

Polyurethane Spray Foam Protection/Insulation System

Description

PENTENS PU-130 is a two component, 1:1 ratio, closed-cell polyurethane foam insulation system which when processed through suitable spray machinery (Graco etc) will produce a solid foam with exceptionally good compressive strength. The foam surrounds the structure in a lightweight blanket of insulation that creates a controlled comfort zone inside or outside the structure and contributes to its overall structural integrity.

Uses

PENTENS PU-130 is used for thermal and acoustic insulation in:

- Exterior or interior of agricultural buildings
- Ocean going yachts/canal barges
- Internal industrial roofing
- Domestic slate or tiled roofs

PENTENS PU-130 is also suitable used as a protective layer for waterproofing before backfilling soil at basement wall or pouring concrete at roof deck.

Standard **PENTENS PU-130** should not be used on substrates below 5°C. When used externally, the foam must be protected from ultra-violet radiation and atmospheric degradation by a suitable elastomeric coating, e.g. **PENTENS SPU**.

Advantages

- Greater structural integrity
- Multi-purpose for a wide range of building applications.
- Can be trimmed, sanded and, sawn, if necessary, painted and plastered.
- Can be applied to damp surfaces.
- Good adhesion to most construction surfaces, such as wood, brick, concrete, metals and many plastics.

Technical & Physical Data

Cream time	3-5 seconds
Tack free time	15-20 seconds
Rise time	20-35 seconds
Free rise density	15-35 kg/m ³
Adhesive strength:	
▪ PVC	1.4 kgf/cm ²
▪ Aluminum plates	1.3 kgf/cm ²
Elongation at break	8-12 %
Thermo Conductivity (Average temp: 30±5°C)(ASTM C518-04)	0.0272 W/m • K
10% Compressive strength (ASTM D1621-04a)	0.42 kgf/cm ²
Density (ASTM D1622-03)	32.2 kg/m ³
Close cell content	92 %
Bending Strength (CNS7774)	1.14 kgf/cm ²
Amount of Water Absorption (CNS 7774)	1.20 g/100cm ²
Water vapor transmission (25mm, 38° C, 88% RH)	3.9 ng/Pa.sm
Dimensional Stability (7 days @ -15° C)	- 0.6 % vol.
Dimensional Stability (7 days @ 70° C, 95% RH)	+ 5.0 % vol.
Ozone depletion potential	ZERO
Service temperature	-15°C to 70°C
Self Life	12 months when unopened and damaged
Storage condition	Store in a dry cool place
Packaging	
▪ In pails (A:B=18:21)	39kg/set
▪ In bulk drums (A:B=180:210)	390kg/set



Equipment

PENTENS PU-130 can be processed through all standard foam spray machines. The machine should be capable of maintaining the mix ratio at $\pm 2\%$ accuracy and controlling the component temperatures at $40-50^{\circ}\text{C}$ (variable).

Recommended machine settings

Block Temperature	40-50 ⁰ C
Hose Temperature	40 ⁰ C
Chemical Pressure	1500 psi

Note:

Chemical pressure of iso/resin not greater than 200 psi difference.

Instruction for Use

Surface Preparation

The substrate should be clean, dry and free of dirt, grease, oil and loose particles.

In certain cases primer may be necessary to maximize adhesion.

Climatic conditions must be suitable for spraying with regard to humidity and wind velocities.

Application

The foam should be built up in passes of not less than 15mm and not more than 10 minutes should elapse between passes.

Health & Safety

Keep away from fire sources. Do not smoke. Sufficient ventilation is recommended, otherwise wear respiratory equipment. Gloves and goggles must protect hands and eyes. In case of contact of the material with the eyes, rinse with plenty of water and consult a physician. Cured foam can only be removed mechanically (sanded or scraped). Uncured foam can be removed with solvent.

