WATERPROOFING SOLUTIONS
FOR CONSTRUCTION AND CIVIL ENGINEERING WORKS
Axter designs, manufactures and sells waterproofing membranes in over 40 countries for construction and civil engineering works.

With its civil engineering waterproofing geomembrane, Axter offers its expertise and provides high-tech products to its customers, specially designed for:

- **Environment**: solid waste containments, liquid waste containments, biogas barriers…
- **Hydraulics**: dams, canals, basins…
- **Transport**: bridges, ditches, railways…
- **Underground works**: underground barriers, tank lining, underground works, tunnels…

For these, Axter provides to its customers:

- **Coletanche® bituminous geomembranes**
- **Bituminous geomembranes with SBS binder** (FORCE® TRAFIC…) or **ALPA® (EXCELPONT® GC…)**
- **Complementary products and accessories** (VERNIS ANTAC GC, DRAINAX® G…)

Those waterproofing systems are implemented according to local regulations and standards. For example, CETU Technical Assessment and Accreditation ASQUAL in France.
Contact us for more details.

Internal specifications may complement these provisions. These systems adapt themselves to constraints for new and rehabilited works sites, and have, thanks to high technical performances, applications in the following areas:

1. **ENVIRONMENT**
2. **HYDRAULICS**
3. **TRANSPORT**
4. **UNDERGROUND WORKS**
ENVIROMENT

The COLETANCHE® bituminous geomembrane, makes by Axter is a waterproofing leading product of civil engineering. Its high performances and its adaptability to all kind of floors, opened many applications in the field of environmental protection. Compatible with industrial and domestic activities of today, the COLETANCHE® geomembrane finds many applications in the fields of the industry and mines (storage ponds, leaching of liquid effluents, green waste composting platforms...).

It permits to avoid the spread of pollution by rainwater, and it is currently used to protect the deposits of industrial wastes, cover end of activity waste heaps or waste storage centres.

HYDRAULICS

Water is our most precious commodity. The COLETANCHE® geomembrane is the response to the growing needs of industry by offering the possibility to install storage and hydraulic transport systems.

It is compatible with materials as hot mix asphalt, mastic asphalt and provides the waterproofing continuity.

COLETANCHE® can be covered by concrete, interlocking pavers, rock fills, gabions, ballast or topsoil. COLETANCHE® can also be connected to synthetic membranes (PVC, PEHD).

TRANSPORT

COLETANCHE® geomembranes, used against chronic pollution, accidental or seasonal, provide an efficient response during road construction in sensitive ecological areas and respect the application of the water law: groundwater and streams protection (achievements of the waterproofing of ditches along the roads and highways, creation of retention basins...).

COLETANCHE® adapts itself to difficult sites (floodable lands, outcropping groundwater, floors under railways or road pavements) and improves conditions of realization of a project.

UNDERGROUND WORKS

The implementation of a waterproofing coating, with or without drainage, is required for underground works. Each year, thousands of claims are reported. The choice of an efficient waterproofing system is essential to avoid any confusion. Axter provides a complete range of high performance waterproofing coatings (FORCE® 4000 TRAFIC underground walls, DRAINAX®, DRAINAX® G, HYRENE® 35 PY RE, COLETANCHE® GC...) which permit to answer to various problems of underground works: casings, underground walls, underground works, tunnels.
SOLID WASTE CONTAINMENTS
Household, mining, industrial waste, green waste

Its chemical resistance and implementation simplicity permit to the COLETANCHE® geomembrane to be widely used for the solid waste storage and above all for:

- Waterproof and isolate clinker maturing areas, composting or extraction of minerals areas.
- Confining the storage centers of industrial waste pollutants (chromate, potassium... and landfills.
- Cover heaps at the end of activity in order to avoid the spread of pollution from storm water and river pollution and groundwater.
- Preserving water resources and soil pollution.

LIQUID WASTE CONTAINMENT
Wastewater, industrial and mining effluents, tailings ponds

For several years, needs in waterproofing construction which permit to retain polluted water are increasing: landfill fund, umbrellas on heaps or waste storage mound...

Thanks to its resistance to biological and chemical attacks, the bituminous geomembrane COLETANCHE® can be used in contact with a wide variety of pollutants. It is thus widely used for lixiviates retention ponds.

BIOGAS BARRIER
Sensitive sites

The COLETANCHE® bituminous geomembrane permits to add value to old contaminated sites by making them fit for construction. By preventing that gas from soils and / or embankments spread in the higher structures, it preserves the quality of the air in buildings. Its performances show that it is an efficient barrier against gas lifts.
Flood control, irrigation, industry, hydroelectricity

The COLETANCHE® bituminous geomembrane has frequently been used in new construction or rehabilitation of waterproofing masks of dams: “Ospédale” dam, “De la Galaube” dam, “d’El Mauro” dam… It is particularly well adapted to waterproof dams gently sloping and concrete dam with large vertical slope.

Canals

Irrigation, navigation and derivation canals

Alone or combined with mechanical protection made of concrete, gabions or rocks, the COLETANCHE® geomembrane offers an efficient solution for waterproofing of all kind of irrigation, hydroelectric plants alimentation or waterways canals. It is recommended for realization of drainage trenches and repair work of bottom leakage.

Basins

Small and large leisure basins, fire reserve, fish farming, drinking water supplies

Due to its strength, its flexibility combined with its compatibility with drinking water, COLETANCHE® geomembrane is the best solution to waterproof small dams, reservoirs or ponds for utility works (reservoirs, fish farming, drinking water supply, storage fire, road basins) or fancyworks (snowmaking power, lakes and artificial water places...).
BRIDGES/RAILS/ROADS

Systems acceding and non-acceding to the support/on masonry or metal decks

Several specific systems to roads and rail works were developed by Axter. In new construction as in rehabilitation, these waterproofing products adapt themselves to the support, the reported protection and the destination of the works.

- Viaduct LGV Le Mans, France: EXCELPONT® GC
- Bridge Rama IX, Bangkok, Thailand: EXCELPONT® GC

RAILWAY LINES

Railways stabilization

The COLETANCHE® geomembrane is frequently used in new railways construction or in the rehabilitation of existing lines in France and abroad. Specially designed to directly receive the ballast, this geomembrane is used to stabilize soils subject to deformation on water contact (lay, gypsum, sand soils) and avoid lifts fines in the ballast. It permits also to prevent the se of polluting products.

- Line LGV The Rhine-Rhône, Nantua, France: COLETANCHE®
- South DK Strip Railways, USA: COLETANCHE®

ROADSIDE DITCHES

Sealing of ditches

The creation of highways or road widening, in conformity with the water law (rainwater management to protect quality of underground water) requires to realize gutters (ditches) waterproofs to collect and lead water until retention basins.

- Bypass Vichy, France: COLETANCHE®
- Roadside ditches - A63, France: COLETANCHE® 500 000 m²
UNDERGROUND WALLS

Sealing of underground walls

The underground or semi-underground external walls are almost always subjected to the action of seepage, run-off and moisture by capillarity or even condensation. Prevent water or moisture appearance is a problem that every project manager faces when designing a building. The technical processing of the seal is generally associated with a drainage system also marketed by Axter.

UNDERGROUND WORKS/TUNNELS

Extrados waterproofing

The extrados waterproofing consists in sealing prefabricated frames installed in a trench and covered later. The COLETANCHE® GC system, under CETU technical opinion, is implemented in independence and lap joints are welded with a torch. The goal is to eliminate water infiltration risks of natural site in the underground structure, COLETANCHE® provides sealing, protection and sustainability of covered trenches.

TUBBING

Waterproofing by inside

The tubbing of a building consists in sealing, by the interior, underground places. The DTU 14-1 defines the general criteria and reminds the importance of treatment of special points. A tubbing with a bituminous waterproofing membrane is completed by an external work that protects the sealing and provides resistance to hydrostatic pressure.
Business proximity
Our sales team is listening to its customers daily and promotes Axter products to prescribers.

Start/technical assistance
To find solutions to the most specific sites and ensure starts of highly technical projects, technical assistance on site is also possible on study.

Technical advice
Our technical advisors respond to your requests for technical information about our systems and waterproofing processes.

Education
Integrated into the production site of Courchelette (59), the training center welcomes partners for better product knowledge and implementation techniques.

Communication
The Communication Service provides practical supports on request:
documentation@axter.eu.

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