PRODUCT CATALOGUE

PROFLEX INDONESIA

POLYOLEFIN FOAM THERMAL INSULATION

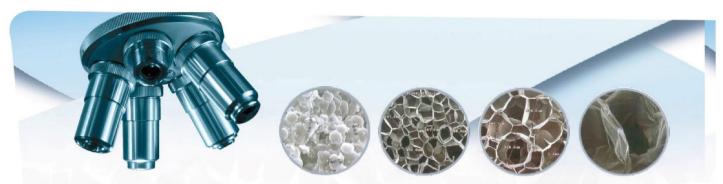
XLPE/IXPE

CFC free HCFC free Zero Ozone Depletion Potential (ODP)

Taking care of energy and Environment



CROSSLINKED CLOSED CELL FOAM +FR



R &D

Proflex Insulation developed after continuous and understanding the needs of the changing demands of the new generation equipment solution.

Proflex is a chemically and physically cross-linked closed-cell polyolefin foam thermal insulation

Proflex XPE/IXPE both properties are same. IXPE cross linked with physically irradiation. IXPE has a very smooth surface and fine cell structure

What does cross-linked means?

A method of making the cell structure stronger-preventing the trapped gas bubbles from bursting. This means that Proflex has superior strength to other non cross-linked and Rubber material

How can Proflex Insulation Benefit the Environment

With today's increasing consumer awareness of protecting the environment. Proflex has been Engineered to provide high quality insulation, Proflex is an insulating material produced without the use of CFC, HCFC, with zero ozone depletion potential (ODP) which mean Environment friendly product.

Proflex Energy Saving, Money Saving Insulation

Energy is the single largest operating expenses for commercial building and factories each year

Did you know that about 44% of your total utility bill pays for heating and cooling your Home, Commercial Buildings and Factories

We offer Proflex specifically for the insulation requirements of various industries, with a sole purpose of improving the energy efficiency, and thereby helping in conserving energy.

Excellent fire-retardant

Proflex contains various flame blocking and smoking reducing elements and therefore smoke density is very low when a fire occurs. Proflex doesn't melt when it caches fire, not to cause spark it has self fire extinguishing material and cannot be the root cause of combustion



Duct insulation

Proflex Duct Insulation

The sustainable benefits of using proflex insulation are numerous, including Proflex is chemically and physically cross-linked closed-cell polyolefin thermal insulation is a light weight with excellent thermal insulation properties, excellent compressive and condensation control, excellent durability and flexibility ,weather chemical resistant, Non hazard, Non irritant, safe and odorless ,will not allow bacterial growth, Proflex is Fiber free, free of cadmium, lead stabilizers, tin organic substances and other heavy metals, Proflex is un affected by most acids, alkalis, alcohols, detergents and petrochemicals. Environment friendly and energy saving characteristics.

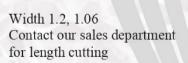
Easy and simple construction

The exceptional flexibility of Proflex is great help to the installer, Proflex is supplied in any thickness, any size of Rolls and sheets to minimize wastage installation time reduced further when supplied with aluminum foil and self adhesive which is more popular in duct insulation application. Proflex duct insulation material can be easily applied to the metal ducts through a process of pre-adhesion, Proflex doesn't emit dust or fiber particles so protective clothing not required during installation.

Applications

General duct work insulation for construction HVAC system (building/factories) it is also suitable for square and round duct construction

| Product range Standard with Alum foil & self adhesive | Continuous sheet |
|--|------------------|
| Wall thickness mm | M/roll |
| 3 | 100 |
| 4 | 100 |
| 5 | 100 |
| 6 | 100 |
| 9 | 60 |
| 12 | 20 |
| 13 | 20 |
| 15 | 20 |
| 19 | 15 |
| 25 | 15 |
| 32 | 10 |
| 50 | 2 |



Profilar

Note: Installing insulation properly is important because gaps, voids, compressions, and moisture reduce the effectiveness of insulation and allow unconditioned air to enter your home



Pipe Insulation

XPE/IXPE

Proflex Pipe Insulation

Proflex Sleeves can be produced chemically and physically cross-linked closed –cell polyolefin foam for all piping work except high steam line

Proflex manufacture in pre formed pipe section comprises two meter long section

Proflex insulation faced with factory applied reinforced aluminum foil as a vapor barrier jacket. Proflex pipe insulation available in full range of pipe diameter and used on mild steel, stainless steel, copper pipe, and plastic pipe work

Applications:

The following services shall be insulated: Chilled water pipe work Condensate pipe work Hot water pipe work and Cold water pipe work Drain pipe work and Refrigeration line and others. Length: Production by order possible pipe dia can be make up to 20"

Size Availability

| Pipe ID | Foam Thick | Length | |
|---------|------------|---------|--|
| mm | mm | m | |
| 8-100 | 3-25 | | |
| 125-600 | 3-50 | only 1m | |

Dimension

| Des | _ | n of mould (| | Copper | Inside | Tolerance | Thickness | Tolerance | Length | Tolerance |
|-----|-------|--------------|---------------|--------|-------------|-----------------------|----------------------------|--------------|--------|-----------|
| | Steel | | Polyvinyl | Pipe | diameter of | on Inside diameter of | | on thickness | | on length |
| | А | В | Chloride pipe | | moud | mould | | | | |
| | - | - | - | 6.35 | 7 | | 5 7.5 10 15 20 | | | |
| | - | - | | 9.52 | 10 | | 10 | | | |
| | - | - | - | 12.70 | 13 | +3 | 15 | | | |
| | - | - | | 15.88 | 16 | 0 | 5 | | | |
| | 10 | 3/8 | 13 | - | 18 | | 7.5 | | | |
| | - | - | - | 19.05 | 20 | | 10 | In case of | | |
| | 15 | 1.2 | 16 | 22.22 | 22 | | 15 | thickness of | | |
| | - / | - | 20 | 25.40 | 26 | | 20 | 5 and 7.5 | | |
| | 20 | 3/4 | - | 28.58 | 8 | | 25 | +15 | | |
| | - | - | 25 | 31.75 | 32 | +4 | 30 | -1.0 | | |
| | 25 | 1 | - | 34.92 | 35 | 0 | 10 | | | |
| | - | - | 30 | 38.10 | 38 | | 50 | In case of | | +50 |
| | 32 | 1 1/4 | - | 41.28 | 43 | | | thickness of | 2000 | 0 |
| | 40 | 1 1/2 | 40 | - | 49 | | | 10 and 15 | | · · |
| | - | - | - | 53-98 | 54 | | | +2.0 | | |
| | 50 | 2 | 50 | - | 61 | +5 | | -1.5 | | |
| | - | - | - | 66-88 | 67 | 0 | 10 | In case of | | |
| | 65 | 2 1/2 | 65 | - | 77 | | 15 | thickness of | | |
| | - | - | | 79-88 | 80 | | 20 | 20 or over. | | |
| | 80 | 3 | 75 | - | 90 | | 25 | +3.0 | | |
| | 90 | 3 1/2 | Sec. 7.1 | - | 102 | | 30 | -2.0 | | |
| | - | - | - | 104-78 | 105 | | 40 | | | |
| 1 | 100 | 4 | 100 | - | 115 | +6 | 50 | | | |
| - | 125 | 5 | 125 | - | 140 | 0 | | | | |
| 1 | 150 | 6 | 150 | - | 166 | | | | | |

Other construction Meterial



Proflex Acoustic Lagging

Noise pollution is an often overlooked environment problem, disturbance from un wanted sound can effect human health and performance, Noise radiating from piping and ductwork can be a serious problem in modern building construction. Turbulent flow piping noise can be caused by water or other liquids passing through elbows, vales or other transition pieces. Duct noise is caused by air flowing past obstructions or branches which results in vibration of the metal duct work this vibration then radiates noise into the building.

Proflex developed a most effective treatment method for the control of piping and duct breakout noise is to wrap the piping and ducting with proflex acoustic lagging.

Current building construction material cause piping and ducting work noise to be more of a concern today than in the past.

Application: Waste - Water and sewage pipes

Inside Diameter Thikness Length : 50mm, 63mm, 75mm, 90mm, 110mm, 125mm, 150mm, 315mm, : 5mm, 9mm : Continuous

Proflex Lining - Open cell

Metal duct work often requires acoustic insulation

to prevent air-borne noise from inside the duct

Noise Emerges into the building through grills and other transition pieces

Proflex duct lining open cell design primarily to provide acoustic insulation to the duct system

Due to the excellent thermal and acoustic properties

Proflex can breakout noise transmission; also improve comfort, and thermal performance

Proflex tested according to ASTM C423 -09a (Standard test method for sound absorption and sound absorption coefficient by the Reverberation Room method) Frequency range was 100Hz to 5000Hz in 1/3 Octave bands.

Proflex Foam Density 33 kg /m² Thickness: 8mm (A-mounting according to ASTM E 795-05) Absorption Coefficient 0.30 to the Frequency 500Hz and 0.67 to the Frequency 5000Hz Noice Reduction Coefficient (NRC) 0.45

Application: Internal surfaces of the metal duct for air-conditioning or ventilation ductwork, under - floor and wall insulation



Accessories

Aluminium Tape 2"-3"



| Foam tapes and gaskets | |
|------------------------|--|
| 3mm x 12mm x10m | |
| 3mm x 20mm x 10m | |
| 3mm x 25mm x 10m | |
| 3mm x 50mm x 10m | |



Double side self adhesive tape 3mm x 12mm x10m 3mm x 20 mm x 10m 3mm x 50mm x 10m



Proflex Contact Adhesive

Proflex Adhesive

Proflex Adhesive has been specially formulated for proflex products and guarantees a homogeneous and reliable joints its seams

Contact our sales department for length and Width cutting

Roof Insulation



Proflex roof insulation provides high performance thermal insulation and also can be used as a vapor barrier, Proflex roof insulation can help to improve indoor temperature and increase energy saving, the energy saving properties of insulation keeps building warm in winter and cold in summer.

Installation

It is fast to install and perform for the life of building without a requirement of maintenance Step 1 Roll over purlin / roof and secure Step 2 mount roof sheets on top of the insulation

Proflex Technical properties

| Raw material | Polyolefin Resin |
|------------------------------------|--|
| Cellular Structure | Cross-Linked Closed-Cell |
| Closed-Cell Content | 90% |
| Density | 30 to 50kg/m ³ (foam core only) |
| Thermal Conductivity | 0.034W/mK@ a mean of 23°C ASTM C 518 |
| Water Vapor Permeability | 4.3 x 10 ⁻¹² g/Pa.m.s ASTM E96 |
| VOC Content | Low |
| Fire Resistant | BS 476 part 6 & 7 class 0 |
| Temperature Range | From - 80°C - + 120°C |
| Odour | Neutral |
| Color | Grey/Black |
| Vibration absorption | Excellent |
| Pollution/Toxic | Non |
| Spread of Flame Index | ≤ 25 ASTM E84 |
| Smoke Developed Index | ≤ 50 ASTM E84 |
| Anti-fungal | Strong |
| Noise Reduction Coefficient (NRC) | 0.45 (8mm thickness) ASTM C423-09a |
| Tensile strength | 90% Both direction |
| Shrinkage | Almost no shrinkage |
| Elongation | 90% |
| Chemical resistant | Excellent |
| Resistant to permanent deformation | High resistant |









HGHRL





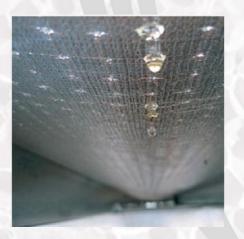
Stable Low Thermal conductivity

Proflex insulation has a very low thermal conductivity value 0.034 w/mk at mean temperature 23C° (ASTM C518)

Proflex is closed-cell foam. It will not absorb moisture or vapor this mean the thermal conductivity remains constant throughout the life time of foam. Other types of open cell and rubber insulation materials thermal conductivity will not remain constant as it will increased over a period of time due to the absorption of moisture into the structure of the material.

Condensation Control

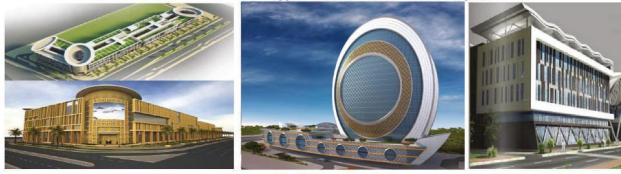
Vapor diffusion into the insulation material is one of the major causes of condensation. The technology is to laminate Proflex foam with aluminum foil as a vapor barrier itself and it is effective dew formation caused by a drastic changes in temperature. proflex with more than 90% of closed-cell and independent air bubble structure it prevent dew forming.



Project Reference



Al Rayyan Stadium and Precint Project



Al Waab Mall

Shell Tower Lusail Qatar

Rotana Hotel

National Service Academy Training Camp - Al Mazroaa - Qatar Armed Forces Al - Udied Air Base - Strategic Military Facilities - Qatar Armed Forces - GHQ POLYOLEFIN FOAM THERMAL INSULATION

PROFLEX TECHNICAL DATA

| PHYSICAL CHARACTER | REMARKS |
|--|---|
| MATERIAL | Cross-linked Closed Cell Polyolefin Insulation. Available in Sheet and Tubes |
| CELLULAR STRUCTURE | Cross-linked Closed Cell |
| DENSITY | 30 to 50 kg/m ³ (foam core only) |
| THERMAL CONDUCTIVITY | 0.034 W/mK @ a mean of 23°C (ASTM C518) |
| EMISSION OF VOLTILE ORGANIC COMPOUND (VOC) | Low VOC Emission |
| FIRE RESISTANCE | BS 476 Part 6 & 7, Class O |
| SURFACE BURNING CHARACTERISTICS OF BUILDING MATERIALS | Spread of Flame Index ≤25 Smoke Developed Index ≤50 (ASTM E84) |
| FIRE LISTINGS | Class O BS 476 Part 6 & 7 |
| CERTIFICATES | UL Listed, TUV BS 476 Part 6 & 7, ASTM E84, ASTM C518, ASTM D5116, ASTM G21-09 |
| WATER VAPOUR PERMEABILITY | 4.3 X 10 ⁻¹² g/Pa.m.s (ASTM E86) |
| TEMPERATURE RANGE | -80°C to +120°C |
| ENVIRONMENTAL CONCERNS | CFC Free, HCFC Free, Dust Free, Fiber Free, Zero Ozone Depletion Potential (ODP), Environment Friendly Product, Global Warming Potential <5 (GWP) |

| CHEMICAL RESISTANCE | Inert to Most Acids, Alkalis, Alcohols, Esters, Ketones, Water, Soaps, and Detergent |
|------------------------------------|--|
| UV RESISTANCE | Excellent, No covering or UV coating required |
| ANTI FUNGAL | Strong |
| WATER PROOFING | Excellent |
| ANTI CHEMICAL | Excellent |
| RESISTANT TO PERMANENT DEFORMATION | High Resistant |
| SHRINKAGE | Almost no Shrinkage |
| POLLUTION / TOXIC | Non |
| VIBRATION ABSORPTION | Excellent |
| TENSILE STRENGTH | 90% Both Direction |
| ELONGATION | 90% |
| ODOUR | Neutral |
| COLOR | Grey / Black |