

Marine-strength waterproofing for Thailand's largest aquarium



Project	Aquaria Phuket
Owner/operator	Aquawalk Thailand Co. Ltd.
Contractor	Aquablu Technologies Sdn. Bhd.
GCP Solutions	SILCOR® liquid-applied waterproofing

Project

Slated to open in early 2019, Aquaria Phuket will be the largest aquarium in Thailand. Located inside the Central Phuket megamall, the aquarium is expected to house some 25,000 marine creatures. Once opened, Aquaria will be more than a tourist attraction. It is expected to become a working research and breeding centre through a partnership with Chulalongkorn University in Bangkok.

Malaysian company Aquawalk Thailand Co. Ltd., the owner and operator of the new aquarium, tasked Aquablu Technologies Sdn. Bhd. to design and build the aquarium, including finding a high-performing waterproofing solution that would be safe for the marine life that will soon call estimated 60,000-square metre aquarium home. Aquawalk is an expert in managing and operating aquariums, as the company also owns and manages the oceanarium Aquaria KLCC in Kuala Lumpur, which opened in 2005.





When it comes to waterproofing, especially an aquarium, the biggest challenge is delivering a solution that is safe for marine life without compromising the waterproofing integrity.

Typically most waterproofing solutions fail at terminations, joints and penetrations.

For Aquaria, Aquablu wanted a high-performing solution that would address waterproofing vulnerabilities, offer flexibility in application and be easy to install. Advanced planning was important for Aquaria to ensure they could meet the project's overall schedule.

"SILCOR® waterproofing provided huge advantages for us," Boyle said. "One of the challenges we face in the construction phase of any aquarium projects is the timing and the speed that we're able to apply the waterproofing. With the SILCOR® system we found we had a lot of flexibility. Plus the speed that we're able to apply it gave us a lot of advantages with our project schedule and the timing of the overall work. We believe SILCOR® waterproofing offers a huge advantage over many other systems available on the market."

Aquablu Chief Operating Officer Matthew Boyle

After researching liquid waterproofing systems for the tanks at Aquaria, Aquablu selected the following SILCOR® liquid-applied waterproofing products from GCP Applied Technologies:

1. SILCOR® primer BS – A fast-drying, single-pack modified polyurethane primer for elastomeric polyurethane membranes
2. SILCOR® 990 MP – A two-part, fast-curing, pure polyurea, spray-applied elastomeric coating
3. SILCOR® LM PU sealant – A joint sealant based on proven polyurethane elastomer technology

The SILCOR® system comprises liquid waterproof membranes, top coat, primers and detailing products. Its flexibility in application protects vulnerable joints and protrusions without compromising waterproofing integrity. The SILCOR® membrane delivers excellent adhesion to concrete and steel, and offers flexibility through spray as well as trowel application.

The specially formulated SILCOR® liquid membrane incorporates advanced polymer resin to optimise product application and durability. This liquid waterproofing system cures rapidly to form a seamless, monolithic membrane that is fully bonded to the substrate. It's highly durable with excellent wear and chemical resistance to offer long-lasting waterproofing protection.



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