Yalıtımda dinamik® Çözüm

# Cross-Linked Polyethylene Foam
# Product Catalogue



Dynafoam® Xpe
Cross-linked
Çapraz Bağlı Köpük Levha

A Better Future Starts with Dinamik

www.dinamik-izmir.com

## The Key to Sustainable Industrial Efficiency: Cross-Linked Polyethylene Foam (XPE)

Today's industrial demands are no longer limited to durability or functionality alone; product performance is now evaluated within a much broader framework.

Criteria such as comfort, safety, environmental sensitivity, energy efficiency, and aesthetics have become central across all areas of application.

In this context, cross-linked polyethylene (XPE) material, developed with advanced manufacturing technologies, offers innovative and sustainable solutions to the modern production world with its versatile structure.

DYNAFOAM XPE products are polyethylene sheets produced through the extrusion method using a chemical cross-linking agent and foaming agent, and finalized through an oven-curing process.

Thanks to this production technique, the resulting sheets are closed-cell, homogeneous, smooth-surfaced, lightweight, yet mechanically robust.



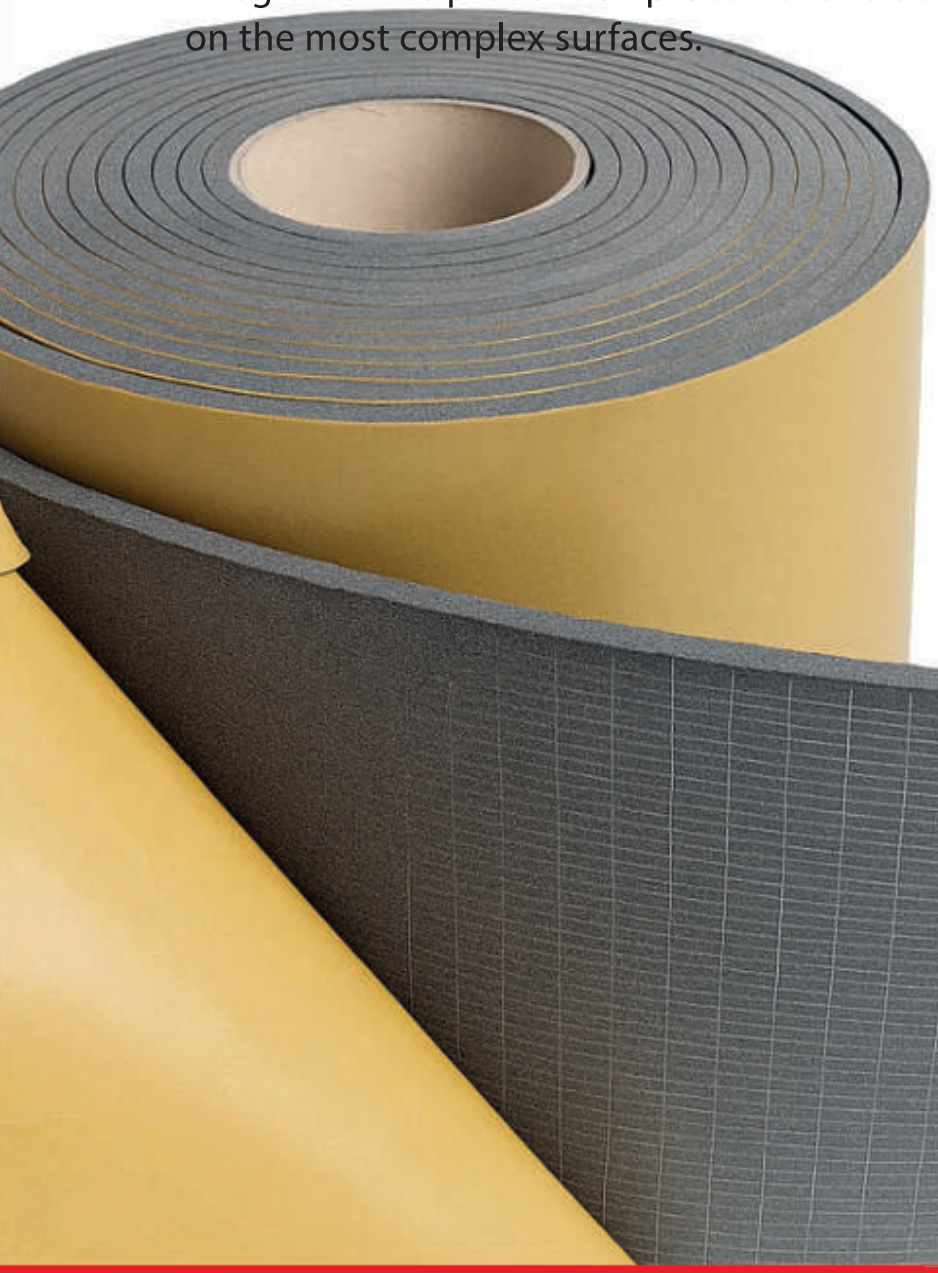
**Next-Generation Performance in Insulation:**

The resulting closed-cell structure delivers outstanding performance in both thermal and moisture insulation. Its capillary water absorption rate is nearly zero, revealing a structure that remains unaffected by humidity. Additionally, its low thermal conductivity minimizes energy loss and contributes to the efficient operation of systems.

Another key advantage of XPE material is its sound and impact absorption capability.

It reduces vibration and shock-induced noise, thereby enhancing indoor comfort and serving as a protective layer during the transport of delicate items. Its flexible structure prevents deformation after impact and maintains its stable form post-application.

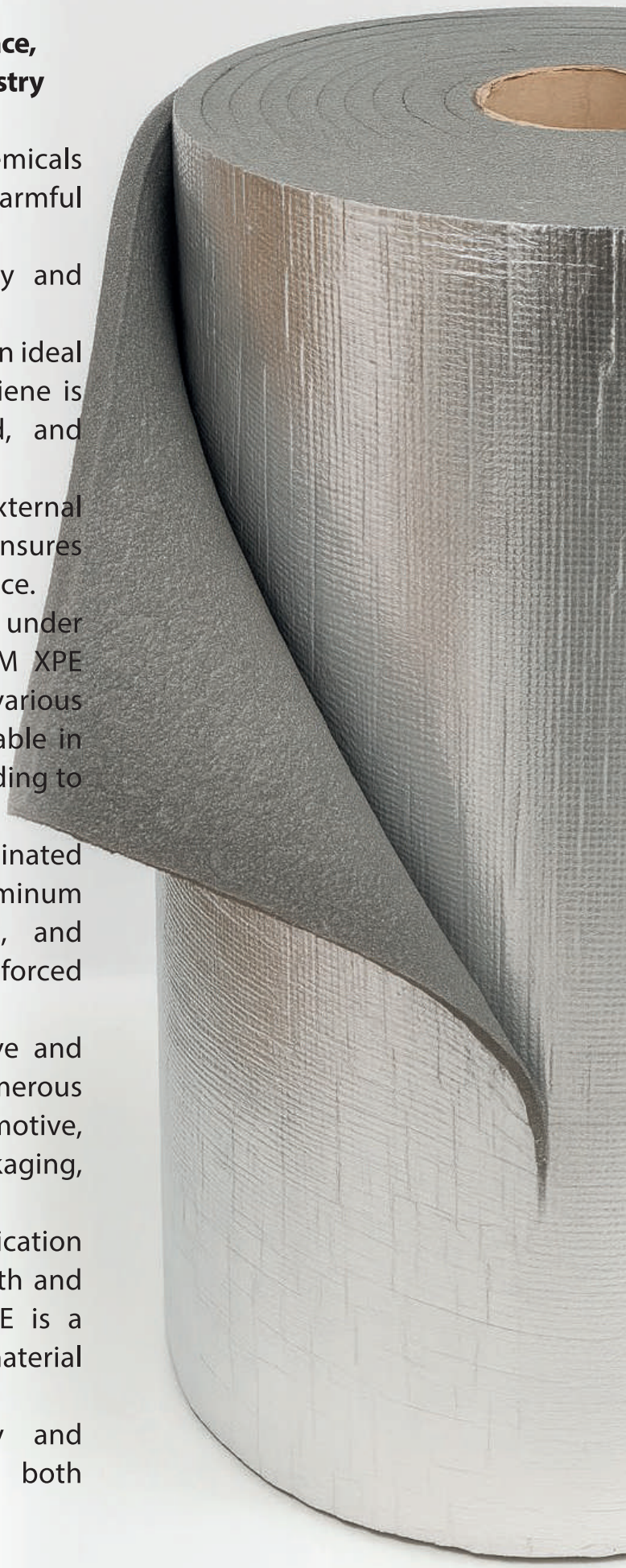
Furthermore, thanks to its thermoformability, it can be easily integrated into production processes and achieves an excellent fit even on the most complex surfaces.



DYNAFOAM XPE stands out not only for its technical performance but also for its excellence in terms of environmental sustainability and human health.

**Seamless Adaptation to Every Surface, Innovative Solutions for Every Industry**

It contains no CFCs or banned chemicals and is entirely free of substances harmful to human health.
This makes it an environmentally and user-friendly material.
Its antibacterial structure makes it an ideal choice for applications where hygiene is essential, such as medical, food, and interior spaces.
Its resistance to chemicals and external environmental conditions ensures long-lasting and reliable performance.
Produced by Dinamik Isı Yalıtım A.Ş. under high-quality standards, DYNAFOAM XPE can be manufactured in various thicknesses and sizes, and is available in pipe, sheet, tape, or roll form according to demand.
It can also be produced with laminated surfaces such as aluminum foil, Aluminum Plus, PVC, PET, film, or fabric, and optionally with mesh-reinforced adhesive-backed models.
DYNAFOAM XPE offers an effective and reliable solution across numerous industries including automotive, construction, white goods, packaging, logistics, and medical.
With its technical capacity, application flexibility, and safety for both health and the environment, DYNAFOAM XPE is a next-generation engineering material that stands out.
It delivers maximum efficiency and long-term performance for both manufacturers and end-users.



**Smart Solution for Thermal and Acoustic Insulation in the Construction Industry**



In the construction industry, ensuring buildings are efficient, safe, and comfortable requires more than just structural integrity — it also depends on the effective management of indoor environmental conditions.

In particular, thermal and acoustic insulation are essential for both user comfort and energy efficiency.

Temperature imbalances in working environments directly impact both physical and mental performance. Extremely hot or cold spaces not only reduce productivity but also pose serious health risks. Moreover, a lack of temperature control in interior spaces leads to significant energy waste and high operating costs.

For a comfortable indoor environment, not only ambient air temperature but also surface temperatures are critical. The temperature perceived by humans is largely determined by the surfaces they come into contact with. Therefore, the temperature of walls, ceilings, and floors should ideally be close to the indoor air temperature. Studies show that, for 80% of people, the ideal indoor temperature is 20–22°C, with a relative humidity of 40–60%. Spaces that meet these conditions provide healthier and more productive living and working environments.

This is where DYNAFOAM XPE comes into play.

With its cross-linked polyethylene foam structure, it offers closed-cell, thermoformable, and low thermal conductivity insulation solutions.

Thanks to its advanced structure, it reduces the impact of outdoor temperatures on interior spaces and minimizes temperature differences on interior surfaces, creating comfortable and energy-efficient environments.

Silent Power Against Noise

Today, acoustic insulation is as essential as thermal insulation, forming a key part of structural comfort and environmental well-being.

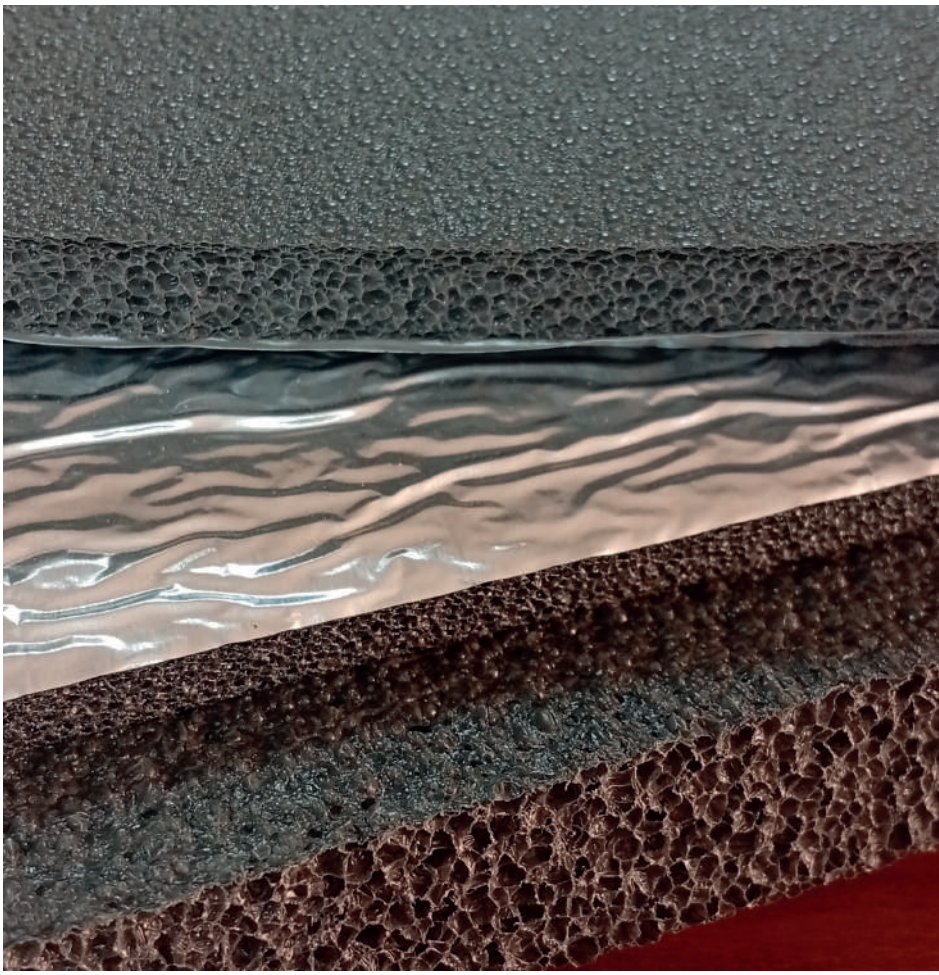
Noise pollution can cause not only physical discomfort but also psychological and cognitive issues.

**Noise Control:**

ChatGPT:
Ambient noise control is achieved through three primary intervention points:
Reducing noise at the source
Dampening it in the transmission environment
Blocking it before it reaches the receiver

Sound is transmitted in two main forms:
Airborne Noise:Originates from sources such as speech, machinery, or television and is transmitted through the air.
Impact Noise: Caused by direct contact with surfaces—such as footsteps, hammer strikes, or moving furniture—and travels through the structure.

DYNAFOAM XPE effectively reduces the transmission of both airborne and impact noise. Its closed-cell elastic structure, combined with vibration-dampening properties and high sound absorption, ensures a peaceful and quiet indoor atmosphere.



In line with the requirements set by the "Regulation on Noise Control in Buildings" published by the Turkish Ministry of Environment and Urbanization, DYNAFOAM XPE has been tested and proven to deliver impact sound insulation values of up to 37 dB, demonstrating its effectiveness.

DYNAFOAM XPE offers a comprehensive insulation solution for construction projects, enhancing energy efficiency while also delivering acoustic comfort.

With its low cost, long lifespan, and environmentally friendly structure, it has become an essential material for modern buildings.

## High-Performance Insulation Solutions for Buildings: DYNAFOAM XPE

The comfort, energy savings, and long-lasting performance required by modern buildings are only achievable through effective thermal and acoustic insulation.
In this regard, DYNAFOAM XPE Cross-Linked Polyethylene Foams offer a wide range of applications in the construction industry with their closed-cell structure, flexible form, and superior insulation properties.




### Under-Screed Insulation

DYNAFOAM XPE is the ideal solution for controlling cold and impact noise originating from the floor. Applied beneath the screed, these products enhance both thermal and acoustic insulation while offering ease of installation. They are laid out before the leveling screed is poured and can be secured with adhesive tapes if necessary. Based on the screed thickness, the material is extended upwards to complete the edge joint detailing.

### Under-Parquet Insulation

In laminate, solid, or engineered parquet flooring applications, DYNAFOAM XPE products are laid beneath the flooring to reduce impact noise and enhance thermal insulation. Additionally, they act as a moisture barrier, preventing dampness from the subfloor from reaching the parquet, thereby extending the lifespan of the flooring.

### Wall Insulation

When external insulation is not possible, internal wall insulation becomes a comfortable and effective solution with DYNAFOAM XPE products. These materials can be applied to interior wall surfaces with decorative film coatings or in forms that absorb surface irregularities. They are cuttable, adhesive-friendly, and easily integrable into both flat and curved surfaces, making installation simple and efficient.

## Mechanical Installation Systems Insulation



n ventilation and piping systems, DYNAFOAM XPE provides an effective solution against noise, heat transfer, and condensation-induced moisture.It stands out with its optimal density and excellent vapor impermeability. The material can also be produced laminated with aluminum foil or other specialized coatings for enhanced performance.

## Roof Insulation

In roofing applications, thermal insulation is just as crucial as traditional waterproofing. Thanks to its reflective surface option, DYNAFOAM XPE helps regulate indoor temperatures by reflecting solar radiation. This not only enhances user comfort but also contributes to reduced energy consumption.



## Other Application Areas

DYNAFOAM XPE products are not limited to standard building components; they are also successfully used in a wide range of specialized applications, including:

Insulation for Climate-Controlled Rooms
Thermal and Acoustic Insulation Between Doors and Windows
Heat Control in Central Heating System Pipes
Ceiling Jackets and Pipe Covers
Floor Insulation in Animal Shelters
Insulation for Yachts and Caravans

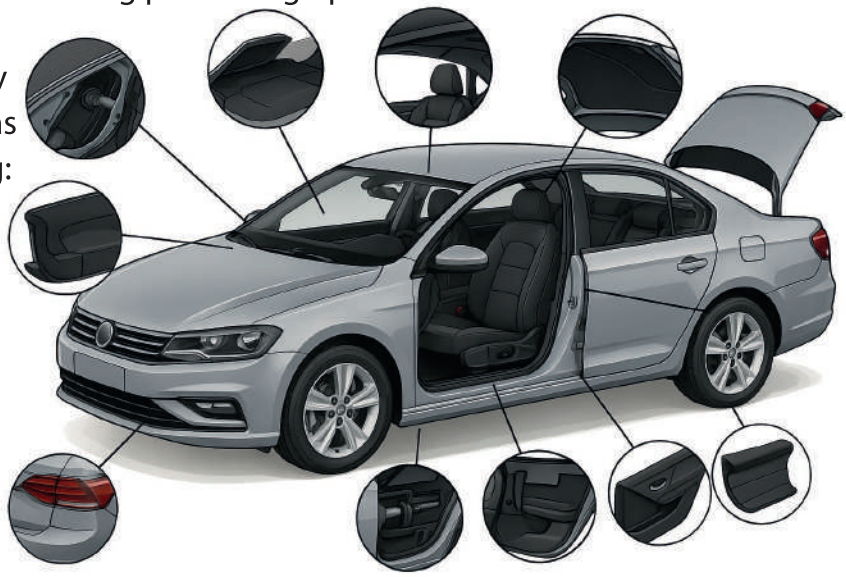
**An Effective and Versatile Material in the Automotive Industry**

Today, the priorities of the automotive industry go far beyond just design or performance. Reducing fuel consumption, enhancing driving comfort, improving acoustic insulation, and lightweighting components have become key factors in material selection. At this point, DYNAFOAM XPE emerges as an ideal solution for the automotive sector, thanks to its outstanding sound, thermal, moisture, and impact insulation properties.

Produced with a cross-linked polyethylene foam (XPE) structure, DYNAFOAM XPE features a closed-cell composition that makes it water- and moisture-resistant, enhances acoustic performance, and provides resistance against impact-related deformations. All these properties improve in-cabin comfort while optimizing the vehicle's overall insulation quality. Moreover, its easy thermoformability and ability to adapt to complex geometries offer high flexibility in manufacturing processes.

Thanks to its advanced manufacturing techniques, DYNAFOAM XPE offers a lightweight alternative to metal or dense polymer-based materials, while maintaining a comparable level of performance. This significantly contributes to vehicle weight reduction, resulting in improved fuel efficiency and lower carbon emissions. Its easy cuttability and workability also make it a practical solution for production lines, saving time and streamlining processing operations.

DYNAFOAM XPE products are reliably used in some of the most critical areas of the automotive industry, including:



Fender Insulation Pads
Seat Support Pads
Headliner Sound Insulation
Trunk Insulation
Lamp Gaskets
Air Conditioner Insulation and Air Duct Linings
Door Panel Support Components
Dashboard and Sun Visor Applications
…and many other application areas throughout the vehicle.

The outstanding technical structure of DYNAFOAM XPE provides lasting solutions to common issues such as vibration, noise, and impact in these application areas. Moreover, its eco-friendly, HCFC-free, and non-toxic formulation makes it fully compatible with sustainable vehicle manufacturing policies.

## Smart Protection for the Packaging and Electronics Industry

In today's packaging and electronics industries, the requirements go beyond aesthetics — product safety, lightweight structure, impact resistance, and flexibility are equally critical. DYNAFOAM XPE Cross-Linked Polyethylene Foams meet these demands with their versatile structure, delivering high performance in both packaging applications and white goods and electronics sectors.

### Innovative Protection in the Packaging Industry

Televisions, computers, measurement and analysis devices, medical equipment, defense industry products, and valuable electronic components — all of these sensitive items now require superior protection as a standard. DYNAFOAM XPE sheets, with their flexible structure and shock-absorbing properties, provide effective protection against mechanical shocks, vibrations, impacts, and scratches.
Thanks to their easy-to-cut, formable, and customizable nature, the material can be conveniently used for inner case compartments, separators, protective linings, and transport packaging.



Additionally, its lightweight structure offers ease of handling, while its reusability supports environmental sustainability.

### Insulation and Safety in the White Goods and Electronics Industry

In the white goods and electronics industry, which offers a wide range of products from refrigeration systems to small household appliances, thermal and acoustic insulation as well as product protection are of great importance. DYNAFOAM XPE, with its closed-cell structure, high impact resistance, and flexibility, provides an ideal solution to meet these requirements. This material can be used in various forms such as insulation pads, adhesive-backed gaskets, and shock-absorbing packaging solutions, while its thermoformability ensures ease of integration into assembly processes.
Custom molding, lamination, shaping, coating, and bonding processes can be carried out according to customer requirements. DYNAFOAM XPE products can be combined with various surface materials such as aluminum foil, fabric, and PVC, offering both high performance and aesthetic compatibility in a single solution.

**HVAC Industry (Heating, Ventilation, and Air Conditioning Systems)**

In heating and cooling systems, insulation materials not only enhance energy efficiency, but also fulfill other critical functions such as preventing condensation, providing sound insulation, and maintaining aesthetic harmony. DYNAFOAM XPE can be produced in variants with aluminum foil, PVC foil, or adhesive backing, depending on the application needs.

Thanks to its sleek exterior appearance, it offers a visual advantage especially in exposed installations without suspended ceilings, such as air ducts, supermarket ceilings, exhibition areas, and retail stores.

In HVAC systems used in residential buildings, hotels, shopping malls, office complexes, and industrial facilities, DYNAFOAM XPE stands out with the following advantages:

Its closed-cell structure prevents the formation of thermal bridges.

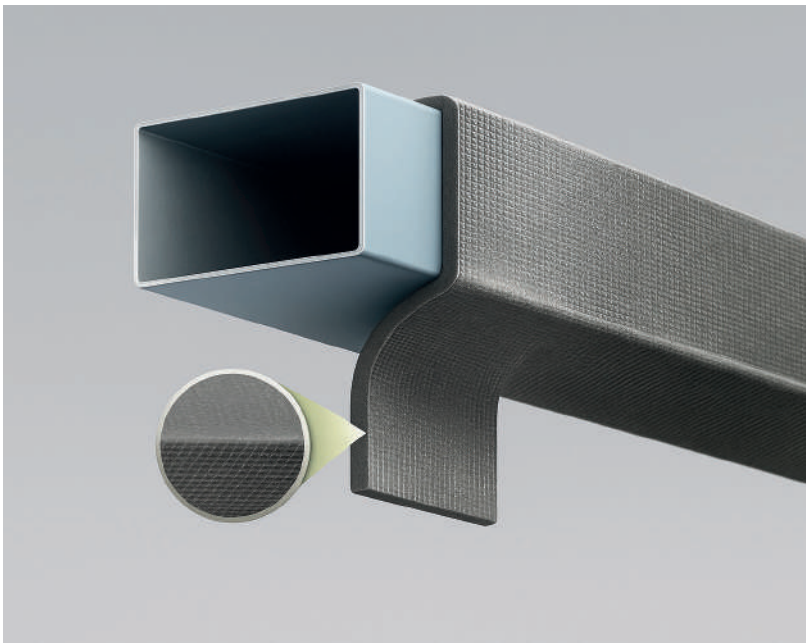
It is resistant to water vapor and moisture transmission.

Its lightweight and flexible structure allows for easy installation.

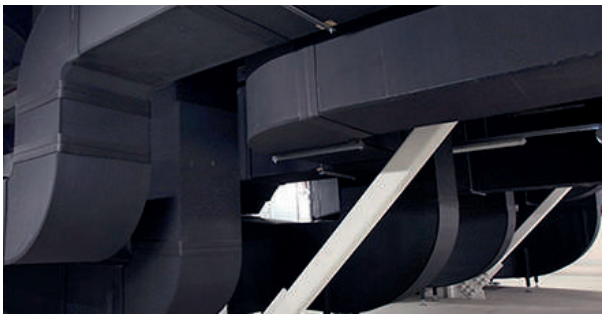
It provides fire safety with its flame-retardant properties.

It reduces the risk of condensation-related corrosion.

Offering both long-lasting performance and user comfort in HVAC systems, DYNAFOAM XPE is an indispensable component of sustainable buildings.







**Lightweight and Flexible Solution for the Sports, Leisure, and Fashion Industries**

DYNAFOAM XPE Cross-Linked Polyethylene Foams offer powerful solutions not only in industrial insulation but also in sports, leisure, mountaineering, bag, and footwear sectors, which directly reach end users. With its lightweight structure, impact absorption, flexibility, and antibacterial properties, it enhances user comfort while also extending product lifespan.



Sports, Leisure, and Mountaineering Applications
Products that are protective against impact, lightweight, and form-retaining play a critical role in sports and outdoor activities.
DYNAFOAM XPE, with its specially developed variants, serves a wide range of applications in these sectors:
Gymnastics mats
Kickboards and life vests
Children's play mats and floor tiles
Underlay pads for artificial turf fields
Helmet linings and camping mats
Military-grade ground and field pads
Thanks to its closed-cell structure, it does not absorb water, is easy to carry, and provides effective protection against impact.
It is free from harmful chemicals such as HFCK and is safe for human health.
Its flexibility and thermoformability also allow it to be produced in various shapes and molds. Our company offers lamination, cutting, forming, and custom sizing services for DYNAFOAM XPE products according to customer requirements.

**Comfort and Durability in the Bag and Footwear Industry**

In everyday use, materials that offer not only aesthetic appeal and style but also long-lasting protection form the foundation of bag and footwear design.
Thanks to its lightweight structure, flexibility, and high impact resistance, DYNAFOAM XPE is widely used in products such as:
Sports shoes
Ski boots
Briefcases
Suitcases
Synthetic leather lamination applications





The material's waterproof nature, antibacterial properties, odor resistance, and shock-absorbing performance significantly enhance user comfort, especially in shoe insoles and carrying bags.

**Healthcare and Medical Applications**

The healthcare industry demands absolute hygiene, user safety, and biological compatibility in every material used.
Developed with a special formulation tailored to meet these strict standards, DYNAFOAM XPE is widely preferred in medical applications.

Its closed-cell structure, smooth surface texture, antibacterial properties, and absence of harmful chemicals such as HFCK make it a reliable choice for medical use.

Thanks to its lightweight, flexibility, and ability to retain shape, it is used in a variety of applications, including:
Medical packaging
Medical support tapes
Orthopedic and prosthetic padding
Wheelchair support cushions
Interior padding for medical transport boxes and covers

With its health-conscious composition, DYNAFOAM XPE offers the ideal combination of comfort, durability, and hygiene for the medical sector.
Products can be cut, shaped, and customized through lamination or other processes based on customer requirements.









**DYNAFOAM XPE Cross-Linked Polyethylene Foam Technical Specifications Data Sheet**

| Properties | Relevant Standard | Relevant Standard |
|---|---|---|
| Density | TS EN 1602 | 20-200 kg/m$^3$ |
| Thickness | TS EN 823 | 3-15 mm |
| Roll Dimensions | TS EN 822 | 1-1,5 -2 m Width Available in custom lengths |
| Thermal Conductivity Coefficient | ITS EN 12667 | 0,035 W/m.K (0 °C)<br>0,039 W/m.K (+10 °C) |
| Fire Resistance (Automotive) | FMVSS 302 | <100 mm/minute. |
| Fire Resistance (Construction and Other Sectors) | TS EN 13501-1 | E (Standard Product)<br>D-s1.d0 (FR Modified Product) |
| Compression Strength* | TS EN 826 | 30 kg/m3;<br>Min. 32 kPa (% 25 Compression)<br>Min. 71 kPa (% 50 Compression)<br>Min. 184 kPa (% 75 Compression) |
| Water Absorption | TS EN 1609 | 0,1 Kg/m$^2$ |
| Service Temperature Range ** | - | -40/+100 °C |
| Impact Sound Insulation Value | EN 10140-3<br>ISO 717-2 | 37 dB |
| Chemical Resistance | - | It is resistant to acids, bases, and other chemicals. |
| Storage | - | Protect from direct sunlight, keep away from open flames, and avoid storing in poorly ventilated enclosed spaces. |
| Environmental Impact | - | Closed-cell and cross-linked standard products are free from heavy metals, HCFC, and CFC gases. |
| CE | TS EN 14313 | Initial type tests were conducted at TEBAR Laboratories. |

The technical values provided above for DYNAFOAM XPE may be subject to change for improvement purposes.
All values are obtained from our in-house laboratory tests and represent instantaneous measurements under specific conditions.

| DYNAFOAM XPE Dimensions | | | | | |
|---|---|---|---|---|---|
| Kalınlık (mm) | 3 | 5 | 8 | 10 | 15 |
| m$^2$/Rulo | 100 | 60 | 50 | 40 | 30 |

According to customer requirements, production can be carried out in widths of 100 cm, 150 cm, and 200 cm, with custom lengths and densities available upon request.
The standard color is grey, but for different color needs, please contact us directly.

# About Us...

As Dinamik Isı, we have been serving as a solution partner for 35 years in the construction and building sectors, with our roles evolving from reseller and distributor to importer, representative, and eventually manufacturer.

We began our operations in 1991 with mechanical installation applications and, in 1993, focused our expertise on the insulation sector.

In 1997, we established "Insulation Advisory Centers" to guide investors.

Between 1993 and 2003, we marketed and partially produced insulation accessories such as insulation hanger pins, plastic dowels, and cold room nails.

In 2003, we decided to invest in industry and, in 2004, started the production of CLIMAFLEX polyethylene insulation materials and DYNAJACKET valve jackets.

That same year, we began importing Elastomeric Rubber Foam insulation products and entered the HVAC sector.

In 2005, we expanded our imported product portfolio to include UV-resistant rubber foam and rockwool insulation materials. That year, we also started exporting our PE products under our DYNAFLEX brand.

In 2006, we commissioned our second production line for Climaflex products, doubling our production capacity. Simultaneously, we launched specially designed polyethylene profiles for the packaging sector under the DYNAPROFIL brand.

In 2007, we built a new factory warehouse with a closed area of 2,600 $m^2$. In the same year, we introduced non-flammable acoustic foam products under the DYNAAKUSTIK brand and began producing tapes for the HVAC sector under the DYNATAPE brand.

In 2008, we began selling Elastomeric Rubber Foam products under our DYNAFLEX RUBBER brand. We expanded our product range for installation insulation and developed engineering solutions tailored to various comfort conditions: DYNAFLEX AL, DYNAFLEX PVC AL-CLAD, and DYNAFLEX AL-PLUS.

In 2009, we started investing in polystyrene foam production for floor and wall insulation. In 2010, we launched these products under the DYNAFOAM brand.

That same year, we commissioned a new 2,500 $m^2$ production facility to manufacture industrial-specific technical foams and gaskets for sectors such as automotive, electronics, white goods, and small household appliances. Our total indoor area reached 9,000 $m^2$.

In 2010, we began investing in an XPS production facility with 10,000 $m^2$ open area and 5,000 $m^2$ closed area. In June 2011, we started production under the DYNAFOAM BOARD brand and launched our full XPS product range.

In 2012, we expanded our production line with investments in Die Cut, Slitting, and Traveling Head Press equipment. We continued designing packaging and technical foam products tailored to specific industries.

Between 2014 and 2015, we increased our PE production capacity annually and became the only company in Turkey capable of producing polyethylene sheets up to 25 mm thickness in a single layer.

Following our ISO 9001 and ISO 14001 certifications, we transitioned to an Integrated Management System with OHSAS 18001.

In 2015, we increased the capacity of our XPS production line by 20%, reaching 130,000 $m^3$.
In 2016, with our investment in the PE line, we began producing high-density flooring backer rods—previously imported—under our DynaProfil EDGE brand.
In 2017, we commissioned our second XPS line, raising our annual production capacity to 250,000 $m^3$.
That same year, we developed XPS products tailored to different needs:
DYNAFOAM FRIGO (refrigerated truck insulation), DYNAFOAM BRICK (insulation under decorative bricks), DYNAFOAM X-TILE (insulation under tiles), DYNAFOAM PANEL (core filling for sandwich panels)
In 2018, we began producing cross-linked polyethylene (XPE) foam sheets at our new facility with 7,000 $m^2$ closed area. By 2019, we had transitioned to regular production.
Our DYNAFOAM XPE products, which provide impact and sound insulation, offer solutions to the automotive, white goods, and many other industries. They are also used in areas such as yoga mats, swimming aids, and sealing applications.
In 2020, we achieved our goal of becoming a publicly traded company and began trading on Borsa Istanbul under the ticker symbol DNISI on September 3, 2020.
In 2021, we launched our new 20,000 $m^2$ Elastomeric Rubber Foam Production Facility investment in the Tire Organized Industrial Zone. In May 2022, we commenced mass production, reaching a total production area of 55,000 $m^2$.
In 2022, we began installing a rooftop Solar Power Plant (SPP) on this facility.
By 2023, we expanded the rooftop SPP projects to cover all our facilities. Our total installed capacity reached 4,513 kWp, and today we produce all our electricity in-house.
As Dinamik Isı A.Ş., with over 4,000 product types, modern facilities, a qualified team, and a strong belief in production, we continue to grow, manufacture for our country, and serve as your solution partner.

## Dinamik Isı A.Ş. Production Complex




**With 5 production plants and 1 central warehouse, we manufacture insulation and packaging solutions over a total area of 55,000 square meters. In our Polyethylene Foam (PE), Extruded Polystyrene Foam (XPS), Cross-Linked Polyethylene Foam (XPE), and Elastomeric Rubber Foam production facilities, as well as our Converting Plant, we offer customized industrial solutions with a product range of over 4,000 items.**




Yalıtımda dinamik® Çözüm

A Better Future Starts with Dinamik

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