

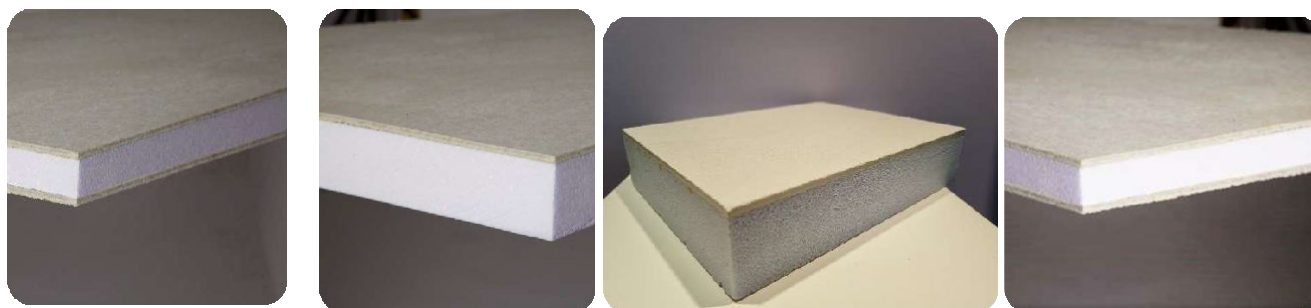
FABRICATION

XPS SOLUTIONS FOR INDUSTRIAL APPLICATIONS

X-FOAM COREVO

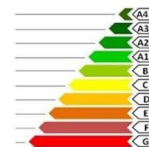
EXTRUDED POLYSTYRENE SANDWICH PANEL COREVO FOAM/H

Thermal insulation: XPS COREVO FOAM/H Covering:
RIGID CLASS A SUPPORTS



X-FOAM COREVO is a sandwich panel made from an extruded polystyrene foam sheet XPS **X-FOAM MLB INDIGO (600)** or **X-FOAM MLB INDIGO (1200)**. It is coupled on one or both sides with: one or two rigid 4 mm Euroclass A fire reaction supports.

| RIGID SUPPORTS | NORM | UNIT | VALUES |
|---|---------------------------------------|-------------------|--|
| Insulation thicknesses | EN 823 | mm | 20 ÷ 120 |
| Rigid Mounts | | mm | 4 |
| Thickness tolerance Thicknesses from 20 mm to 120 mm | EN 823 EN 13164 | mm | ± 0.5 |
| Length | EN 822 | mm | 2.500 – 3.000 |
| Width | EN 822 | mm | 600 - 1.200 |
| Length Tolerance (l) | EN 13164 | mm | l: ≤ 50 th: - 0/+10 l: ≥ 50 th: - 0/+15 |
| Width tolerance (b) | EN 13164 | mm | b: ≤ 700: - 0/+3 b: ≥ 700: - 0/+5 |
| Orthogonality tolerance (Sb) | EN 824: EN 13164 | mm/m | 2 |
| Flatness tolerance (Smax) | EN 825: EN 13164 | mm/m | 3 |
| Insulation density | | kg/m ³ | 30+33 ± 10% |
| Insulating specific heat | | J/kgK | 1.450 |
| Sheet profile | Straight edge | | |
| Insulation surface finish | Rough surface with or without grooves | | |



| PROPERTIES | NORM | UNIT | VALUES | |
|--|----------------------|--|-------------|------|
| Declared thermal Conductivity (λ D) Declared thermal Resistance (RD) | | | λ D | RD |
| Thicknesses 6 ÷ 19 mm | EN 13164 EN 12667 | λ D: W/mK RD: m ² K/W | 0,034 | |
| Thickness 20 mm | EN 13164 EN 12667 | λ D: W/mK RD: m ² K/W | 0,031 | 0,60 |
| Thicknesses 21 ÷ 29 mm | EN 13164 EN 12667 | λ D: W/mK RD: m ² K/W | 0,031 | |
| Thickness 30 mm | EN 13164 EN 12667 | λ D: W/mK RD: m ² K/W | 0,031 | 0,95 |
| Thicknesses 31 ÷ 39 mm | EN 13164 EN 12667 | λ D: W/mK RD: m ² K/W | 0,032 | |
| Thickness 40 mm | EN 13164 EN 12667 | λ D: W/mK RD: m ² K/W | 0,032 | 1,25 |
| Thicknesses 41 ÷ 49 mm | EN 13164 EN 12667 | λ D: W/mK RD: m ² K/W | 0,033 | |
| Thickness 50 mm | EN 13164 EN 12667 | λ D: W/mK RD: m ² K/W | 0,033 | 1,50 |
| Thicknesses 51 ÷ 59 mm | EN 13164 EN 12667 | λ D: W/mK RD: m ² K/W | 0,033 | |
| Thickness 60 mm | EN 13164 EN 12667 | λ D: W/mK RD: m ² K/W | 0,033 | 1,80 |
| Thicknesses 61 ÷ 79 mm | EN 13164 EN 12667 | λ D: W/mK RD: m ² K/W | 0,034 | |
| Thickness 80 mm | EN 13164 EN 12667 | λ D: W/mK RD: m ² K/W | 0,034 | 2,35 |
| Thicknesses 81 ÷ 99 mm | EN 13164 EN 12667 | λ D: W/mK RD: m ² K/W | 0,034 | |
| Thickness 100 mm | EN 13164 EN 12667 | λ D: W/mK RD: m ² K/W | 0,034 | 2,90 |
| Thicknesses 91 ÷ 119 mm | EN 13164 EN 12667 | λ D: W/mK RD: m ² K/W | 0,034 | |
| Thickness 120 mm | EN 13164 EN 12667 | λ D: W/mK RD: m ² K/W | 0,035 | 3,40 |
| RD calculation formula for intermediate thicknesses: Thickness [m] / λD [W/mK] | | | | |



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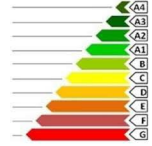
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Compressive strength at 10% strain due to load or break (kPa)

| | | | |
|---|-----------|-----|-----------------|
| Thicknesses 6 ÷ 19 mm | EN 29469: | kPa | ≥ 300 |
| Thicknesses 20 ÷ 40 mm | EN 29469: | kPa | ≥ 200 |
| Thicknesses 50 ÷ 60 mm | EN 29469: | kPa | ≥ 250 |
| Thicknesses 61 ÷ 120 mm | EN 29469: | kPa | ≥ 300 |
| Compressive elastic modulus | EN 29469: | kPa | 10 000 |
| Tensile elastic modulus | EN 12086: | kPa | 5 000 |
| Shear resistance | EN 12086: | kPa | ≥ 260 |
| Shear elastic modulus | EN 12086: | kPa | 2700 |
| Traction perpendicular to faces | EN 12087: | kPa | ≥ 600 – TR600 |
| Dimensional stability at 70°C and 90% RH. Changes in thickness, length and Width | EN 1604: | % | ≤ 5 – SD(70,90) |
| Deformation behavior. Cond. 70 °C, 168 hours, 40 kPa test | EN 1605: | % | ≤ 5 – DLT(2)5 |



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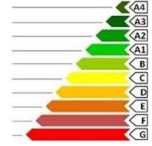
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| | | | |
|--|-----------------------|----------------|--|
| Water absorption by immersion (28 days) | EN 16535:2019 | Vol % | ≤ 0.7 – WL(T)0.7 |
| Water absorption by diffusion (28 days) | EN 16536:2019 | Vol % | ≤ 3% – WD(V)3 th.< 60 ≤ 2% – WD(V)2 sp. 60 ≤ 1% – WD(V)1 sp.> 60 |
| Resistance to water vapour diffusion (μ) | EN 12086:2013 | | MU 80 |
| Frost behaviour (alternating freeze-thaw) after water absorption for Long-term diffusion Thicknesses < 60 mm | EN 12091:2013 | Vol % | ≤ 2 – FTCD1 |
| Frost behaviour (alternating freeze-thaw) after water absorption by long-term diffusion Thicknesses ≥ 60 mm | EN 12091:2013 | Vol % | ≤ 1 – FTCD2 |
| Reaction to fire | EN 13501-1 | Euroclass | E |
| Temperature limit of use | | °C | + 75 |
| Closed Cell Media | | % | > 96 |
| VOCs (Volatile Organic Compounds) | EN 16516 ISO 16000 | Class/Protocol | A+, Leed, Well, Bream |

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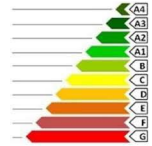
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Example of X-FOAM COREVO product calculation:

- It is a sandwich consisting of an extruded polystyrene core **X-FOAM MLB INDIGO (600) or X-FOAM MLB INDIGO (1200)** with one or two surfaces finished with one or two coatings in **FIBER cement** reinforced with mineralized cellulose fibers.
- They are manufactured in a company where there is an internal Quality System in accordance with **UNI EN ISO 9001:2008**
- The qualitative, physical, mechanical and dimensional parameters are carefully and frequently checked, so that they comply with the internal technical specifications and the values declared in our literature.
- After having carried out the appropriate thermal calculations, considering the materials that make up the

The total Thermal Resistance values of the **X-FOAM COREVO Panel** are estimated to be:

- Nominal thickness of **FIBROCEMENT C slab**: 4 mm
- Average density of **FIBROCEMENT C slab**: Kg/m³ 1,600 ± 10%
- Specific heat of **the FIBRE cement C slab**: J/kgK 1440
- Thermal conductivity of **the FIBROCEMENT C slab**: W/mk 0.48

Declared thermal resistance at 10 °C of **the insulation X-FOAM MLB INDIGO (600) and X-FOAM MLB INDIGO (1200)** according to the European standard **EN 13164**

| XPS THICKNESS (mm) | 8 | 10 | 16 | 17 | 20 | 28 | 30 | 40 | 50 | 60 | 80 | 100 | 120 |
|------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| RD (m2K/W) | 0,20 | 0,30 | 0,50 | 0,50 | 0,60 | 0,90 | 0,95 | 1,25 | 1,50 | 1,80 | 2,35 | 2,90 | 3,40 |
| FIBROCEMNETO C (mm) | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| RD (m2K/W) | 0.008 | 0.008 | 0.008 | 0.008 | 0.008 | 0.008 | 0.008 | 0.008 | 0.008 | 0.008 | 0.008 | 0.008 | 0.008 |
| RD Tot (m2K/W) | 0,244 | 0,302 | 0,524 | 0,557 | 0,653 | 0,912 | 0,976 | 1,258 | 1,523 | 1,827 | 2,361 | 2,950 | 3,437 |

- Nominal **thickness of sheet MAGNESIUM OXIDE W**: 4 mm
- Density of **sheet MAGNESIUM OXIDE W**: Kg/m³ 1.000 ± 10%
- Specific heat of **sheet MAGNESIUM OXIDE W**: J/kgK 930
- Thermal conductivity of **the sheet MAGNESIUM OXIDE W**: W/mk 0.45

Declared thermal resistance at 10 °C of **the insulation X-FOAM MLB INDIGO (600) and X-FOAM MLB INDIGO (1200)** according to the European standard **EN 13164**

| XPS THICKNESS (mm) | 8 | 10 | 16 | 17 | 20 | 28 | 30 | 40 | 50 | 60 | 80 | 100 | 120 |
|-------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| RD (m2K/W) | 0,20 | 0,30 | 0,50 | 0,50 | 0,60 | 0,90 | 0,95 | 1,25 | 1,50 | 1,80 | 2,35 | 2,90 | 3,40 |
| MAGNESIUM OXIDE W (mm) | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| RD (m2K/W) | 0.009 | 0.009 | 0.009 | 0.009 | 0.009 | 0.009 | 0.009 | 0.009 | 0.009 | 0.009 | 0.009 | 0.009 | 0.009 |
| RD Tot (m2K/W) | 0,245 | 0,303 | 0,525 | 0,558 | 0,654 | 0,913 | 0,977 | 1,259 | 1,524 | 1,828 | 2,362 | 2,951 | 3,48 |



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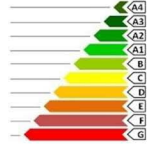
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