



A functional environmentally safe plastic, designed for the circular economy

Aquapak's Hydropol™ is a specially engineered material that can create a range of packaging products that are designed to eliminate plastic pollution at source

Marine Safety

Aquapak's material is hydrophilic (water liking) and has no propensity to attract toxins or form toxic micro plastics and is itself non-toxic to marine fauna.

This toxicity screening has been tested by OWS (Belgium) using the Daphnia test protocol for ASTM D6691 and OK Marine. Aquapak 30 series products represented by Hydropol 30110, and 33 series products represented by Hydropol 33101 which represents a family of grades have successfully proven non-toxicity under the test protocol. This protocol consists of addition of 0.1% Hydropol to the water-based growth medium, after 91 days no adverse affect was seen on the *Daphnia magna* living in the system. The environmental safety requirement of the OK biodegradable MARINE certification scheme of TÜV AUSTRIA Belgium was fulfilled for sample Hydropol 30110 HWS. Please see our white paper for the full test report (found at <https://www.aquapakpolymers.com/technology/>).

In addition, Aquapak is undertaking a 2-year programme of research starting in September 2019 the Institute for Life and Earth Sciences at Heriot-Watt University to look at macro effects and eco-toxicity modelling. Testing and modelling will involve not only Aquapak material in various forms (monolayer film, coex constructions, laminates and extrusion coating) but a comparison with existing common plastics. The observations, findings and results will be published, and updates as the research progresses will be included in further editions of this White Paper together with Aquapak's website.

Freshwater Safety

Work carried out by the Open University (under a UK government Department of Environment, Farming & Rural affairs programme) showed Aquapak material to be harmless. Please see our white paper for the full test report (found at <https://www.aquapakpolymers.com/technology/>). Further accredited tests are planned to look at the behaviour of the most likely Aquapak material to enter this environment, film and coated paper, in October 2019.



It should be noted that Aquapak has not moved to certify the film as the samples were internally produced on our pilot equipment for indicative purposes only. The test was undertaken to establish the safety of the film. It is normal commercial practice that the product actually entering the market from the film producer requires certification to substantiate a claim.

Aquapak regularly screens and independently tests its materials for a wide number of end of life and disposal options in order to help customers who are producing their own finished goods based on Hydropol™ to obtain certification.

A handwritten signature in black ink, appearing to read "E. Smith".

Dr Elizabeth Smith
Technical Manager