



DECLARATION OF PERFORMANCE

no. D/03/2022

Unique identification code of the product-type:

GS PIR D [thickness d_N] [modular width: 1000] [outer/inner profilation: T / L, P]

Harmonised standard: EN 14509:2013

System/s of AVCP: System 1

Notified body/ies: ICiMB (Nr 1487), FIRES (Nr 1396), ITB (1488)

Intended use/es: Roofs

Manufacturer: GÓR-STAL Sp. z o.o., ul. Przemysłowa 11, 38-300 Gorlice, POLAND

Declared performance/s:

| Unique identification code of the product-type | | | GS PIR D40 | GS PIR D60 | GS PIR D80 | GS PIR D100 | GS PIR D120 | GS PIR D150 | GS PIR D160 | Classification | | | | |
|---|--|--|---|--|--|-------------|-----------------|-------------|-------------|----------------|---------------|-------|-------|-------|
| module: 1000, profilation: T / L, P | | | | | | | | | | | | | | |
| Thickness | | | 40/80 mm | 60/100 mm | 80/120 mm | 100/140 mm | 120/160 mm | 150/190 mm | 160/200 mm | | | | | |
| Essential characteristics / Parameters | | | Value of parameters | | | | | | | | EN 14509:2013 | | | |
| Thermal properties | | | | | | | | | | | | | | |
| Thermal conductivity, λ_D | | | W/m·K | | 0,022 | | | | | | | | | |
| Thermal transmittance, $U_{d,s}$ | | | W/m ² ·K | | 0,55 | 0,37 | 0,27 | 0,22 | 0,18 | 0,15 | | 0,14 | | |
| Mechanical properties | | | | | | | | | | | | | | |
| Compressive strength (core) | | | MPa | | 0,10 | | | | | | | | | |
| Tensile strength | | | MPa | | 0,060 | | | | | | | | | |
| Shear strength | | | MPa | | 0,13 | 0,12 | 0,10 | 0,10 | 0,10 | 0,080 | | 0,080 | | |
| Shear modulus (core) | | | MPa | | 3,20 | 3,20 | 3,00 | 2,90 | 2,80 | 2,4 | | 2,40 | | |
| Bending resistance in the span | | | (+) | ambient temperature | kN·m | | 2,72 | 4,08 | 5,44 | 6,80 | | 8,16 | 10,20 | 10,88 |
| Bending resistance in the span | | | (-) | | kN·m | | 1,60 | 2,40 | 3,20 | 4,00 | | 4,80 | 6,00 | 6,40 |
| Bending resist. at internal support | | | (+) | | kN·m | | 2,05 | 3,07 | 4,10 | 5,12 | | 6,15 | 7,68 | 8,20 |
| Bending resist. at internal support | | | (-) | | kN·m | | 2,30 | 3,45 | 4,60 | 5,75 | | 6,90 | 8,62 | 9,20 |
| Bending resistance in the span | | | (+) | elevated temperature | kN·m | | 2,66 | 3,99 | 5,33 | 6,66 | | 7,99 | 9,99 | 10,66 |
| Bending resistance in the span | | | (-) | | kN·m | | 1,56 | 2,35 | 3,13 | 3,92 | | 4,70 | 5,88 | 6,27 |
| Bending resist. at internal support | | | (+) | | kN·m | | 2,00 | 3,00 | 4,01 | 5,01 | | 6,02 | 7,52 | 8,03 |
| Bending resist. at internal support | | | (-) | | kN·m | | 2,25 | 3,38 | 4,50 | 5,63 | | 6,76 | 8,44 | 9,01 |
| Creep coefficient | | | for $t=2.000h$: | | 0,67 (for 0,5/0,5); 0,79 (for 0,5/0,4); 0,91 (for 0,4/0,4) | | | | | | | 0,69 | | |
| | | | for $t=100.000h$: | | 1,09 (for 0,5/0,5); 1,14 (for 0,5/0,4); 1,33 (for 0,4/0,4) | | | | | | | 0,83 | | |
| Reduced long term shear strength (40%) | | | MPa | | 0,052 | 0,048 | 0,040 | 0,040 | 0,040 | 0,034 | | 0,034 | | |
| Reaction to fire (all applications) | | | B-s1,d0 | | | | | | | | | | | |
| Fire resistance (details in the classification) | | | NPD | | | | REI 30 / RE 120 | | | | | | | |
| External fire performance | | | B _{roof} | | | | | | | | | | | |
| Water permeability | | | Class A | | | | | | | | | | | |
| Air permeability | | | (+) | C=0,0046 m ³ /(hPa ⁿ ·n), n=1,2421 | | | | | | | | | | |
| | | | (-) | C=0,0033 m ³ /(hPa ⁿ ·n), n=1,0658 | | | | | | | | | | |
| Airborne sound insulation | | | 24(-1,-3) (for 0,5/0,5 & 0,5/0,4); 24(-2,-4) (for 0,4/0,4); [dB] | | | | | | | | | | | |
| Dimensional tolerances | | | „Pass” (Thickness: $\pm 2mm$ for $\leq 100mm$ and 2% for $\geq 100mm$) | | | | | | | | | | | |
| Durability – all colours | | | „Pass” | | | | | | | | | | | |
| Dengerous substances | | | NPD | | | | | | | | | | | |

The performance of the product identified above is in conformity with the set of declared performance/s. This declaration of performance is issued, in accordance with Regulation (EU) No 305/2011, under the sole responsibility of the manufacturer identified above.

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