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Structural Insulated Panels (SIPs)

DESCRIPTION

Designed for use in the construction industry and used as an alternative to traditional methods for not only structural wall but also roof and floor applications in both residential and commercial markets. Growing rapidly in popularity with major benefits over traditional methods and materials including improved efficiency and accuracy, greatly reduced onsite build times and therefore labour time and costs and inherently higher thermal performance.

The standard and most commonly used construction consists of OSB3 skins with EPS100 rigid foam core, creating a structurally strong, rigid, lightweight and highly insulated sandwich composite. Alternative core materials are possible however, including Premium EPS, containing a graphite additive or others such as PU foam with greater insulation properties still. Alternative facing materials can similarly be specified where required to best suit the overall requirements of the application.

The panels are available in a variety of sizes and thicknesses including many options to bespoke customer requirements.

We can additionally offer other services to best achieve your precise specification including bespoke cut/angled shapes or pre-machined door and window apertures. In some cases pre-finished panel surfaces can be appropriate and still more advantageous for which we can also laminate aesthetic or protective facings such as PVC, GRP or coated aluminium or steel.

TYPICAL APPLICATIONS

- Offsite and modular construction.
- Residential, New Builds and Extensions
- Commercial, Office, Education
- "Garden Rooms" for home office or leisure use

STANDARD PANEL CONSTRUCTION

Skins, Oriented Strand Board (OSB3)

Under EN 300, OSB3 is classified as a load-bearing panel for use in humid conditions. Thickness 11mm. Also possible 9mm or others on request. More detailed data sheet available upon request.

Core, EPS100 Rigid Foam

Expanded Polystyrene rigid foam. Compressive strength 100kPa nominal @ 10% comp'n. Density 20kg/m³ nominal. Thermal Conductivity 0.036W/mK. More detailed data sheet available upon request.

Adhesive

Polyurethane based 2-part liquid, giving excellent compatibility with the materials being bonded, good thermal and moisture resistance.

DIMENSIONS, WEIGHT, THERMAL

Panel Thickness (mm)	100	125	150	175
Face Thickness (mm)	11	11	11	11
Core Thickness (mm)	78	103	128	153
Weight (Kg/m ²)	13.0	13.9	14.5	15.2
U value, Std EPS100 (W/m ² K)	0.43	0.33	0.27	0.23
U value, Premium EPS (W/m ² K)	0.36	0.28	0.23	0.19

Standard Nominal Panel Sizes:-

Lengths, 2.4m, 3.0m, 3.6m, 4.0m
Width 1.2m

Standard Edge Rebating: Where rebated core edges are required, standard options are 38mm or 50mm depth all four sides.

Standard thickness tolerance: +/-1mm

Standard flatness tolerance: L/400

Standard packing: Palletised, typical pack height range 1200-1800mm approx excl pallet.

(NB Figures given above relate to standard options and are indicative and correct at time of printing. Other bespoke specifications, sizes, thicknesses are also available. Please contact us for more information)