

## DOMOLAM WALL PANELS - PW

### DESCRIPTION:

The products DOMOLAM **PW** are self-supporting double skin metal faced insulating panels, which are factory manufactured from two metal sheets joined together with polyurethane foam.

### APPLICATION SCOPE:

The products are used for the covering of external and internal walls, as well as ceilings at several types of buildings, providing water and air tightness and thermal insulation.



### QUALITY:

Products are submitted to tests according to the EN 14509:2013.



### ENVIRONMENTAL PROTECTION:

The PIR HIGH INDEX foam consists of closed cells, is chemically neutral, non toxic, and is produced from environmentally friendly technology with N- Pentane as blow agent without the use of CFC, HCFC.



### TECHNICAL CHARACTERISTICS:

**PW** – The loads calculated are the necessities to obtain the max deformation in mm [span\*10] according to EN14509

| Panel thickness<br>(mm) | Metal sheet thickness<br>(mm) | Weight<br>(kg/m <sup>2</sup> ) | U-Value<br>(W/m <sup>2</sup> K) | Span<br>(m)               | Single span |      |      |      |      |      |      |      |
|-------------------------|-------------------------------|--------------------------------|---------------------------------|---------------------------|-------------|------|------|------|------|------|------|------|
|                         |                               |                                |                                 |                           | 1,5         | 2,0  | 2,5  | 3,0  | 3,5  | 4,0  | 4,5  | 5,0  |
| 30                      | 0,50-0,45                     | 9,44                           | 0,72                            | q<br>(kN/m <sup>2</sup> ) | 2,08        | 0,93 | 0,47 | 0,26 | 0,16 | 0,10 | 0,06 | 0,04 |
| 40                      |                               | 9,85                           | 0,54                            |                           | 3,02        | 1,41 | 0,74 | 0,42 | 0,25 | 0,16 | 0,11 | 0,07 |
| 50                      |                               | 10,26                          | 0,43                            |                           | 3,99        | 1,91 | 1,03 | 0,59 | 0,37 | 0,24 | 0,16 | 0,11 |
| 60                      |                               | 10,67                          | 0,36                            |                           | 4,98        | 2,43 | 1,33 | 0,78 | 0,49 | 0,32 | 0,22 | 0,15 |
| 80                      |                               | 11,49                          | 0,27                            |                           | 6,98        | 3,51 | 1,97 | 1,19 | 0,76 | 0,51 | 0,35 | 0,25 |
| 100                     |                               | 12,31                          | 0,22                            |                           | 9,01        | 4,61 | 2,64 | 1,63 | 1,06 | 0,71 | 0,50 | 0,35 |

## DECLARATION OF PERFORMANCE No.1/PIR HIGH INDEX/WALL

- |                                                                                                                                                             |                                                                                                                                     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| 1. Unique identification code of the product-type:                                                                                                          | DOMOLAM PIR HIGH INDEX PW                                                                                                           |
| 2. Type, batch or serial number or any other element allowing identification of the construction product as required pursuant to Article 11(4):             | PW-F, PW-D, PW-LC, PW-C, PW-B, PW-V, PW-LCV, PW-1SF, PW-2SF, PW-4SF, PW-1SV, PW-2SV, PW-4SV, PW-1SC, PW-LCV, PW-4SC, PW-1SD, PW-4SD |
| 3. Intended use or uses of the construction product, in accordance with the applicable harmonized technical specification, as foreseen by the manufacturer: | Self supporting double skin metal faced insulating panels - External or internal walls & ceilings                                   |
| 4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant to Article 11(5):                      | PAGOUNI S.A., 57008 Echedoros, Thessaloniki, Greece                                                                                 |
| 5. Where applicable, name and contact address of the authorized representative whose mandate covers the tasks specified in Article 12(2):                   | Not relevant                                                                                                                        |
| 6. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:                          | AVCP – System 1                                                                                                                     |
| 7. In case of the declaration of performance concerning a construction product covered by a harmonized standard:                                            | CSI SPA No. 0497 – EN 14509:2013                                                                                                    |
| 8. In case of the declaration of performance concerning a construction product for which a European Technical Assessment has been issued:                   | Not relevant                                                                                                                        |

9. Declared performance

| Essential characteristics                       | Performance              | Harmonized technical specification |
|-------------------------------------------------|--------------------------|------------------------------------|
| External pre-painted galvanized steel           | S280+Z140                | EN 10346                           |
| Internal pre-painted galvanized steel           | S280+Z140                |                                    |
| <b>Thickness in mm</b>                          | 30,40,50,60,80,100       | EN 14509                           |
| External pre-painted galvanized steel thickness | 0,35;0,40;0,45;0,50;0,55 | EN 10143                           |
| Internal pre-painted galvanized steel thickness | 0,30;0,35;0,40;0,45;0,50 |                                    |
| External coating (µm)                           | Standard Polyester 20+5  | EN 10169                           |
| Internal coating (µm)                           |                          |                                    |
| Density (kg/m <sup>3</sup> )                    | 45                       | EN 1602                            |

|                                                 |                  |                  |              |
|-------------------------------------------------|------------------|------------------|--------------|
| <b>Thermal conductivity (W/mK)</b>              | 0,0215           |                  | EN 13165     |
| <b>Thermal transmittance (W/m<sup>2</sup>K)</b> | <b>Thickness</b> | <b>U - Value</b> | EN ISO 10456 |
|                                                 | 30               | 0,72             |              |
|                                                 | 40               | 0,54             |              |
|                                                 | 50               | 0,43             |              |
|                                                 | 60               | 0,36             |              |
|                                                 | 80               | 0,27             |              |
|                                                 | 100              | 0,22             |              |

|                           |                  |                   |            |
|---------------------------|------------------|-------------------|------------|
| <b>Reaction to fire</b>   | B-s2-d0          |                   | EN 13501-1 |
| <b>Resistance to fire</b> | <b>Thickness</b> | <b>Resistance</b> | EN 13501-2 |
|                           | 30               | NPD               |            |
|                           | 40               |                   |            |
|                           | 50               |                   |            |
|                           | 60               |                   |            |
|                           | 80               |                   |            |
|                           | 100              | EI 30 : E 60      |            |

|                                      |                                                 |              |
|--------------------------------------|-------------------------------------------------|--------------|
| Water permeability                   | Class A                                         | EN 12865     |
| Water vapour permeability            | Impermeable                                     | EN 14509     |
| Air permeability                     | 0,19 m <sup>3</sup> /m <sup>2</sup> /h at 50 Pa | EN 12114     |
| Airborne sound insulation $R_w$ (dB) | 25                                              | EN ISO 717-1 |
| Sound absorption $a_w$               | 0,10                                            | EN ISO 11654 |
| Durability                           | Pass                                            | EN 14509     |

**Mechanical resistance**

|                                                     |           |           |            |          |
|-----------------------------------------------------|-----------|-----------|------------|----------|
| Tensile strength (MPa)                              | 0,14      |           |            | EN 14509 |
| Compressive strength (MPa)                          | 0,12      |           |            |          |
| Shear strength (MPa)                                | 0,10      |           |            |          |
| Shear modulus (MPa)                                 | 2,80      |           |            |          |
| Wrinkling stress (external face)<br>panel thickness | <b>30</b> | <b>60</b> | <b>100</b> |          |
| - in span (MPa)                                     | 96        | 115       | 140        |          |
| - in span, elevated temperature (MPa)               | 94        | 112       | 134        |          |
| - at central support (MPa)                          | 92        | 100       | 129        |          |
| - at central support, elevated<br>temperature (MPa) | 90        | 98        | 127        |          |
| Wrinkling stress (internal face)<br>panel thickness | <b>30</b> | <b>60</b> | <b>100</b> |          |
| - in span (MPa)                                     | 85        | 90        | 110        |          |
| - at central support (MPa)                          | 80        | 86        | 95         |          |

10. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 9.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.

Signed for and on behalf of the manufacturer by:



Vrellas Charisis - Quality Engineer of Pagouni SA

Thessaloniki 21.06.2019