

# **ABOUT ENBI**

We are a multi-material company with a passion for leading the way through products that help to protect the earth's scarce resources. Enbi offers solutions to make your product quieter, greener, and more sustainable using materials to absorb noise and reduce energy losses. Thanks to our global footprint we provide continuous development of products and processes around the world.

We have over 50 years of experience in green technologies and can help your company to grow.

# WHAT ARE THE ADVANTAGES OF ENBI?

## OVER 50 YEARS OF EXPERIENCE WITH GREEN **TECHNOLOGIES**

### SUSTAINABILITY

- Helping to reduce your carbon footprint by installing EnbiTherm jackets and using less energy
- Converting innovative, high-tech high-performance materials designed to save energy
- Most Enbi products can be recycled at the end of life

### SAFETY

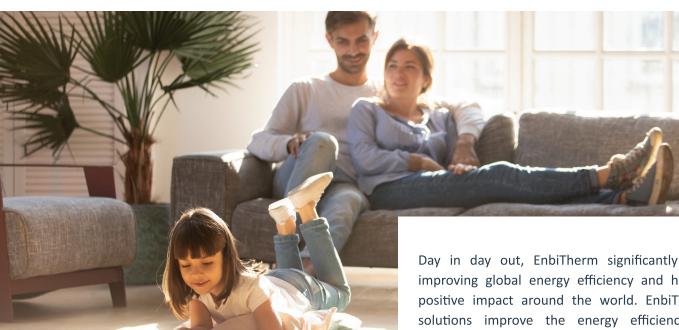
- Meeting B1 fire rating
- Ensuring fire safe thermal, acoustic and mechanical materials
- · Keeping noise to a minimum by using anti-vibration and damping foams

## **ENERGY EFFICIENCY**

- Contributing significantly to global energy efficiency
- Saving up to 100 times the energy it takes to make them

### DESIGNED FOR A PEACEFUL HOME

- Reducing noise by up to 30 dB(A)
- Reducing system vibration and structural noise



# **ENBITHERM**

EnbiTherm is a range of flexible insulation materials that meets the growing demand for reliable and environmentally friendly flexible insulation materials that can be used in the HVAC, heat pump and solar applications.

Day in day out, EnbiTherm significantly contributes to improving global energy efficiency and helps to make a positive impact around the world. EnbiTherm insulation solutions improve the energy efficiency of technical equipment saving up to 20% energy.

The unique combinations of materials make the product easy to install and the combination of a very low thermal conductivity and extremely high resistance to water vapor transmission. This prevents long-term energy losses and moisture ingress reducing the risk of corrosion under insulation. In some cases, built-in antimicrobial protection and excellent fire performance make the product especially suitable for use in public buildings and process industries.

# ENBITHERM INSULATION SYSTEMS - SAVING ENERGY, PROTECTING SCARCE RESOURCES

EnbiTherm is a range of fleece and foam insulation, that provides superior protection against thermal losses, condensation and moisture accumulation that can lead to mold. It is the ideal choice for insulating mechanical systems including HVAC, chiller, and air handling systems.

For applications requiring fire ratings EnbiTherm can meet Bs2, D0 standard giving unparalleled safety should the worst case happen. Architects, government institutions, hospitals and commercial businesses of all types value the long-term performance and peace of mind that EnbiTherm can provide when used in its HVAC systems.

The EnbiTherms' moisture-resistant characteristics and superior thermal performance make it especially valuable on surfaces that are susceptible to condensation. Moisture can soak through fibrous types of insulations, degrading their thermal performance, leaving them susceptible to fungal growth and ultimately shortening their lifecycle. Moisture-resistant EnbiTherm can maintain its physical and thermal integrity for the life of the mechanical system making it the perfect choice for your application.

### MATERIALS AVAILABLE IN THE RANGE INCLUDE:

- UR-foams 12-650 kg/m3
- Polyethylene, melamine resin, composite, synthetic EPDM and filter (15-80 ppi) foams
- Heavy layer (bitumen)
- Fleece (non-wovens)
- Self-adhesives
- Foils (PET, copper, fleece, aluminium)
- EPS

Enbi also has the capability to refine materials by laminating special foils and adhesives (for example PUR-foils, PET, aluminium, copper, conductive coatings). Our material range is based on PUR foams and similar material groups such as:

- PUR-foam from 10 kg/m³ up to 650 kg/m³
- Polyester, polyether, polyethylene, microcellular and melamine resin foam
- EPDM neoprene rubber, CR-EPDM etc
- Non-woven
- Silicone-rubber
- Homogeneous polyurethanes
- From 45 Sh A up to 95 Sh A



# ENBICOMFORT - THE SOLUTION TO SILENCE

The bigger cities become, the more people suffer from excessive noise and vibration. This is why we invented EnbiComfort.

EnbiComfort is a range of materials that are highly effective, easy to install and cost effective noise control products especially suitable for insulating across a wide range of frequencies, effectively reducing noise. In comparison to traditional products, EnbiComfort's multi-layer acoustic insulation materials achieve greater noise reduction with thinner wall thicknesses. EnbiComfort provides acoustic damping leading to not only higher levels of end user comfort, but also in many applications a sense of calm and well-being. Increasing appreciation of low noise levels in living space and offices is reflected in higher expectations from consumers. EnbiComfort can help you to meet the increased expectations of your customers.

## **KEY TECHNICAL FEATURES**

- Low fogging / low emission
- FMVSS 302, UL94 (HF1), EN13501.B2
- Temperature range -40 °C to 180 °C (-40 °F to 356 °F)
- Oleophobic and hydrophobic
- Acoustic test (alpha cabin, acoustic impedance)
- Customized product development and engineering support with 50+ years of experience







## FLEXIBLE INSULATION JACKETS

With our planet increasingly impacted by resource scarcity, conservation has become a global priority. This global trend is significant for Enbi and our EnbiTherm jackets have a unique positive contribution to protecting scarce resources.

The European community is leading the world with rigorous environmental regulations for heating systems and insulation capabilities. In some water tanks associated with heating systems, new energy certification and labels are mandatory (e.g. label "B" for a tank up to 500 liters/132 US gal). These optimized insulations are contributing to a better environmental balance and providing cost savings to residential and commercial customers.

Customized and lightweight, EnbiTherm gives you the freedom to design innovative systems to provide end user benefits such as reduced energy costs, a reduced carbon footprint and better space utilization.





### ENBI LINEA - PRODUCT ADVANTAGES FOR HOT WATER TANK

- High strength materials
- Easy and simple installation
- Fleece with 15-17-21 kg (33-37-46 lbs) volume weight suitable for every customer application
- Fleece is dermatologically tested according to expert medical opinion
- Thermal conductivity according to DIN 12667;
  Lambda: 0.032 0.043 watt
- Fire rating B1 according to DIN 4102-1

### **SURFACE:**

- High-impact PS sheet
- Temperature range 85 °C to 130 °C (185 °F to 260 °F)



### ENBI TRAPEZIO - PRODUCT ADVANTAGES FOR HOT WATER TANK

- Meets ErP Label B or A
- Easy and simple installation
- EPS density 14,5 kg/m³
- Thermal conductivity according to DIN 12667;
  Lambda: 0.035 watt
- Fire rating B1 according to DIN 4102-1

#### SURFACE:

- High-impact PS sheet
- Temperature resistance 70 °C (158 °F)

	ENBI LINEA	ENBI TRAPEZIO	ENBI COOL	ENBI VACUUM
DESCRIPTION	Our benchmark insulation jacket. Combining fleece and PS sheet for maximum energy saving and long life. Enbi Linea is the ultimate light weight, high performance jacket where ErP Label B or C is needed.	Our latest development is a high-quality tank insulation made from a combination of EPS and fleece. Enbi Trapezio can be used to achieve ErP Label B or A.	Enbi Cool jackets are made from a combination of closed-cell rubber foam and PS sheets. Enbi Cool is the perfect solution for chilled water tanks where corrosion under insultation is a problem.	A premium combination of Enbi Linea (fleece) with integrated vacuum panels. Enbi Vacuum is designed for extreme conditions where ErP Label A is needed.
CONSTRUCTION	PET fleece, PS sheet, PS fixtures (profile)	EPS, PET fleece, PS sheet, PS fixtures (profile)	Precision cut insulation bonded to the tank. The jacket can be protected by PS sheets if needed	PS sheet, fleece/ vacuum panels, PS fixtures (profile)
FIRE RATING	B1 according to DIN 4102-1	B1 according to DIN 4102-1	B1 according to DIN 4102-1	B1 according to DIN 4102-1
ENERGY RATING	DIN 12667 Lambda: 0.032 - 0.043 watt	DIN 12667 Lambda: 0.035 watt	DIN 12667 Lambda: 0.033 watt	DIN 12667 Lambda: 0.018 watt Thickness: 20 mm
TEMPERATURE RANGE	85 °C to max. 130 °C 185 °F to max. 260 °F	Max. 70 °C Max. 158 °F	Max. 85 °C Max. 185 °F	Max. 130 °C Max. 260 °F



Our mission is to deliver the highest level of service and comprehensive support to our OEM customers through our innovative solutions, cost-effective global footprint, and dedicated workforce driven by our flexible operating model. At the same time, we provide a safe and rewarding environment for our team members.

Enbi's headquarters are in Shelbyville, Indiana, USA. Our manufacturing facilities are strategically positioned around the world in North America, Europe and Asia.

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