

WHAT IS PLYSOLENE PIB?

PIB is a weatherproofing material for insulated ductwork and pipework. It is produced from high molecular weight polyisobutylene, modified to achieve optimum properties:

- Will not harden
- Will not crack or peel
- Virtually non-ageing
- Ozone resistant
- UV resistant

Tests carried out after 20 years have shown no significant alteration to the properties of the material, consequently no maintenance is required. We do recommend periodic inspection of very large ductwork installations to repair damage if necessary.

Plysolene PIB self amalgamates under pressure hence rolls are supplied either chalked or paper interleaved to prevent self amalgamation occurring prematurely.



A range of thicknesses from 0.5mm to 1.2mm are available to cover all applications from small pipes to large ductwork sections. The standard colour is black which has outstanding weather resisting UV properties, also available in 0.8mm is white which is used internally.

APPLICATION ADVICE

The sheeting is very easily applied to the insulated pipeline. Suitably sized pieces are cut and wrapped around the outside of the insulation. Endlaps of 80mm should be allowed and 500mm sidelaps underneath the pipes.

The overlaps are solvent welded by applying Plysolene Welding Agent E with a stiff brush. Other solvents can be used, but greater skill is required to achieve really good welds, hence Plysolene always recommend the use of their specifically formulated welding agent. The solvent should be applied with a circular scrubbing movement to both surfaces so that they become tacky before the overlap is pressed together. The use of too much solvent can cause premature failure as the excess solvent will continue to dissolve the PIB long after the weld has been made.

PIB is a thermoplastic elastomer and does soften with increases in temperature and therefore it should not be used to hold the insulation in place around the pipe. This should be secured in place prior to covering with PIB. For very large pipelines, having a diameter in excess of 300mm, use 1.0mm or for very large pipework 1.2mm.

For ventilation ductwork, the sheeting should be fully bonded to the fixed insulation material, which should be high density resin bonded glass-fibre or mineral-wool slab. If expanded polystyrene is used, the edges of the polystyrene should be well taped and all sections should butt up to one another to minimise the effects of movement and to prevent a temperature gradient existing over any gap.

The main cause of failure on ventilation ductwork is air leakage within the ventilation system.

Any air leak leads to a build-up of moist air within the insulation material that becomes wet as the air cools and condensation occurs. Over a period of time this can lead to a complete failure of the lagging. The best solution is to eliminate all air leaks, but if this is not possible, very small ventilation holes in the underside of the ductwork can prevent the build-up of moist air within the insulation.

Plysolene PIB is a flexible thermoplastic elastomeric sheet and will never give a flat rigid appearance. Consequently, the top of any ductwork which is close to horizontal should be built-up to give rain a good run off, and the PIB and insulation material should be well supported to prevent puddling. For very large ductwork and any installation where there are numerous large flat areas, where a flatter finish is required, use either 1.0mm or 1.2mm sheeting.



TECHNICAL SPECIFICATIONS

| | |
|----------------------|---|
| Specific Gravity: | 1.6 |
| Tensile Strength: | 2.5Nmm ⁻² |
| Elongation: | 300% |
| Temperature Range: | -34°C to +72°C |
| Vapour Permeability: | 5g/0.001in/m ² /day at 38°C and 90% RH (0.1g/m ² /24 hrs) |

Plysolene PIB Approvals:

- Approved by the Department of Environment PSA Standard Specification (M&E) No 3.
- Plysolene PIB does not conduct electricity
- Meets Class 2 Spread of Flame BSS 467 Part 7: 1971
- Fumes given off when burning are not considered toxic.

CHEMICAL RESISTANCE

Plysolene PIB is generally unaffected by: Hydrochloric Acid (dil & conc), Acetone, Sulphuric Acid (dil & conc), Acetic Acid, Aqueous Caustic Lime, Methanol and Ethanol, Aqueous Hydrosulphite, Formic Acid (dil & conc), Methyl Acetate, Copper Sulphate solutions, Sodium Chloride, Potassium Permanganate, Ethylene Glycol, Hydrogen Peroxide, Chromic Acid, Glycerine, Ethyl Acetate, Sulphonic Acid, Phenol, Chlorosulphuric Acid, Cyclohexane, Sodium Hydroxide (dil & conc), Ammonia, Naphthalene Sulphuric Acid, Solvents E13/E14.

Plysolene PIB is semi-resistant to: Concentrated Nitric Acid, Nitration Acid

Plysolene PIB is NOT resistant to: Chlorine & Bromine (liquid, gaseous or aqueous)

Plysolene PIB swells in: Ether, Butyl Acetate, Petrol and Diesel, Animal and Vegetable Fats and Oils (eg. Lard, Butter, Coconut Fat, Linseed, Olive or Whale Oil).

Plysolene PIB is soluble in the following: Benzene, Xylene, Paraffin Wax, Carbon Bisulphide, Toluene, Cyclohexane, Liquid Paraffin, Chlorobenzene, Benzene, Mineral Oil, Methylene Chloride, Carbon Tetrachloride.

AVAILABILITY

We have many distributors throughout the UK, please contact us to find the distributor nearest to you.

PIB RANGE OF PRODUCTS:

| Thickness | Finish | Width | Length | Approx Roll Weight |
|-----------|-------------------|--------|-------------|-------------------------------|
| 0.8mm | Chalked | 1000mm | 15 metres | 19kgs |
| 0.8mm | Paper Interleaved | 1000mm | 15 metres | 19kgs |
| 0.5mm | Chalked | 1000mm | 25 metres | 23kgs |
| 0.5mm | Paper Interleaved | 1000mm | 25 metres | 23kgs |
| 0.8mm | Chalked | 1200mm | 15 metres | 23kgs |
| 0.8mm | Paper Interleaved | 1200mm | 15 metres | 23kgs |
| 0.5mm | Chalked | 1200mm | 25 metres | 27kgs |
| 0.5mm | Paper Interleaved | 1200mm | 25 metres | 27kgs |
| 0.8mm | White Chalked | 1000mm | 15 metres | 19kgs [for internal use only] |
| 1.0mm | Chalked | 1000mm | 15metres | 24kgs |
| 1.0mm | Paper Interleaved | 1000mm | 15 metres | 24kgs |
| 1.2mm | Chalked | 1000mm | 12.5 metres | 24kgs |
| 1.2mm | Paper Interleaved | 1000mm | 12.5 metres | 24kgs |

ALSO AVAILABLE:

Welding Agent E in 5 litres and 1 litre

Narrow bandages in thicknesses of 0.8mm, 1.0mm and 1.2mm in widths of 150mm, 190mm or other configurations to suit.

Different colours available subject to 50 roll minimum orders.

Welding agent for tropical climates and a range of adhesives.