



RETENTION BASIN PITON SAHALES RÉUNION

Products	AFITEX P 800 A , AFITEX P 1200 geoNETEX® ... 400, 800 g/m ²	135 000 m ² 50 000 m ²
Location	Réunion, Mascarene Islands, Indian Ocean	
Installation	2023 - 2024	
Installers	RAZEL-BEC REUNION	FAYAT Group
	GEObio étanchéité	

Réunion Island, located in the Indian Ocean, is part of the Mascarene Islands archipelago and is situated just under 700 km east of Madagascar. The inhabitants of this remote location, which covers an area of 2,512 km² and has a population of nearly 900,000, invest significant resources into ensuring maximum agricultural self-sufficiency. This goal is closely linked to the necessity of securing an adequate water supply for farming operations. To supplement irrigation during dry seasons, they utilize the capacity of retention reservoirs that accumulate rainwater.

As a French Overseas Department and therefore EU territory, the island has already constructed three structures of this type. The most recently completed project, Piton Sahales, with a capacity of 350,000 m³, was built between 2023 and 2024. In addition to supporting agriculture, it serves as a response to the need for local adaptation to climate change. The project costs, amounting to €23 million, were 90% covered by the European Agricultural Fund for Rural Development (EAFRD).

Built on a hill near the village of Bourg-Murat (within the commune of Le Tampon), the reservoir makes efficient use of the natural landscape to supply end-users via gravity. During periods of intense rainfall, the reservoir can reach full capacity in just 5 to 6 hours. To prevent the collected water from seeping into the adjacent volcanic bedrock, it was necessary to line the bottom and slopes of the structure with a geomembrane. The protection of these sealing elements against mechanical puncture—whether caused by surrounding materials under load, during the backfilling process, or by installation activities—is provided by non-woven geotextiles. For this project, JUTA a.s. supplied **AFITEX P 800 A** and **AFITEX P 1200** protective geotextiles with grammages of 800 and 1,200 g/m². These products hold the French ASQUAL certification, and a total area of 135,000 m² was delivered. The final surface of the upstream slopes consists of a concrete slab cast into geocells, which act as formwork until the mixture sets. The bottom of the reservoir is also finished with concrete.

Because the reservoir lining forms an impermeable layer, it is essential to drain any water or gases that may accumulate between the seal and the subsoil. This function is performed by a drainage geocomposite. For its production, our company supplied **geoNETEX®** non-woven geotextiles with grammages of 400 and 800 g/m², totaling 50,000 m².