



ENVIRONMENT
Solid waste storage

COLETANCHE®

CIVIL ENGINEERING



SOLID WASTE

Confinement :
domestic, mining, industrial, green waste



COLETANCHE®

Bituminous geomembrane for the confinement of solid waste

More environmentally friendly than incineration in terms of CO₂ emissions, the storage of hazardous and non-hazardous final waste is becoming an increasingly popular solution for managing waste and is occasionally the only technical solution available (certain mining and final waste, for example). As such, the numerous properties of the COLETANCHE® bituminous geomembrane make it a valued partner when it comes to protecting the environment. COLETANCHE® "Solid Waste Confinement" solutions ensure long-lasting protection of soil and water tables against pollution by preventing the infiltration of rainwater runoff.

Over 30 years of expertise, outstanding durability

Analyses of COLETANCHE® geomembranes used for capping waste have proven that they provide long years of excellent, trouble-free performance and outlast long-term waste.

The SUNE solid waste landfill in Normandy has been in operation since 1981. The COLETANCHE® secondary containment liner at the La Hague low- and intermediate-level radioactive waste repository has been frequently examined since 1992. The mechanical properties (tensile strength, permeability, puncture resistance, elongation) of the COLETANCHE® liner show no signs of degradation since it was installed.



1981

All-weather, on-time installation

COLETANCHE® can be welded or adhered to all types of materials (concrete, steel, rigid PVC, etc.), providing a totally waterproof seal. It can also be attached using mechanical fasteners. Because it is quick and easy to put in place, it can be installed in extreme weather conditions, which limits disruptions to the work schedule. Meeting deadlines means that structures can be put into operation in a timely fashion, avoiding losses due to delays.



Cold weather installation



Installation in an anchor trench



Outstanding mechanical properties, exceptional safety

Friction angle superior to all polymeric geomembranes

Laboratory tests using the inclined plane method to determine the friction angle of loads of various materials on the COLETANCHE® have shown that the friction angle for topsoil was 34°, meaning geogrids are often not required with the COLETANCHE®.



Excellent puncture by aggregate resistance

Because it is internally reinforced, COLETANCHE® offers several unique advantages, including high tear resistance, which means that it can be installed on natural surfaces and can also be covered risk-free with standard backfill as well as large-sized materials. For example, ash and rocks at mining operations can be safely stored using COLETANCHE®. A number of studies have shown that bituminous geomembranes have 4 to 5 times fewer defects per hectare than polymeric geomembranes, which are more fragile due to their lack of reinforcement.

Elongation: very good resistance to differential settlement

Polymeric geomembranes maintain the values of their advertised mechanical properties, up to 12% elongation. Beyond this level they change from an elastic state to a plastic state. By comparison, COLETANCHE® maintains the values of its advertised mechanical properties, up to 35% elongation.

Resistance to leachates

COLETANCHE® resists the chemical agents found in most leachates. Feel free to consult us to determine whether your products are compatible with our geomembrane.





International Civil Engineering waterproofing specialist

COLETANCHE® has been used by civil engineering professionals for over 40 years. Drawing on hands-on experience in the environmental sector, our R&D department has developed "Solid Waste Confinement" solutions to meet environmental requirements. COLETANCHE® has been used for this type of application in many projects, including: 98,000 m² mining waste / Boladero, Chile // 17,300 m² mining waste / Colmar, France // 88,500 m² / mining waste / Canada // 172,000 m² / domestic waste / La Fosse Marmitaine, France...

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