

Ultimate energy efficiency
for your building
 $\lambda=0.022 \text{ W}/(\text{m}^*\text{K})$

SIP PANELS WITH PUR CLASSIC: FAST AND ENERGY EFFICIENT

Use of PH Insulation SIPs with PUR Classic

PH Insulation's structural insulated panels – SIPs – with polyurethane foam PUR Classic offer an exceptional mix of energy efficiency and speed for construction of residential buildings. If you need the advanced prefabricated buildings components to build a cottage, a hunting base, a shift or a construction camp, anywhere in the world, opt for the PH Insulation SIP panels.

The SIPs are used to build the structural, load bearing elements: walls, ceilings, roofs, and partitions. The rigidity of the PH Insulation SIPs is guaranteed by the characteristics of oriented strand boards – OSB – that cover the PUR insulation core on both sides.

How you will benefit with PH Insulation SIPs at construction:

- You will save time on construction. SIPs arrive at the jobsite already prefabricated at our manufacturing facility
- You will spend less on foundation. The PUR Classic polyurethane weighs twice as less compared to the weight of wool insulator, and 10 times less than bricks
- You will save money on heating or cooling: polyurethane is the most advanced and high-performance insulator. Its thermal conductivity is twice lower than that of mineral wool: $\lambda=0.022 \text{ W/(m}\cdot\text{K)}$

Why choose SIP with PUR?

- It is durable: PH Insulation SIPs resist temperatures from -50°C to $+50^{\circ}\text{C}$. The service life of SIPs is beyond any limit due to the nature of polyurethane
- It is eco-friendly: E-1 class
- It is easily used for interior decoration: the walls and corners assembled with SIPs stay ideally straight at 90 degrees without any special effort. The oriented strand boards OSB allow for fast design solutions
- It is water resistant: wet rot would not occur on SIPs in damp conditions
- No rodents or insects would enter your walls due to the nature of polyurethane

Installation

The PH Insulation SIP panels are totally easy to assemble – a team of 3-4 people will assemble a 150-200 m² house in 2 or 3 weeks. The PH Insulation SIPs are factory-made to the size that suits your exact requirements. Unique docking spike-groove lock designed by PH Insulation speeds up the docking and guarantees the energy efficiency of the building.



Structure of the SIPs

The SIPs are composed of three layers to provide superior durability and keep your house warm in winter or cool in summer.

SIPs provide durability with the rigid covering by the oriented strand boards (OSBs) on both sides. OSB consists of several perpendicularly directed layers of elongated softwood chips. Wood chips are compressed and tarred so that they withstand stratification, cracking and voids. Due to the water-resistant waxes used to manufacture the OSB boards, the SIPs are not susceptible to rot, mold attack, would not take in water. The OSB's thickness — 12 or 15 mm (0.47" or 0.59").

Energy efficiency is achieved with polyurethane foam insulator PUR Classic. The density of PUR Classic is 42-45 kg/m³, thermal conductivity ratio $k=0.022 \text{ W/(m}\cdot\text{K)}$. Long-lasting bonding of the insulator to the OSBs is guaranteed by the adhesiveness of the polyurethane foam. The PH Insulation SIPs spike-groove joints eliminate the cold bridges.

Technical Specifications

Length: 2 800 mm (9'1")

Width: 1 250 mm (4'1")

Thickness of insulation: 100, 150, 200 mm (3.9", 5.9", 7.8")

Total thickness: with 12 mm (0.47") OSBs: 124, 174, 224 mm (4.8", 6.8", 8.8")

with 15 mm (0.59") OSBs: 130, 180, 230 mm (5.1", 7", 9")



The SIPs' Joints



Floors joint



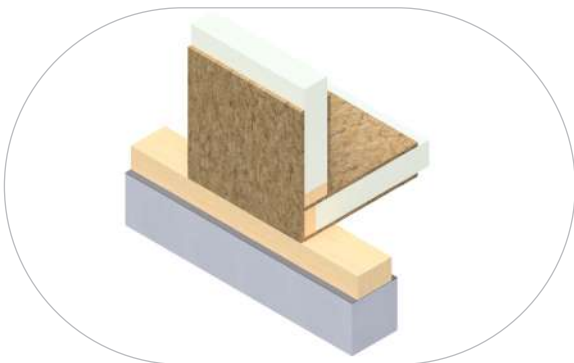
Inter-floor connection



45° connection



90° degree connection



Wall and floor connection



Wall, roof, and ceiling connection



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COLD & FREEZER ROOM DOORS, SOLAR PANELS**

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