



ECOFLEX

Description

ECOFLEX flexible duct is designed for HVAC applications that require a stronger duct construction due to higher air pressure. It is specifically designed for thermal and acoustical insulation for HVAC application. It is used in heating, ventilation, and air conditioning to deliver and remove air. These needed airflows include, for example, supply air, return air, and exhaust air. It also deliver, most commonly as part of the supply air, ventilation air. As such, using ECOFLEX is one method of ensuring acceptable indoor air quality as well as thermal comfort.

Cost Effective Thermal and Acoustical Alternative

Used in a variety of applications that require good thermal and acoustical efficiency in a minimal space.

Applications

Available either in plain or pre-insulated form, it is designed for use in all pressure cooling and heating systems. It is used in either supply or return sections: for branch ducts and branch connections to or between mixing units, induction connections to or between units, induction units, control or terminal units and diffusion devices, including light troffers. It provides economical means for handling misalignment between systems components and ducting around obstacles where fabricated and fitted ducts are difficult and costly to install. ECOFLEX is equally suitable for new jobs or retrofit work and is especially useful when making systems extensions or for changing zones, now or in the future.

Can be used in applications where internal air temperatures do not exceed °C.

Advantages

Optimal fibre diameter. Optimal fibre diameter ranging from 4-5microns produces more air chamber which enables the insulation to provide a better and enhanced performance.

Better fibre network. Fine, longer and evenly distributed fibre network helps in creating better tensile strength allowing the insulation to demonstrate superior durability, flexibility and feeling much softer.

Less dusty and less itchy. Specifically engineered to produce a comfortable and less dusty insulation. The insulation creates a pleasant work experience by reducing the tingling feeling during installation.

Temperature control. Enhanced comfort. It helps to ensure that heated or cooled air will be transmitted from central air equipment to working and living spaces at comfort levels suited to occupants' needs.

Read This Before You Buy

Insulation's effectiveness is measured in R-Value. R stands for the insulation's resistance to heat flow; heat escapes from your building and heated air enters your building. The higher the R-Value, the greater the resistance to heat flow and the greater your potential for saving energy, natural resources and money. Compare insulation R-Values before you buy.

R-Value = Thickness / K-Value



Durability and integrity. Provides long-term thermal, acoustical, and condensation control performance without deterioration and with no measurable fibre erosion. ECOFLEX resist damage both during installation and in service.

Mold and fungus resistance. Will not support the growth of mold when tested in accordance with applicable ASTM C665. Installed in clean, dry and well-maintained air duct systems will not contribute to mold, fungal, or bacterial amplification and consequent contamination of the indoor environment.

Acoustical control. It is a key contributor to the creation of an acoustically satisfying indoor environment by absorbing noise generated by central air equipment, by expansion and contraction of duct components, and from air movement noise within the ducts. It also contributes to personal privacy and productivity by preventing the ductwork from transmitting unwanted conversations from room to room in the home or workplace.

Energy conservation. The same thermal performance properties that contribute to occupant comfort also enable ECOFLEX to control heat loss or gain through duct walls with efficiency not equalled by other forms of flexible duct. By enabling ducts to transmit heated or cooled air to occupied spaces at design temperatures, building operating cost is reduced as well as sparing the environment from additional greenhouse gases released into the air.

Condensation control. Dry ductwork. When warm, humid air comes in contact with the surfaces of uninsulated cold air ductwork, water vapour will condense and result in dripping of liquid water from duct surfaces onto other building components. ECOFLEX is manufactured with a sufficient R-value which in most cases prevents condensation problems and consequent damage to building materials. It is the best way to control surface condensation.

ECOFLEX

Typical Physical Properties

Properties	Description
Temperature rating	Maximum -20 to 80°C
Fire Classification (BS476 Part 6&7)	Class 0
Water Vapor Absorption (ASTMC655)	Less than 5% by weight
Fungi /Bacteria resistance (ASTMC655)	Does not breed or promote growth
Corrosiveness (ASTMC655)	Does not accelerate with steel, copper or aluminium
Odour (ASTMC655)	None
Wire Pitch	40mm
Insulation	Glass mineral wool
Insulation Thickness	50mm, 25mm

Fire Properties

Tested in accordance and comply with (glass mineral wool):

- B.S. 476: Part 6 Fire propagation
- B.S. 476: Part 7 Surface spread of flame
- Bomba Class O

Product Range

Standard dimension :

- Diameter - 100mm till 450mm
- Length - 3m, 5m, 6m, 10m
- Insulation thickness - 25mm, 50mm

Available Forms

Plain – high quality flexible duct without insulation

Pre-insulated – insulated with glass mineral wool for predictable thermal insulation performance with the added benefit of being an effective sound absorption material.

Note: Pre-insulated ECOFLEX is available either fire-retardant or non fire-retardant form.

ECOFLEX is available in thermal value of R-0.70 or R-1.0.

Composition

- Inner Core - metallized polyester, aluminium foil
- Outer Jacket - metallized polyester film composite, aluminium foil PET composite
- Insulation - glass mineral wool

Short Form Specification

Flexible duct for connections between _____ and _____ shall be ECOFLEX _____ (PLAIN, PRE-INSULATED) flexiduct. ECOFLEX air duct shall be factory made and composed of: an inner duct of two layer of high grade metallized polyester or aluminium foil composite bonded together with glue encapsulating high carbon steel wire and tear and puncture resistance aluminium foil PET composite or metallized polyester film composite.

Thermal resistance "R-Value" of the insulation shall be R _____.

Technical specifications as shown in this literature are intended to be used as general guidelines only. The physical and chemical properties of sound control thermal and acoustical fibre glass insulation listed herein represent typical average values obtained in accordance with accepted test methods and are subject to normal manufacturing variations. They are supplied as a technical service and are subject to change without notice. Any references to numerical flame spread or smoke developed ratings are not intended to reflect hazards presented by these or any other materials under actual fire conditions.