



STYROPAN

STYROPAN



Styropan is the brand name of Kilzi & Co. for Expanded Polystyrene (EPS) since 1964.

EPS is the abbreviation for “expanded polystyrene” and is the currently used term in industry.

Expanded polystyrene has been one of the most widely used forms of insulation in the world for over 50 years, particularly in the design of high energy efficiency buildings. Whatever their dimension or thickness, rigid EPS boards can be used to insulate roofs, walls and foundations no matter what the structure or exterior finish. EPS insulation is appreciated by architects, estimators and contractors for its value, its versatility, its ease of installation and its insulation value/price ratio.

Technical advantages

- Low weight, high compression strength.
- High insulation value, constant over time (without ageing effects, for example from decreasing content of blowing agents and / or increasing moisture content).
- Easy, clean and safe to work with.
- Freedom to design practically any shape by molding or cutting.
- Closed cell foam, inert, biologically neutral.
- Available in Fire Retardant quality, upon request.

Health and safety aspects

- No irritation to skin, eyes or lungs from released fibers or dust.
- No personal protective equipment or clothing needed.

Environmentally friendly

- Durable, because it doesn't degenerate by moisture, rotting, mould, or compact by vibration.
- Low environmental impact during production.
- Easily and completely recyclable.
- Free from formaldehyde, (H) CFC's and other ozone depleting blowing agents.

Competitive price

- The most cost-effective insulation.

STYROPAN



Styropan

- **Dimension:** 200x100 cm-100x100 cm-100x50 cm
- **Thickness:** 0,5 to 50 cm
- **Density:** From 10 Kg/m³ to 40 Kg/m³.
- **Facing and covering:** Unfaced.
- **Application fields:** Boards for thermal and sound insulation for double walls, floors, ceilings, roofs, hangars and cold storage room. Expansion joint in concrete work. Void filler in concrete.



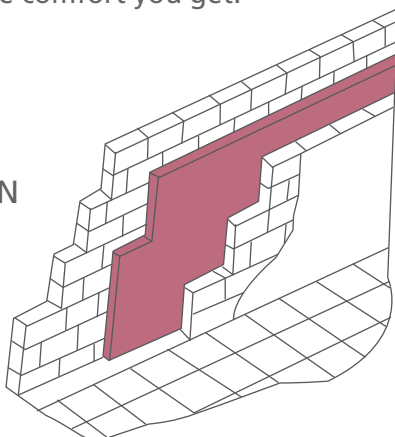
INSULATION OF BUILDINGS

Recommended thicknesses of styropan insulation

- **Roof insulation:** 3 to 6 cm
- **Wall insulation:** 2 to 5 cm
- **Floor insulation:** 2 to 4 cm

The lower thickness values being for lower altitude regions, keeping in mind that the thicker the insulation, the more saving on energy cost and the more comfort you get.

STYROPAN WALL INSULATION



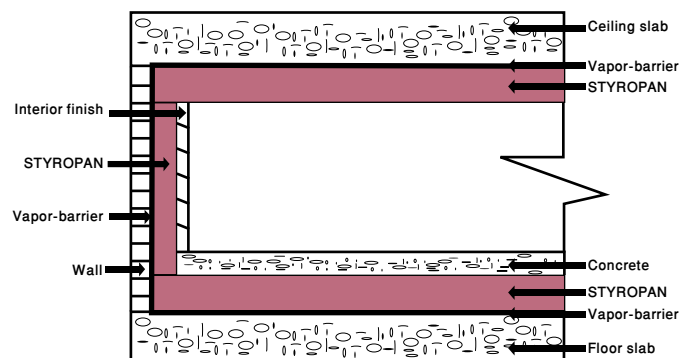
INSULATION OF REFRIGERATING AND FREEZING WAREHOUSES

The use on insulation is absolutely imperative in the refrigerated warehouses and freezers. It is equally important as the refrigeration machinery, and STYROPAN is the most suitable for this purpose.

RECOMMENDED STYROPAN THICKNESSES (based on average outdoor temp. 30°C)

WAREHOUSE TEMPERATURE (°C)	STYROPAN INSULATION (Cm)
10	5
5	10
0	12
-5	14
-18	20
-24	24
-30	28
-35	30

Section through an insulated room

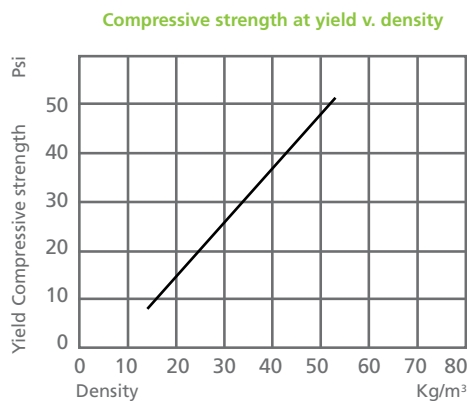
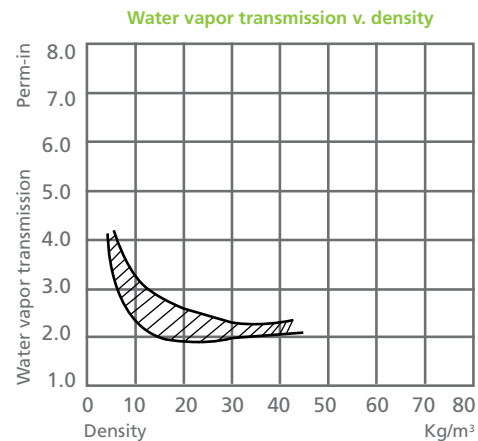
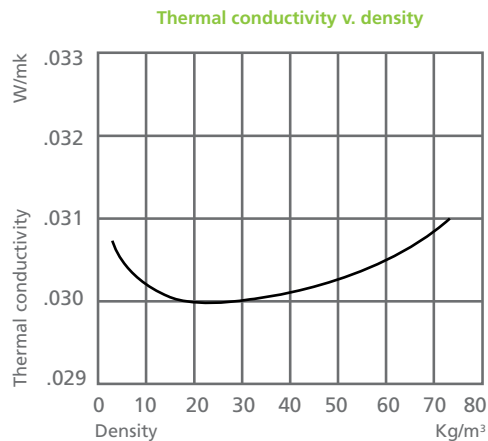


STYROPAN



STYROPAN DATA SHEET

- **Density:** 10 to 40 Kg/m²
- **Thermal conductivity:** 0.030 W/mK
- **Compressive strength:** 12 to 40 psi (0.8 to 2.5 Kg/cm²)
- **Water absorption:** 1.5% in volume after several months.
- **Water vapor transmission:** 2.4 perm.- in (0.8 g/sq.m 24 Hr)
- **Coefficient of expansion:** 7×10^{-5} per deg. C
- **Acoustical properties:** a) Airborne sound absorption is best achieved at about 600 Hz.
b) Excellent impact sound reduction is obtained using the floating-floor system with pre-compressed Styropan (resilient).
- **Fire resistance:** Can be supplied as self extinguishing quality upon special request.



STYROPAN

Styrobeads

- **Bead size:** 0.8 to 2.5 mm
- **Density:** 13 Kg/m³,
other density are available upon request.
- **Available in:** 1- 2.5 - 3 - 3.5 Kg Plastic bag.
- **Application fields:** Light weight concrete, furniture filling, decoration, packaging etc.



LIGHTWEIGHT CONCRETE USING STYROBEADS

Styrobeads - filled lightweight concrete differs from other forms of lightweight concrete because of the special properties of the Expanded Polystyrene.
These beads occupy 60-70% of the volume.

The Styropan beads which take the place of the aggregates have the following properties:

- Extremely low apparent density,
- Outstandingly low thermal conductivity,
- Negligible moisture uptake because of the closed cellular structure,
- Regularly spherical form leading to the formation of the cement matrix with comparatively high compressive strength.

The lightweight concrete density ranges between 200 and 900 Kg/m³.
600 Kg/m³ is the most adequate density for light-weight concrete.

At this density there is sufficient cement to fill the interstitial spaces between the Styrobeads, and enough strength in the concrete.
The density of the Styrobeads is around 13 Kg/m³.
9 Kg of Styrobeads are to be put in every cubic meter of the lightweight concrete mix representing about 60-70% of its volume.

LIGHTWEIGHT CONCRETE MIXES DATA SHEET

Density of concrete Kg/m ³	200	300	400	500	600	700	800	900
Styrobeads Kg	9	9	9	9	9	9	9	9
Cement Kg	150	200	250	300	350	350	350	375
Fine sand Kg	–	–	25	50	100	175	250	325
Water Kg	50	100	125	150	150	175	200	200
Compression resistance Kg/cm ²	–	3	7	14	20	32	45	60
Flexure resistance Kg/cm ²	–	2	4	6	7	8	10	12



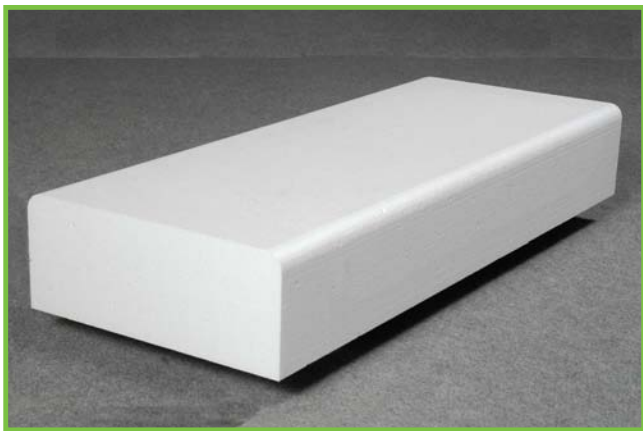
Light weight concrete

STYROPAN



Styrohourdi

- **Density:** 13 Kg/m³, other density are available upon request.
- **Dimension:** according to the requirements of the customer.
- **Application fields:** Styrohourdi are used instead of normal Hourdi blocks in the construction of concrete ceilings.
- **Advantage when using Styrohourdi:**
 - Load and pressure reduction on buildings by 15 to 30% from total load, which means savings in the cost of steel and cement in the concrete.
 - They are light and easy to handle.
 - They have sound and thermal insulation ability.



STYROHOURDI



Building under construction

Styropack

- **Dimension:** As requested by client.
- **Thickness:** 0.5 to 50 cm
- **Density:** 10 Kg/m³ to 40 Kg/m³
- **Application fields:** Packaging, carton boxes, shock absorber, inbox insulation for cakes, ice cream boxes etc...



3x1x1 cm pieces
Protective packaging

STYROPAN



Styropipe

- **Thickness:** 2 to 10 cm
- **Diameter:** ¼' to 19.7' (13-500 mm)
- **Facing and covering:** Unfaced.
- **Density:** 18-20 Kg/m³, other density available upon request.
- **Application fields:** Pipe insulation, for thermal insulation of industrial piping, cooling and chilling systems.



Styrocraft

- **Application fields:** Custom fabrication of architectural shapes. Decoration for wedding ceremonies, anniversaries, theaters, store façade, exhibition stands. Marketing props, building ornamentation or decorative structures.



Styromould

- **Available shape:** Vegetable boxes in different sizes. Other shapes are available upon request.
- **Application fields:** (Shape molding) Vegetables boxes, Ice Cream boxes, electronics covering etc..



Kilzi & co. is purely a material manufacturer and supplier and do not have any control of the end use or the installation of the product, and is free from any legal responsibility.