Edoburg®

International Organization for Standardization ISO 9001

Multilayer Composite Piping System

Strength in Layers, Confidence in Flow

PRODUCT CATALOGUE

Edoburg®
PIPING SYSTEMS

Edoburg®

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About Edoburg

Edoburg, an ISO 9001 certifies company, specialises in supplying high-quality piping systems that consistently meet stringent international standards, ensuring unparalleled performance of the piping systems. Our experienced team, equipped with extensive technical knowledge, coupled with our efficient operations and fast turnaround time, enables us to provide top-tier supply of piping products tailored to your needs.

Our Mission

Edoburg's mission is to supply high-quality piping systems worldwide, offering a complete solution that meets international standards to ensure superior performance in every project.

Product Range

Our stellar lineup of pipes, ready for every project:

- PEX Pipe: PEX-A, PEX-B, PEX-A EVOH, PEX-B EVOH
- PPR Pipe
- PERT Pipe
- HDPE Pipe
- MDPE Pipe
- PVC-C Pipe: Portable water, Reclaim water, Industrial
- PVC-U Pipe: Drainage, Portable water, Reclaim water, Industrial
- PVC-O
- Composite Pipe: PEX-AL-PEX, HDPE-AL-HDPE
- PVC Electrical Conduit
- PVC Hose

Complete Solution Concept

Our wide range of products represent our complete solution concept.

With our products intended for diverse sectors, we offer individual and comprehensive system solutions. Focusing on the needs of projects and entire system.

We provide high standards of products in the market at all times. We always stand by our piping systems and reliable service network.

As a global pipe supplying company that stands out with successful operations ever since our incorporation, we act as a solution point to meet all your needs based on our technical knowledge, specialization and reliability.

Quality Assurance

We are committed to excellence in every aspect of our operations. The products we supply comply with the international standards and certifications, ensuring reliability, durability, and safety in every application. With Edoburg, you can trust that you're receiving top-notch piping solutions that meet your specifications and exceed your expectations.

Our Presence in the World

Our warehousing are strategically located in various places in **India**, **Vietnam** and **China**, to ensures efficient distribution of the products. We ensure fast deliveries with our modern logistics partners deployed at our local distribution hubs which are strategically located near the ports to ease the export of products. Edoburg Piping Systems exports its products all over the world.

Our Market Segments

Based on our experience and high-quality standard of products in the sector, Edoburg Piping Systems supports its clients with a complete piping solutions for every project requirement.

- Chemical and Petrochemical
- Water and Wastewater
- Mining and Mineral Processing
- Power Generation
- Marine and Offshore
- Building and Construction
- Manufacturing Industries
- Agriculture
- Pharmaceuticals
- Infrastructure

About Plastics

Plastics are polymers created by the chemical conversion of natural products or synthesized from organic materials. The primary components that make up the building blocks of plastics are long chains of carbon (C) and hydrogen (H) known as monomers.

The raw materials used for the production of plastics are natural compounds such as cellulose, coal, oil and natural gas. In the plastics industry, around 6 % of the petroleum products that come out from refineries is used.

Plastics fall into three main categories on the basis of their internal structure and the resulting mechanical characteristics: thermoplastics, thermosetting plastics and elastomers.

Advantages of Plastics

Thermoplastics obviously demonstrate different characteristics than those of the metals traditionally used for piping.

Metal	Plastic
High density • Crane is needed for transport. • Requires wide spacing for fixings. • High anchoring forces, fixing required.	Low density • Can be carried by hand up to d110. • Requires minimal spacing for fixings. • Simple and economical.
Thermal conductivity • Insulation is needed to limit heat loss. • Formation may result in corrosion.	Low thermal conductivity • Limited heat loss. • Low levels of condensation and resistance to corrosion.
Corrosion Behaviors • Galvanic corrosion can occur. • Corrosion reduces internal diameter. • Reduced diameter causes pressure losses.	High Corrosion Resistance • Galvanic Corrosion Free. • Prevents corrosion and diameter reduction. • No pressure losses.
Chemical resistance • Low Resistance to Acids. • Damage from Incrustation.	High chemical resistance • A minimum of 25-years of life with correct jointing methods. • Incrustation free.

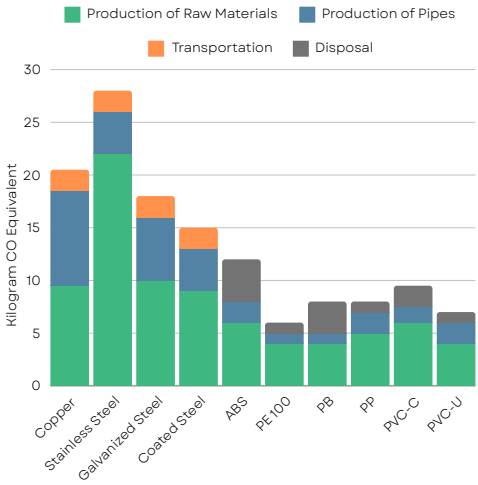
Thermoplastics in turn can be split into two main categories as partially-regulated (semi-crystalline) and iregular (amorphous) molecular structures.

- Semicrystalline thermoplastics, which have a partially ordered molecular structure: this category includes the polyolefins (polypropylene, polyethylene, polybutylene) and fluoropolymers (PP, PE, etc.)
- Amorphous thermoplastics, which have no crystalline regions and no packed molecular structure: this category includes the vinyl chlorides (PVC-U, PVC-C, etc.) and styrenes (ABS, polystyrene, etc.]

Semicrystalline materials are more suitable for hot welding, while amorphous thermoplastics are ideal for cementing or cold welding (solvent cementing).

Carbon Footprint of Plastics Vs Metal

It is the total of all greenhouse gases emitted to the atmosphere during the entire lifetime including the processes for extracting a product having carbon footprint from under the ground, refining, producing, using and disposing of that product.



Multilayer Composite Piping System

Discover the superior performance and reliability of our Multilayer Composite Pipe (PEX-AL-PEX), a state-of-the-art solution designed for a wide range of plumbing and heating applications. Combining the benefits of different materials, this advanced pipe technology offers exceptional durability, flexibility, and efficiency.

- Strength and Durability: The PEX-AL-PEX construction integrates the strength of aluminum with the flexibility of cross-linked polyethylene (PEX), providing a robust pipe that withstands high pressures and temperatures.
- Corrosion Resistance: The aluminum core effectively prevents oxygen and other elements from permeating the pipe, ensuring long-term corrosion resistance and maintaining water quality.
- Flexibility: Its flexibility allows for easy bending and installation around corners without the need for additional fittings, reducing potential leak points and installation time.
- Heat Resistance: Suitable for both hot and cold water systems, the pipe maintains its integrity and performance across a wide temperature range.
- Smooth Interior: The smooth inner surface minimizes friction and scaling, promoting efficient water flow and reducing energy consumption.
- Hygienic and Safe: Made from materials that meet stringent safety standards, ensuring reliability and peace of mind for residential, commercial, and industrial applications.

Fields of Application

- Plumbing Systems: Ideal for potable water distribution in residential buildings, hotels, hospitals, and other facilities.
- Heating Systems: Well-suited for underfloor heating, radiator connections, and other hydronic heating applications.
- Renewable Energy Systems: Used in solar thermal systems and other sustainable energy applications.

Technical data

Working Temperature
- 0°C - 95°C (32°F - 203°F)

Pipe Standard
- EN ISO 21003

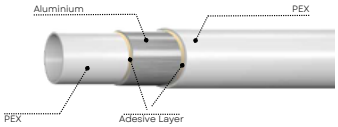
Certifications

Multilayer Composite Pipe Range

PEX-AL-PEX Composite Pipe

Pipe Size (mm)	Outer Diameter (mm)	Tolerance on OD (mm)	Pipe Thickness (mm)	Coils (m)	Straight Length (m)
16	16	0.2	2.0	100	5
20	20	0.2	2.0	100	4
25	25	0.2	2.5	100	4
32	32	0.2	3.0	50	4

PRESSURE RATING: Maximum Operating pressure 10 kg/cm2 @ 95 °C



PEX-AL-PEX Fittings

Crimping type fittings, made from PPSU and high quality brass.

Crimping, a mechanical joining technique prevalent in plumbing applications, is favored for its simplicity, dependability, and cost-effectiveness in residential and commercial settings alike. Utilizing a specialized tool, this method involves compressing a metal ring around the pipe and fitting, thereby creating a secure seal that effectively prevents leaks.






Technical Properties

Mechanical Properties

Provide detailed mechanical property requirements:

- Pressure Rating: Maximum allowable operating pressure (MAOP) at different temperatures, such as 10 bar at 70°C.
- Temperature Range: Suitable for continuous operation from -20°C to 95°C.
- Flexural Strength: Ability to withstand bending without fracturing.
- Impact Resistance: Ability to resist mechanical impact without cracking or breaking.
- Chemical Resistance: Resistance to chemicals commonly found in plumbing systems, ensuring compatibility with various water qualities.

Performance Requirements

Specify performance criteria and tests according to EN ISO 21003:

- Hydraulic Performance: Tested for pressure and flow characteristics to ensure adequate water flow and distribution.
- Leak Tightness: Tests to demonstrate the pipe's ability to maintain a leak-free system under specified conditions.
- Thermal Cycling: Evaluate dimensional stability and resistance to deformation after exposure to temperature variations.
- Long-Term Performance: Assess performance over extended periods to ensure durability and reliability in service.

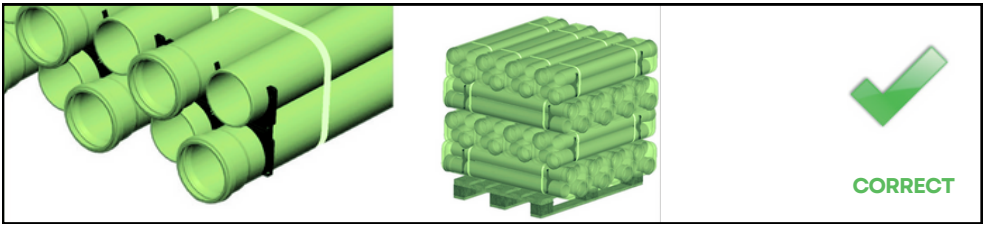
Layer	Material	Thickness (mm)	Properties
Inner Layer	PEX	2.0 ± 0.2	High temperature resistance, flexibility
Adhesive Layer	EVOH adhesive	0.2 ± 0.1	Excellent barrier properties
Middle Layer	Aluminum foil	0.2 ± 0.05	Structural reinforcement
Outer Layer	PEX	2.0 ± 0.2	UV resistance, durability

Property	Requirement	Test Method
Tensile Strength	≥ 18 MPa	ISO 6259
Elongation at Break	≥ 350%	ISO 6259
Creep Resistance	No visible creep after 1000 hours at 80°C and 5 MPa	ISO 16770
Abrasion Resistance	No visible damage after abrasion test with sandpaper	-
Oxygen Barrier	Oxygen permeability ≤ 0.1 mg/(m²·d)	ISO 15105
Resistance to Thermal Aging	No significant deterioration after 500 hours at 95°C	ISO 1167
UV Stability	No significant change in properties after exposure to UV light for 1000 hours	ISO 4892-2
Compatibility with Fittings	No leaks or failures in joint tests with standard fittings	-

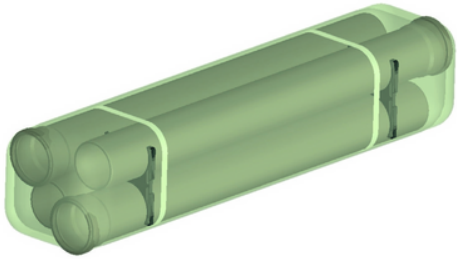
Packaging, Storage and Transportation

Packaging

Our pipes and fittings are packed as ready for transport in a customer-friendly way. Packing ensures safety, efficient storage and easy transport.

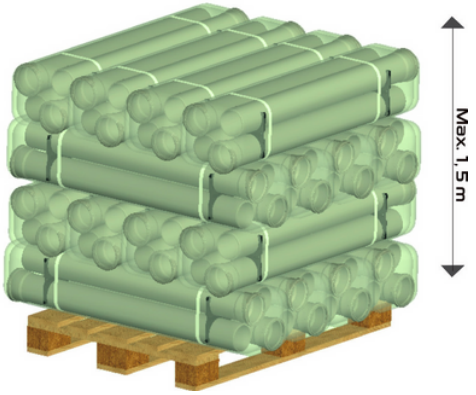


Short parts with the length of 150, 250 and 500 mm are packed in carton boxes like connection parts.



Pipes are packed by plastic clamps to hold them together. Stretch film is applied to protect pipes from pipes dust and stains.

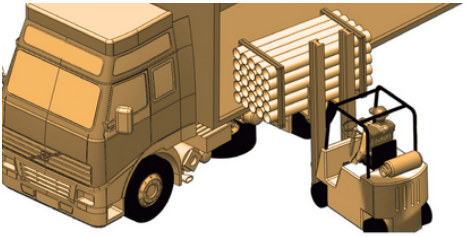
Storage

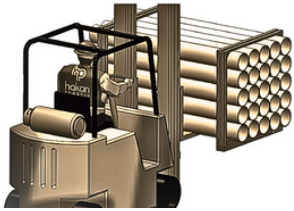


Method of storage should not cause any outflow and should not damage the pipes. As long as they are stored properly, no permanent deformations or damages will occur on the pipes and fittings. Pipes should not be stacked above 1,5 m. Pipes should be safe against sliding.

Pipes and fittings packed in carton boxes should be protected against moisture. Carton boxes should be sealed and stored in a dry area.

Transportation





Pipes should be carefully transported to prevent any damages. Avoid sudden and hard pressures on pipes and fittings that might cause freezing in cold weather conditions. Ensure that pipes are not slided and dropped on the floor. Loading and unloading and packing of pipes in a block should be carried out by means of forklifts having flat threads and extensions.

Notes

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/edoburgpipes

Edoburg Piping Systems LLP
Reg. Office: 320, Vikas Kunj
Vikaspuri, Delhi 110018 IN

+1 201 616 0164
+91 962 585 8500
hello@edoburg.com