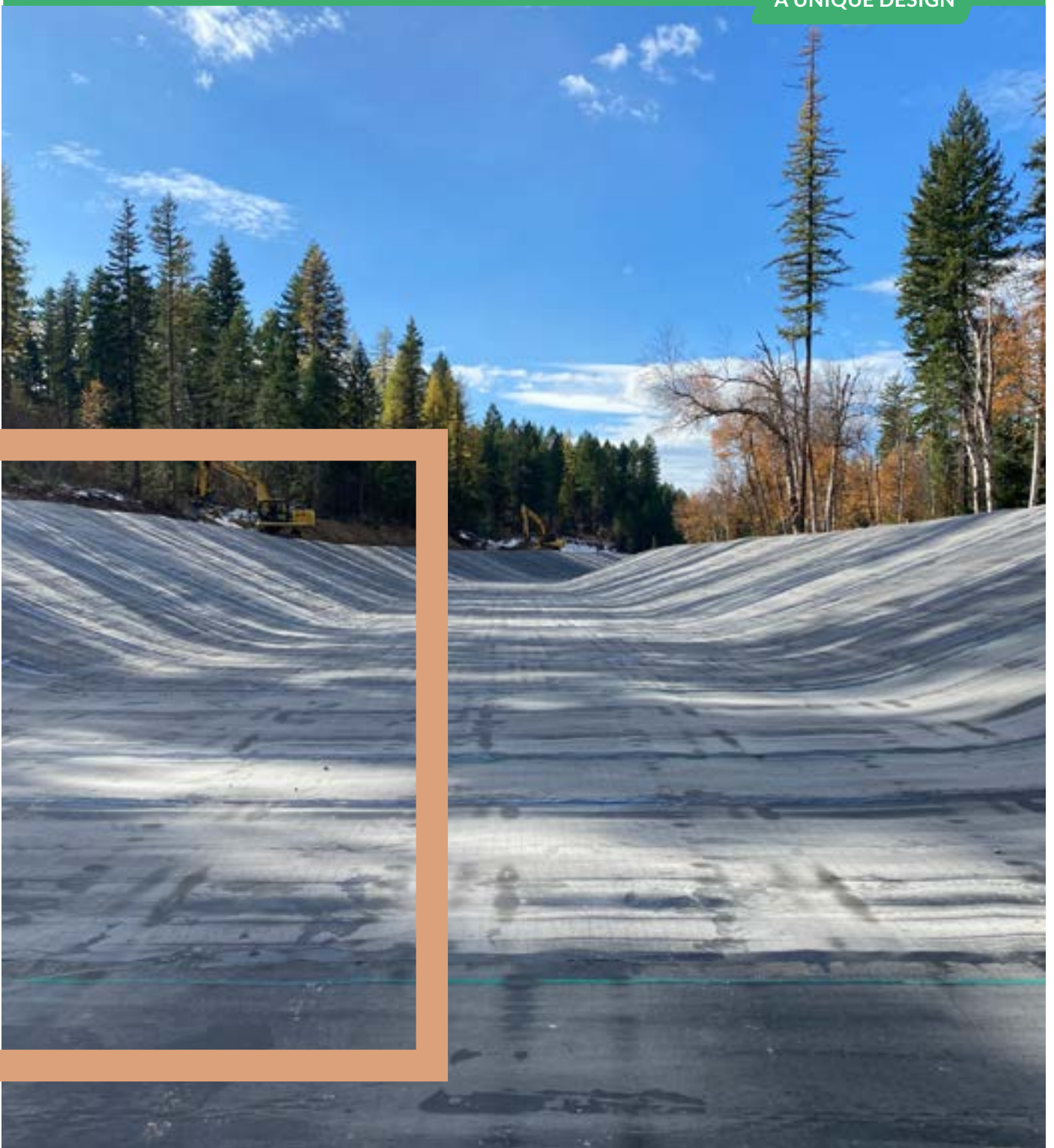


GEOMEMBRANE WATERPROOFING SYSTEM

COLETANCHE

A UNIQUE DESIGN



AXTER

WATERPROOFING SOLUTIONS

ENVIRONMENT HYDRAULICS UNDERGROUND CONSTRUCTION TRANSPORT

HIGHLY TECHNICAL PRODUCT

CONSTRUCTION SOLUTION FOR CIVIL WORKS

With its COLETANCHE® brand, AXTER proposes a range of geomembrane construction solutions for public works and civil engineering projects around the world.

The high technical performance of these solutions makes them suitable for a wide range of applications for both new build and renovation projects in various sectors: environment, hydraulics, transport and underground construction.



MULTIPLE APPLICATIONS

COLETANCHE® geomembranes are specially designed for the following sectors

- > **Environment:** retention of solid and liquid waste, biogas barriers, etc.
- > **Hydraulics:** dams, canals, basins, etc.
- > **Transport:** bridges, roadside ditches, railway lines, etc.
- > **Underground construction:** buried walls, waterproof linings, underground structures, tunnels, etc.

COLETANCHE®: GUARANTEED QUALITY

We implement a quality assurance system to the manufacture and installation of our geomembranes, guaranteeing maximal quality. Welds can be inspected by various methods, including ultrasound

TECHNICAL VALIDATION

These waterproofing systems are implemented in compliance with local regulations and reference systems. For example: CETU technical approval and ASQUAL certification in France.

Additional internal specifications can also be implemented. Please contact your local representative for more details



COLETANCHE®

RELIABLE TECHNICAL SOLUTIONS FOR A WIDE RANGE OF APPLICATIONS

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THE COLETANCHE® GEOMEMBRANE

A UNIQUE DESIGN

COLETANCHE® is a bituminous geomembrane waterproofing system, unique in terms of its 5.10m width. COLETANCHE® geomembrane associates an elastomeric bitumen based binder and an internal structure made from non-woven polyester geotextile; it is designed to guarantee excellent mechanical and chemical resistance over the long term

ADVANTAGES FOR ALL SITUATIONS



RESISTANCE TO AGGRESSIVE ENVIRONMENTS
even without adding an anti-puncture geotextile



COMPATIBLE WITH ALL SUBGRADES AND COVERING MATERIALS
(hot-mix asphalt, concrete, stone, gravel)



EXCELLENT RESISTANCE TO AGEING
Resistance to UV, weathering, biological agents and oxidation



SUITABLE EVEN FOR EXTREME WEATHER CONDITIONS
(rain, wind, cold to -40°C)



REMARKABLE DIMENSIONAL STABILITY AND FLEXIBILITY
Guaranteeing permanent contact with the supporting ground

PEELABLE PROTECTIVE STRIP FOR WELDING

BOTTOMSIDE: ANTI-ROOT PERFORATION FILM

UPPER SIDE: SANDED

ROLL WIDTH 5,10 M

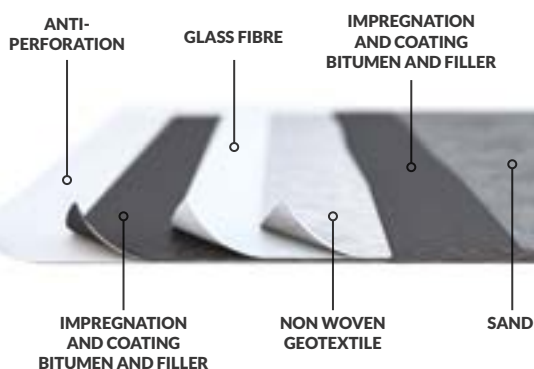
OVERLAP LINE FOR WELDING

APPLICATION

2 RANGES OF GEOMEMBRANES

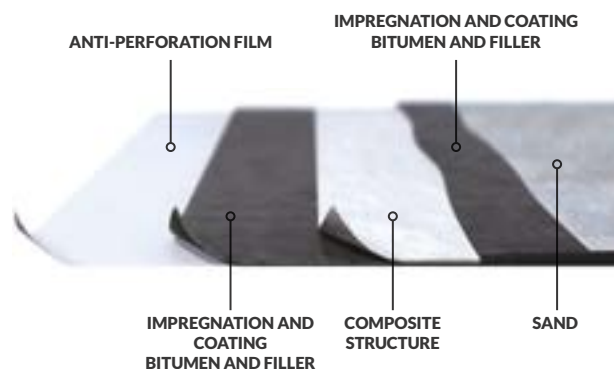
FOR ALL APPLICATIONS DEPENDING ON IMPLEMENTATION CONDITIONS, GRANULOMETRY OF SUPPORT SURFACES AND CLIMATIC CONSTRAINTS.

COLETANCHE® ES



ES RANGE is made from elastomeric bitumen, with high elastic properties, ensuring better resistance at low temperature, higher resistance to UV and improved durability in exposed situations.

COLETANCHE® XP



XP RANGE is a single-structure variation of the ES range. It is less thick, but made from the same amount of elastomeric bitumen, ensuring the same mechanical and construction performance.

The geomembranes of each range are available in increasing grades of resistance, meeting all requirements, regardless of the mechanical stress to which the product will be subjected.

		Thickness (mm)	Standard width (m)*	Standard length (m)*	Density (g/m ²)	Bind
ES RANGE	ES1	3,5	5,1	100	4 200	Elastomeric bitumen
	ES2	4		80	4 850	
	ES3	4,8		65	5 800	
	ES4	5,6		55	6 400	
XP RANGE	XPC	2,2		140	2 500	
	XP1	3,2		100	4 300	
	XP2	3,2		100	4 300	
	XP3	3,7		80	4 900	
	XP4	4,2		65	5 500	

*Non-standard lengths and widths can be made to order.

ENVIRONMENT

Compatible with today's industrial and domestic activities, COLETANCHE® geomembrane is ideal for a wide range of environmental protection applications. It is particularly recommended for industrial and mining structures.



CONTAINMENT OF SOLID WASTE

Waste from domestic, mining and industrial activities, green waste

The COLETANCHE® geomembrane is widely used for the following purposes:

- waterproofing and isolation of bottom ash maturation areas, composting areas and ore extraction sites,
- containment of storage centres for contaminated industrial waste (chromates, potash, etc.) and landfill sites,
- covering slag heaps after activity to prevent the spreading of pollution via rainwater and contamination of rivers and the water table,
- protecting reserving water resources and soils against pollution of all kinds.



CONTAINMENT OF LIQUID WASTE

Waste water, liquid waste from industrial and mining operations, tailings pond

Watertight construction design for retention of polluted waters has increased substantially in recent years.

Coletanche geomembranes have a high level of resistance to biological and chemical agents and offer an environmentally friendly solution to a wide range of pollutants.



BIOGAS BARRIERS

Sensitive sites

The COLETANCHE® geomembrane enables the recovery of formerly contaminated sites by making them suitable for construction. By preventing the gases in the soil and/or backfill from spreading through the upper level structures, it preserves air quality in the new constructions. Its performance levels make it an effective barrier against upward gas flows.



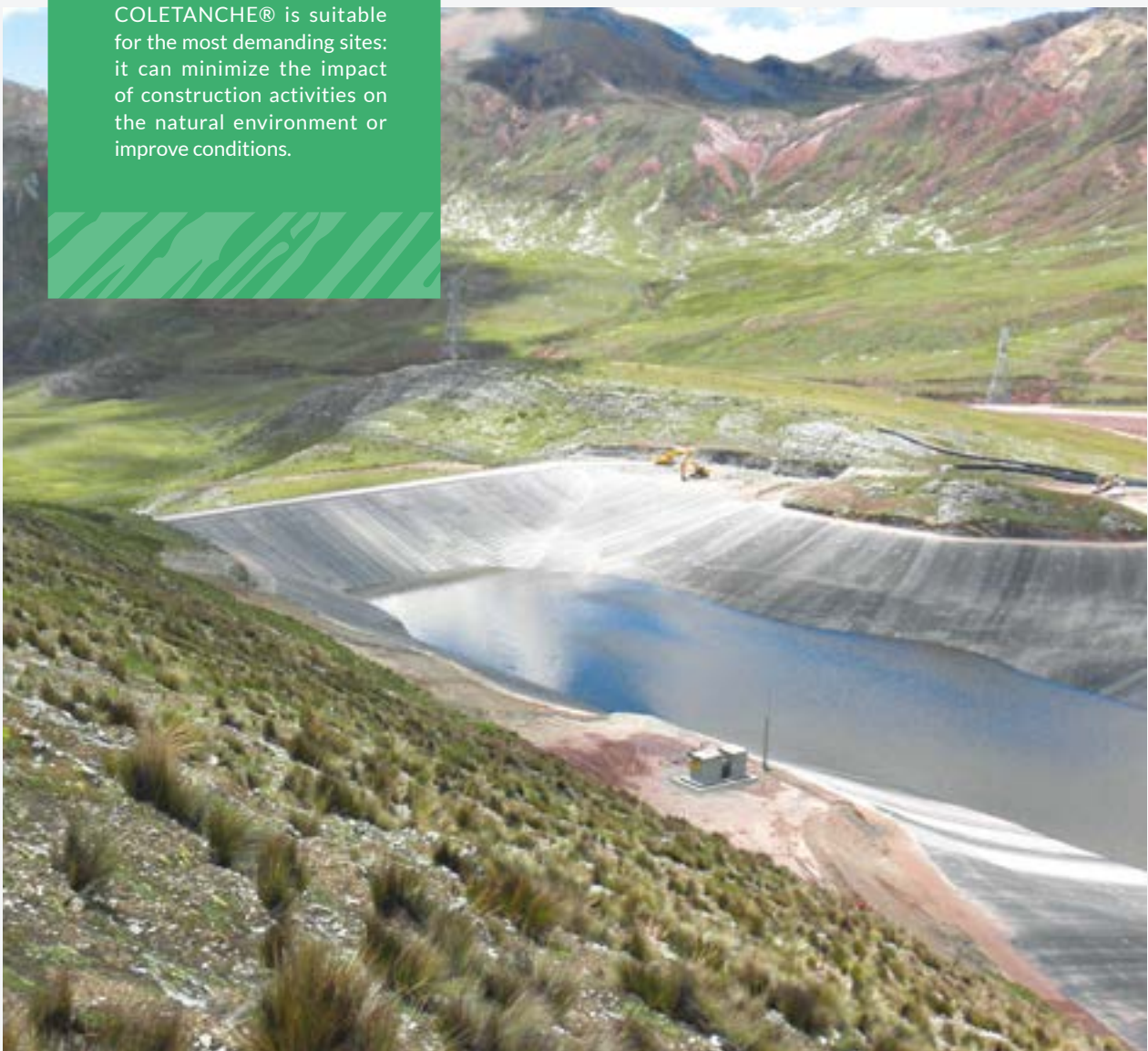
COLETANCHE® PROTECTING THE ENVIRONMENT

COLETANCHE® protects against the harmful effects of pollution, preserves water resources and soil quality for future generations in conditions compatible with today's industrial, domestic and mining activities.

BUILDING ON SENSITIVE SITES

COLETANCHE® is suitable for the most demanding sites: it can minimize the impact of construction activities on the natural environment or improve conditions.

COLETANCHE® has a **wide range of applications in industrial and mining sectors**: basins for storing, lagooning or leaching different types of liquid and solid waste, for bottom ash maturation or green waste composting platforms.



HYDRAULICS

Water is our most precious resource, this is why we have developed COLETANCHE® to meet the increasing needs of the industry, offering the possibility of installing the geomembrane for hydraulic transport and storage systems.



DAMS

Flood mitigation, irrigation, industry, hydroelectricity

The COLETANCHE® geomembrane is used for new build and renovation projects concerning the upstream construction facings of dams: Ospedale dam, Galaube dam, El Mauro dam, etc. It is particularly well-suited for the waterproofing of slight gradient earth-filled dams.



CANALS

Irrigation, navigation and supply canals

Used on its own or combined with mechanical protection systems made from concrete, gabion or rock, the COLETANCHE® geomembrane is an effective solution for the waterproofing of all kinds of irrigation canals, hydroelectric power plant supply pipes and waterways. It is also recommended for the construction of drainage trenches and repairing leaks.



BASINS

Large and small leisure pools, fire reservoirs, fish farms, drinking water reserves

Thanks to its resistance, flexibility and compatibility with drinking water, the COLETANCHE® geomembrane is ideal for construction hill reservoirs and basins for utility purposes (irrigation reservoirs, fish farms, drinking water supplies, fire storage, roadside basins) and leisure facilities (snow machine supplies, artificial lakes and ponds, protection of dams for leisure ports, etc.).



UNDERGROUND CONSTRUCTION

Underground construction must have a construction coating, with or without drainage, depending on the application. With COLETANCHE® GC, AXTER proposes a high-performance construction coating to resolve the various problems related to underground construction: structures, tunnels, waterproof linings, etc.



WATERPROOF LINING

Construction from the inside

Lining a building involves construction the basement areas from the inside. In France, DTU 14-1 defines the general criteria and recalls the crucial nature of treating particular features. A lining with a bituminous construction membrane is completed by an external structure to protect the waterproofing and ensure resistance to hydrostatic pressure.



UNDERGROUND STRUCTURES / TUNNELS

Extrados waterproofing

Extrados waterproofing involves construction the prefabricated frames installed in a trench to be covered later. The COLETANCHE® GC system, currently under evaluation by CETU, is implemented independently and the overlap joints are welded with a blowtorch. The goal is to eliminate the risk of natural groundwater infiltrating into the underground construction; COLETANCHE® thus ensures the waterproofing, protection and long-life of cut-and-cover tunnels and wildlife crossings, for example.



TRANSPORT

For transport infrastructures built on water-sensitive land, the COLETANCHE® geomembrane offers an effective solution to protect against soil instability during extreme weather events (torrential rain, drought, etc.) that may render the structures unusable.

RAILWAYS

Stabilisation of railways

The COLETANCHE® geomembrane is often used in the construction of new railway lines (high speed lines) or for the renovation of existing lines. Specially designed to hold the ballast directly on top, this geomembrane is used to stabilize soil at risk of deformation in contact with water (clay, gypsum, sandy terrain) and to prevent fine particles from rising up into the ballast. This also means that the use of pollutant phytosanitary products is unnecessary. The width of COLETANCHE® (5.1m) corresponds to the usual dimensions of a European railway line, which also makes it ideal for railway bridges.



ROADSIDE DITCHES

Ditch waterproofing

When motorways are built or roads are widened, the water laws (control of rainwater and runoff to protect the quality of the groundwater) require the construction of sealed gutters (ditches) to collect the runoff water from the road and transfer it to the retention basins.





AIRPORTS

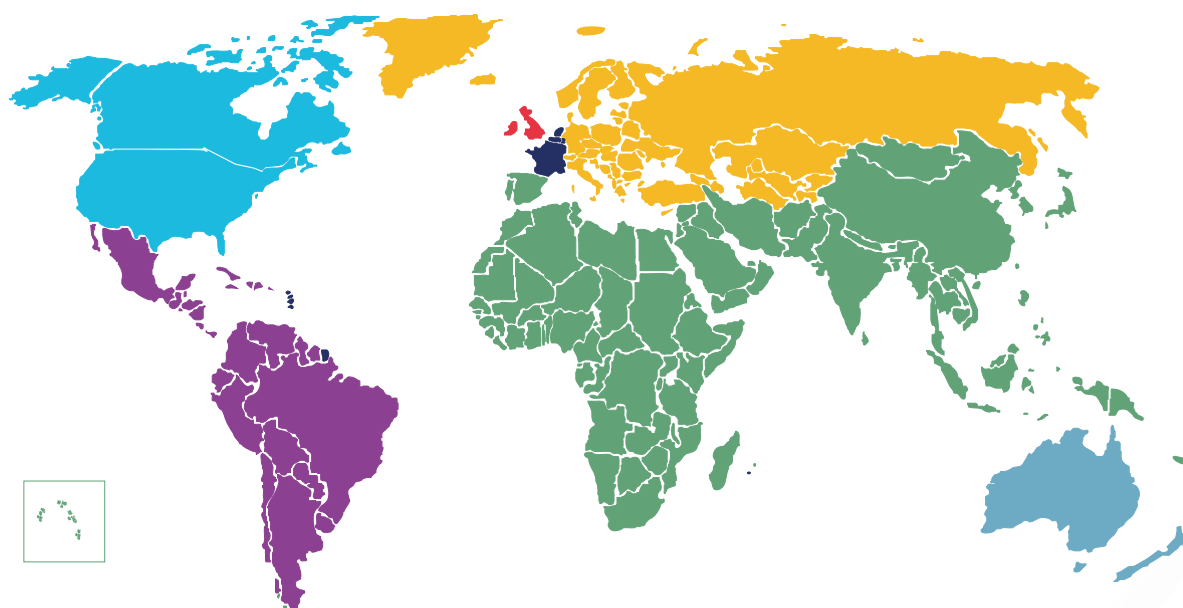
Stabilisation of airport runways

COLETANCHE® can be used for airport runways to create a waterproof barrier above water-sensitive soil to preserve the physical and mechanical properties of the runway regardless of weather conditions: rain, snow, sun, high or low temperatures. The composite structure of COLETANCHE® geomembranes, with its reinforced geotextile, also offers excellent resistance to punctures due to aggregate.



**AXTER****COLETANCHE**

AXTER designs, manufactures and commercializes construction systems (bitumen, PVC, liquid) for flat or sloping rooftop terraces, public works and civil engineering structures. These construction systems also comprise additional products and accessories that are required for their installation. AXTER generates 40% of its turnover on the export market, in more than 50 countries around the world. Our sales and technical teams work with you as partners, assisting at every stage of your project..



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