0,5 <sup>(5)</sup> |                       |                            |  |
|   |   |             | Δε <sub>d</sub> ≤8 <sup>(4)</sup> ≤2,0 <sup>(5)</sup> |                       |                            |  |
|   |   |             | Δε <sub>l</sub> ≤1 <sup>(4)</sup> ≤0,5 <sup>(5)</sup> |                       |                            |  |
|   |   |             | Δε <sub>b</sub> ≤1 <sup>(4)</sup> ≤0,5 <sup>(5)</sup> |                       |                            |  |
|   |   |             | Δε <sub>d</sub> ≤4 <sup>(4)</sup> ≤2,0 <sup>(5)</sup> |                       |                            |  |
|   |   |             |   |                       | DS (70.90)4<br>DS (-20,-)2 | Thk. ≥ 80 mm                             |
| Compressive stress  | σ <sub>10</sub>                                       | EN 826      | ≥ 120   | kPa                   | CS(10/Y)120                | At 10% Deformation                       |
| Tensile strength  | σ <sub>mt</sub>                                       | EN 1607     | ≥ 100   | kPa                   | TR100                      | Perpendicular to faces                   |
| Water absorption  | W <sub>if</sub>                                       | EN 12087    | ≤ 2   | %                     | WL(T)2                     | --                                       |
| Water vapour resistance   | Z   | EN 12086    | 20  | hm <sup>2</sup> Pa/mg | Z20                        | Value from the test of:<br><b>ALU 1U</b> |
| Reaction to fire<br>(Value end-use application)   | --  | EN 13501-1  | B-s2,d0   | --                    | --                         | Thk. ≤ 80 mm                             |
|   |   |             | B-s3,d0   |                       |                            | Thk. > 80 mm                             |
| Release dangerous substances  | TVOC  | ISO 16000-6 | < 1000  | µg/m <sup>3</sup>     | A+                         | --                                       |

**PROPERTIES:**

- ✓ Closed cell foam
- ✓ No melt / No drop
- ✓ FCF / HCFC Free
- ✓ Great internal cohesion (Not delaminate)

For any further clarification, you can contact Technical Department ([tecnico@europerfil.com](mailto:tecnico@europerfil.com) or by phone).  
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\* Información sur le niveau d'émission de substances volatiles dans l'air intérieur, présentée un régime de garantie par insulation, sur une échelle de classe allant de A+ (très faibles émissions) à C (faibles émissions).  
Valor de Total VOC (TVOC): 24