

An enabling new material technology for the Circular Economy

MAYR TRADING offers multi-functional **water-soluble polymers** that enable economic recycling and meet the goals of the Circular Economy. All of our products are designed to facilitate the elimination of plastic pollution at source by recycling, enhanced recovery and biodegradation.

All products are made of **Hydropol™**. What is **Hydropol™**? Hydropol™ is an **innovative, water soluble, biodegradable polymer** that can create a range of packaging products, designed to eliminate plastic pollution at source.

Hydropol™ has several useful material properties – it is hot or warm **water soluble, stable and storable, high-strength, heat sealable, electrostatic-resistant and is naturally resistant to UV light**.

Owing to its high hydrolysis level, Hydropol™ reacts to water at controlled temperatures and has a much wider range of potential applications than cold water-soluble flakes.



Water-soluble

Hydropol™ will work at varying hydrolysis levels but is predominantly designed for high hydrolysis to maximise application potential.



Stable and storable

As Hydropol™ has been formulated into a standard plastic pellet, it is stable in normal storage conditions



High-strength

Hydropol™ is approximately 3 times stronger than polyethylene at the same thickness of film



Heat-sealable

Hydropol™ can be heat sealed using standard heat-sealing processes



Electrostatic-resistant

Hydropol™ is designed to naturally dissipate electrostatic energy



Ultra-violet-resistant

Hydropol™ is naturally resistant to UV light

PRODUCTS

Fashion Garment Bags

Fashion garment bags made from Hydropol™ enable retailers to replace single-use bags with recyclable, water-soluble and marine-safe garment packaging.



The apparel industry uses over 5 million tons of plastic for garment protection bags each year. Traditionally these protective bags are produced with low-density polyethylene which is hydrophobic and harmful to the environment.

All single-use plastic garment packaging can be replaced with 'leave no trace' versions made from Hydropol using Aquapak's patent-protected technology which is environmentally safe plastic that is recyclable, biodegradable, water-soluble and marine-safe.

Our partner Aquapak developed clothing packaging that leaves no trace. We eliminated the use of traditional polymer, single-use bags in favour of bags that disappear safely, are non-toxic and marine-safe.

[Click here to see the **LEAVE NO TRACE** version.](#)

What are Leave No Trace bags made from?

#leavenotrace garment bags made from Hydropol™ - a specialty hydrophilic (water-liking) polymer made from polyvinyl alcohol.

Are Leave No Trace bags biodegradable?

By its nature Aquapak's base polymers are inherently biodegradable and there is a large amount of historical work undertaken by academic and other researchers in this area detailing the microorganisms which breakdown the polymer in various conditions.

Are Leave No Trace bags safe in the sea?

We are very much aware of the ocean plastics problem and are in touch with several organisations looking at this problem. Work has already been undertaken with a renowned university in toxicology testing using standardised marine fauna and no deleterious effects were found.

Can Leave No Trace bags be recycled?

Yes. The material can be readily identified by sorting methods such as infra-red and laser sorting and can therefore be separated and reprocessed. In less sophisticated waste handling facilities, the use of a hot water wash enables Hydropol to be taken into solution. Once in solution the polymer can either be recovered or the solution allowed to go to normal waste water treatment or anaerobic digestion.

Are Finisterre's Leave No Trace bags safe in waste water treatment systems?

Hydropol's base polymer (PVOH) has been used for many years in applications where the disposal route is through the waste water system and there are no reported problems. This has been confirmed by a historical literature review as well as work conducted at two UK Universities on Hydropol™ film.

If a turtle eats a leave no trace bag, what happens?

The work undertaken so far by independent laboratories including the OK Marine certification scheme indicates that Hydropol™ is non-toxic to marine species which would include turtles. The mechanism of breakdown would also decrease the possibility of the turtle accumulating levels which would be harmful unlike most conventional plastics



Red laundry bags

Designed for industrial / commercial machines, red bags made from Hydropol dissolve fully at $\geq 70C/158F$ bags, leaving no residue on linen or machines. Non-toxic and marine safe. 100% British made. Conform to the NHS Executive Guidelines - HSG (95) 18 - Hospital Laundry Arrangements for Used and Infected Linen. Available now from Echo Packaging.



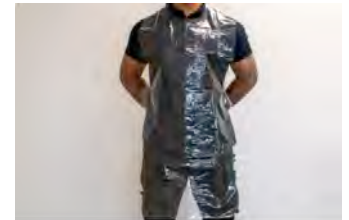
Laundry Bags

Hydropol™ allows manufacturers of polybags to make a high-performance, water-soluble laundry bag to assist with the fight against COVID19. Bags dissolve completely in domestic and commercial washing machines without causing environmental problems in the waste-water stream.



Infection Control Bags

Hydropol™ allows manufacturers of infection control bags to make a high-performance, water-soluble bag to assist with the fight against COVID19. Both industrial and domestic grades dissolves completely in washing machines, reducing handling and the risk of cross-contamination.



Aprons

Hydropol™ can be made into high-performance, hot water-soluble aprons to assist with the fight against COVID19. Ideal for use in healthcare, housekeeping, F&B departments, at fuel pumps and for food preparation.



Gloves

Fully-dissolvable gloves made from Hydropol™ are designed for single-use applications without negative environmental impact. Ideal for use in housekeeping, F&B departments, at fuel pumps and for food preparation.



Injection Moulded Components

Consumer goods such as clothing tag ties, golf tees and spice shakers can be injection moulded with Hydropol in standard injection moulding (injection molding) machinery



Nonwovens

Hydropol can be used to create melt spun staple fibres and spunmelt filaments for the production of nonwovens.



Food Waste Bags

Food waste bags made from Hydropol™ break down fully in both mesophilic and thermophilic systems, as well as biodigesters. No de-bagging is required as they do not clog filters or conveyors. When fully digested, they will not form microplastics in the digestate and meet the requirements of PAS 110.

Summary Features

Unlike conventional plastics, which can take thousands of years to fully biodegrade, Hydropol biodegrades **quickly and safely in the environment** as well as in controlled breakdown systems like **composting and anaerobic digestion**.

Water soluble. Hydropol grades are available in **cold water and hot water soluble forms** depending on the application, fully dissolving in minutes.

Non-toxic and marine-safe

If unintentionally released into the natural environment, **Hydropol will safely biodegrade, leaving no trace.**

Three times stronger than alternatives

Effective grease, oil and oxygen barrier

Designed to be **used in existing thermo-processing equipment** for a wide range of applications

Grades formulated to dissolve at temperatures between 10C-80C.