

Robust and Food-safe Solution for Demanding Applications

New Wear-, Hydrolysis- and Impact Resistant WHI Material for HabasitLINK® Belts



Plastic modular belts are commonly used in red meat, fish, and poultry processing because of their many beneficial characteristics. From faster repair and maintenance to strength and resistance in demanding environments, they are a versatile, robust, and long-lasting solution used in many wet food applications. HabasitLINK plastic modular belts are available in a wide range of materials to meet the demands of different food

processing applications where compliance with EU and FDA food contact regulations is required. The range has now been expanded to offer better wear-, hydrolysis- and impact resistance using a new material: WHI. It has been specially engineered for red meat, fish, and poultry applications where high strength and chemical- and impact resistance are a necessity.

Plastic modular belts used in the food processing industries are frequently made of polyoxymethylene, more commonly known as acetal or POM. With its high stiffness, cut resistance, hardness, strength, and wide range of operating temperatures, POM is a reliable solution for meat, fish, and poultry processing, but has limitations in terms of hydrolysis, chemical resistance, and high-impact applications, which affect belt service life. Now Habasit's new WHI, a polyketone material for HabasitLINK plastic modular belts, offers enhanced resistance to mechanical stress and demanding conditions.



Slower wear rate and improved scratch resistance

Belts wear down from friction after millions of cycles resulting in increased need for maintenance and eventual replacement. Habasit's WHI material is more resistant to wear and abrasion from processed goods and conveyor elements. In fact, it shows 40% less wear than POM in both wet and dry controlled tests and the scratch depth for WHI belts is 70% less than for POM belts.



40% less wear vs. POM



70% lower scratch depth on WHI than on POM

Good resistance to impact of cleaning agents

Humidity and temperature variances in the wet food industries are a challenge for many of the plastic modular belt materials. Elevated temperature from cleaning process and the use of cleaning chemicals accelerate cracking or breaking of e.g. POM resulting in premature belt replacement. With its much higher hydrolysis resistance WHI can be used in a temperature range of -50°C (-58°F) to +80°C (176°F) in wet conditions and up to +110°C (+230°F) in dry operating conditions.

WHI also demonstrates good resistance against most commonly used cleaning agents.

The inherent hydrolysis resistance of WHI contributes to maintaining the mechanical properties of the belt over extended time.

The use of some chemicals to disinfect food in the process (both chlorinated or acidic agents) impacts belt materials much more than their use in cleaning/sanitation due to the continuous exposure. Please contact your Habasit representative to check the compatibility of your standard cleaning and disinfecting protocols with the belt material selected.



Better impact resistance

Belts are subjected to high impacts on a regular basis. Modules crack or break over time and need to be replaced.

WHI demonstrates improved impact resistance when compared to POM and PA, and more stiffness than PE. It is an excellent solution for cutting, deboning and trimming applications where surface wear and the impact of processed goods are higher. Belts made with WHI are stronger and less likely to be damaged from impacts. As a result, WHI offers better belt lifetime performance and a lower risk of sudden belt breakage than other materials.



3x the impact
resistance
WHI vs. POM

Lower risk of belt damage

Belt damage from impact, wear or chemical breakdown of surface (dusting) can lead to contamination of food products.

Improved durability of WHI material will reduce the risk of material breaking loose from the belt. This helps to improve food safety, reducing the risk of product contamination with wear debris or broken modules.

Less belt breakage also supports achieving higher production yields with less unexpected downtime, as well as longer belt lifetimes.

FDA and EU Compliant

Like all other Habasit food contact materials, WHI modular belt material fulfills the food contact requirement by the FDA and EU.

For details visit Habasit's declaration of compliance on www.habasit.com.



WHI brings real benefits to your line and total cost of ownership



Less unexpected downtime – Higher strength, impact and hydrolysis resistance means longer belt lifetime, less time needed for belt repair and maintenance, and less frequent belt replacement compared to POM belts.



More efficient cleaning – Belts can withstand demanding cleaning and sanitation protocols according to industry standards and are easier to clean due to improved hydrolysis, chemical and cut and scratch resistance.



Less risk of product contamination – Higher resistance to damage from impact or wear means belt material does not break away and enter into the product, which reduces the risk of product contamination even in challenging applications across a wide range of temperatures.



Reduced cost of ownership – Less unexpected downtime, more efficient cleaning and less risk of foreign object contamination help to reduce the overall cost of ownership.

WHI Material Comparison

Material	WHI	POM	PP	PE	PA
Wear resistance	++	+	+	-	++
Hydrolysis resistance	+	-	++	++	Not Recommended
Impact resistance	++	+	-	++	++
Fatigue lifetime	++	++	+	-	++
Low temp application	++	++	-	++	++
High temp dry application	++	+	++	-	++
High temp wet application	+	-	++	-	-
Resistance against acids (dilute/weak)	++	+	++	++	-
Resistance against alcohols	++	++	++	++	+
Resistance against alkaline cleaners	+	++	++	++	++
Resistance against detergents	++	++	++	++	++
Resistance against oxidants	+	-	+	++	-
Resistance against strong oxidants	-	-	+	++	-

++ = Very Good Performance

+ = Fair Performance

- = Low Performance

Global leadership, local service

Habasit is your local partner with global reach. With 30 affiliated companies, each with its own inventory, fabrication, assembly, and service facilities, plus our worldwide network of partners, we react quickly and expertly to meet your most complex installation challenges.



Comprehensive technical support

from belt selection to design assistance. Extensive knowledge of our customers' processes lets us guide you from application analysis to selecting the optimal solution. We offer online calculation and belt selection tools, as well as on-site engineering assistance and equipment design, to make sure you get the best solution.



Process optimization and everyday efficiency

Innovation comes from understanding our customers' daily challenges. Habasit is more than a belting company. Our experts can provide belt condition monitoring, regular inspections, analysis, and surveys at your sites, to keep your lines running smoothly and fully optimize your equipment and production processes.



Sharing knowledge and making business easy

Habasit offers training programs and support tools to ensure optimal use of our products, with training on fabrication, installation, assembly, maintenance and belt repair either at a Habasit site or your own location. Orders, shipping and tracking can be managed via our Customer Care team, or directly online.

Committed to innovation beyond the obvious

Because our customers' challenges and needs are always changing, we are constantly investing in the research and development of new products and solutions not only for today, but also for tomorrow.

Habasit is a member of EHEDG


Our dedicated belting solutions aim to support the highest standards of hygienic equipment design.







Habasit International AG

Römerstrasse 1
CH-4153 Reinach, Switzerland

 +41 61 715 15 15

 +41 61 715 15 55

 [habasit.com](https://www.habasit.com)

Registered trademarks

Copyright Habasit International AG

Subject to alterations

4520FLY.MOD-en0522HQR

Information provided herein does not constitute legal representations or warranties and may change without notice.

Please refer to the specifications/disclaimers provided in the respective product data sheets.

