



HabaGUARD®

Conveyor belts containing
an antimicrobial additive

Habasit – Solutions in motion



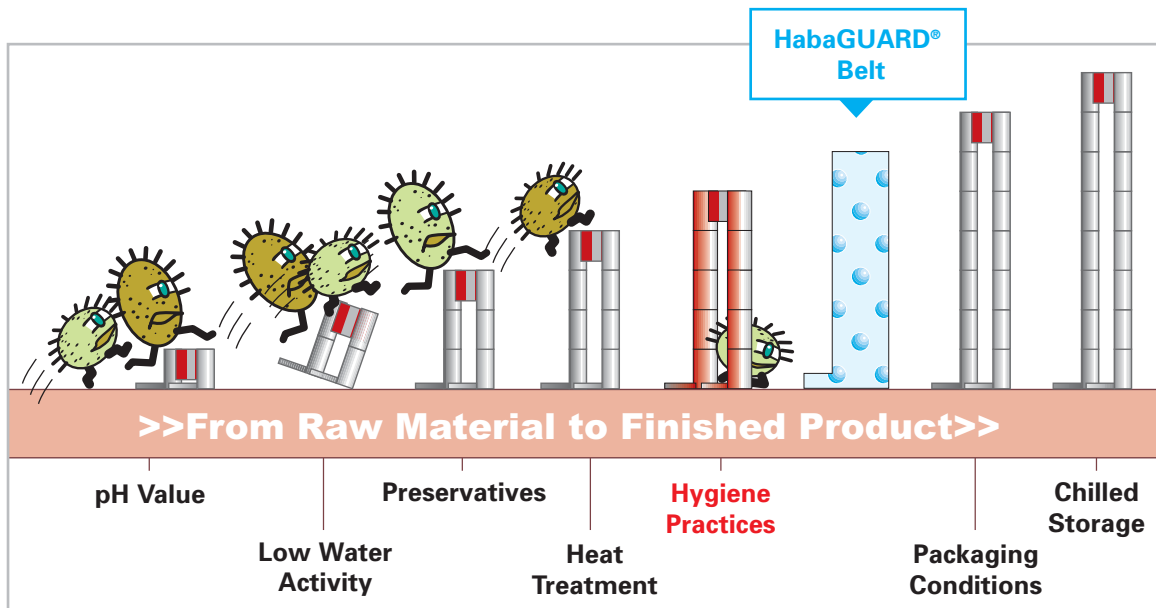
The food industry is striving to improve the quality and shelf life of food products as the industry's awareness of responsibility and liability increases. This has led to the implementation of tougher hygiene and quality management systems, such as HACCP and Good Manufacturing Practices (GMP). Furthermore, food processors are searching for additional tools to increase the safety of their products.

The development of multiple safety hurdles to control food-borne pathogens and spoilage microorganisms along the food chain from farm to table is a top priority for the food industry. Conveyor and processing belts are often in direct contact with food and therefore are a critical element in the food processing chain. With HabaGUARD® belts, Habasit offers an additional hurdle to help prevent the growth of microorganisms.

An additional hurdle for microorganisms.

HabaGUARD® food conveyor belts: The intelligent solution to support the food processing industry.

Main hurdles with HabaGUARD® belts



General Remark

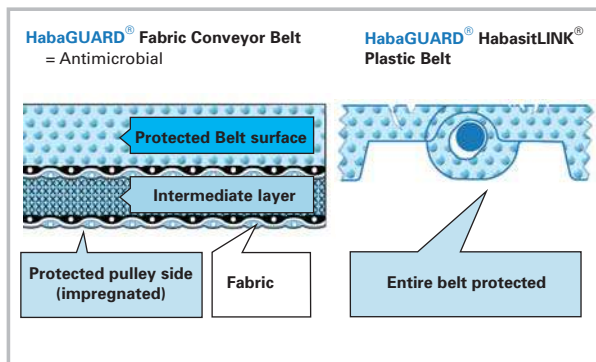
The use of HabaGUARD® food conveyor and processing belts (containing an antimicrobial additive) is an important and precautionary step in the prevention of microbial growth. Adhering to proper cleaning procedures is always essential. This product does not protect users or others against food borne or disease causing bacteria.

HabaGUARD® food conveyor belts are designed to complement existing hygiene and safety procedures in food plants.

Daily use and cleaning cause mechanical stress and damage to belt surfaces. This leads to increased retention of dirt and debris and growth of microorganisms. Not even optimal cleaning intervals nor a sophisticated HACCP concept

can guarantee effective cleaning.

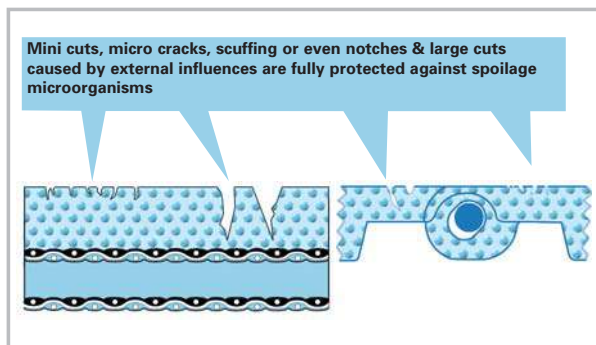
HabaGUARD® food conveyor belts contain an additive that protects the entire belt throughout its service life against microorganisms, especially in microcracks and cuts that are inaccessible to cleaning procedures.



Entire protection

With HabaGUARD® belts, all cover coating and running-side impregnation materials contain the antimicrobial additive.

The HabaGUARD® additive causes no changes in the belt's physical properties: joining, flexibility, temperature range, strength ratings, chemical resistance, color or surface properties.



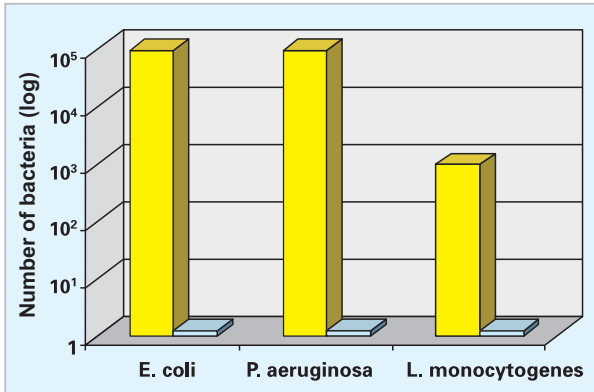
Entire protection in cuts and cracks

Microorganisms are controlled both on the complete belt surface as well as in the cuts and cracks that appear during belt use.

General Remark

The use of HabaGUARD® food conveyor and processing belts is an important and precautionary step in the prevention of microbial growth. Adhering to proper cleaning procedures is always essential.

- HabaGUARD® was developed especially for the food industry. All products comply with FDA and USDA regulations.
- The antimicrobial additive in HabaGUARD® is approved by the EPA for food contact applications.
- HabaGUARD® can be used in the USA and Canada.

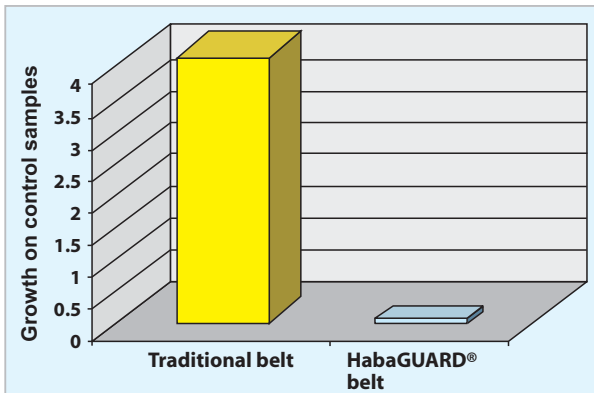


Film Adherence Test

HabaGUARD® conveyor belts were compared to traditional food conveyor belts in a Film Adherence Test. A controlled amount of test organisms were applied to each belt surface; after 24 hours the remaining microorganisms were counted.

Tested by TNO Netherlands

- Traditional conveyor belt
- HabaGUARD® food conveyor belt



Mold Test

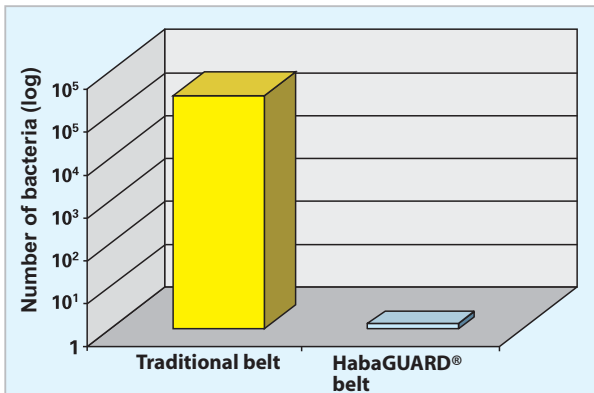
The mold test accc. ASTM G-2196 has been executed by NAMSA-Labs (USA).

The duration: 28 days

Evaluation: growth of mold on belt surface

- 0 = no growth
- 1 = traces (< 10%)
- 2 = low (10–30%)
- 3 = medium (30–60%)
- 4 = strong (60–100%)

- Traditional conveyor belt
- HabaGUARD® food conveyor belt



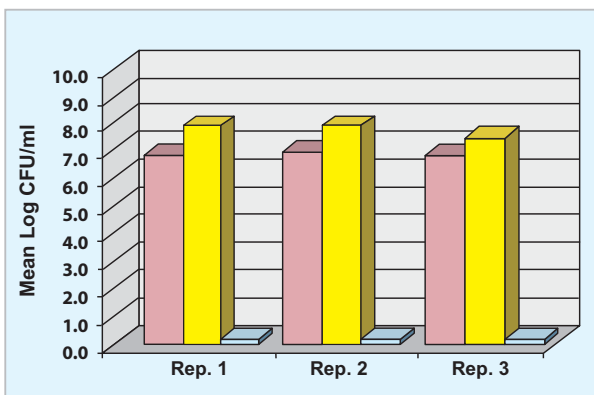
Biofilm build-up after 24 hours

Laboratory testing using a special biofilm reactor showed less biofilm build-up on HabaGUARD® belts compared to standard conveyor belts.

Test organism: E. Coli

Tested by TNO Netherlands

- Traditional conveyor belt
- HabaGUARD® food conveyor belt



Durability of antimicrobial additive

A HabaGUARD® belt was tested for 1 year in a typical meat processing plant. After 12 months in operation, it still showed the same efficiency against microorganisms.

Durability results: L. monocytogenes

Tested by North Carolina State University USA

- Original count
- Traditional conveyor belt
- HabaGUARD® food conveyor belt

The increasing number of food recalls and food poisoning cases due to microbiological, physical, or chemical contamination emphasizes the importance of reliable hygiene standards.

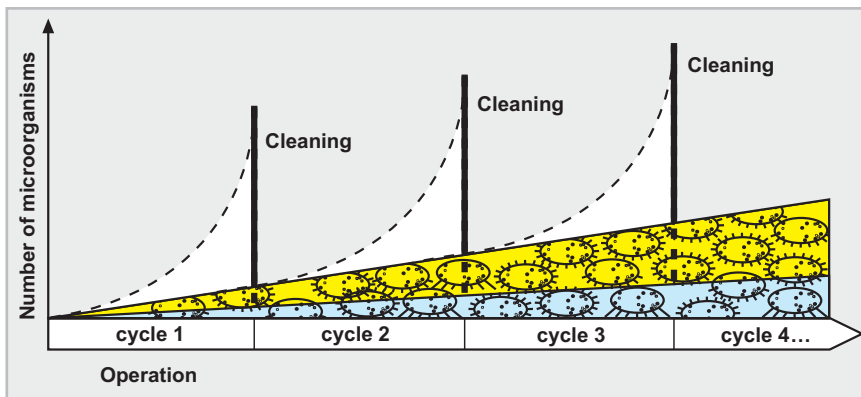
With machinery and processes already improved to higher safety standards, the focus now lies on improving single elements such as conveyor belts. Habasit, the world market leader in conveyor belting, provides the means for intelligent solutions that focus on hygiene in the food industry.

Biofilms: A time bomb in food plants

Biofilm formation takes place when bacteria adhere to surfaces, surround themselves with a protective layer and grow into a network of microcolonies and water channels. The pathogens are protected within the biofilm and can not be dislodged by conventional cleaning methods.

Considering that all surfaces are subject to mechanical damage over time, there is an increasing risk of contamination by microorganisms. Once bacteria and biofilms have built up, regular cleaning becomes less effective and proper sanitation needs more strenuous efforts. HabaGUARD® belts delay biofilm formation.

Even the best cleaning is never perfect



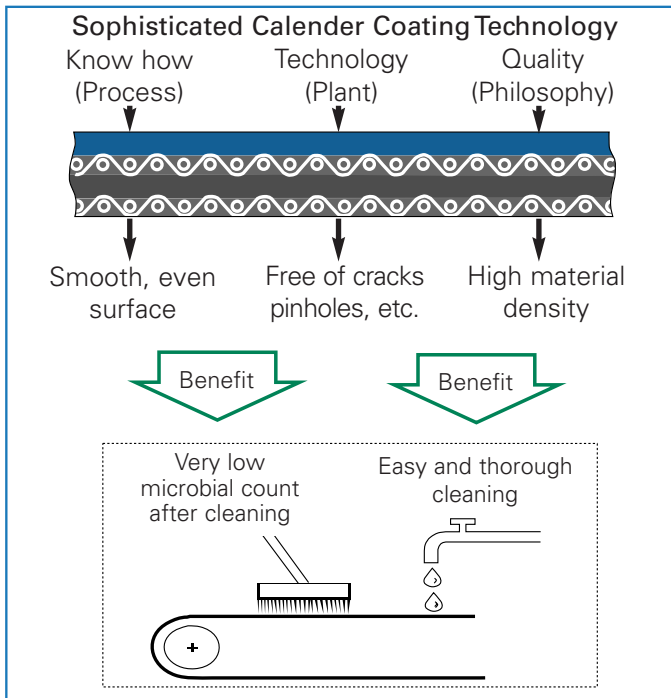
Less build-up of bacteria with HabaGUARD® food belts – delays formation of biofilm

- Traditional conveyor belt
- HabaGUARD® food conveyor belt

Summary

Customer benefits of HabaGUARD® food belts

- contain an additive that is registered with the EPA and in compliance with FDA and USDA regulations
- provide an additional hurdle to contamination by microorganisms
- prevent growth of molds
- delay formation of biofilms
- avoid build-up of bacteria in areas that are unattainable or difficult to reach using common cleaning procedures
- the additive remains affective after repeated cleanings and normal wear throughout the operating life of the belt

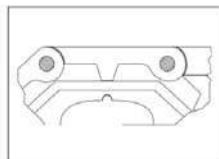


Calendered TPU-coating	FEATURES	BENEFITS
 Resistant to oil and fat	closed surface	easier cleaning to reduce spoilage microorganisms
Good Flexibility	resistant to oils and fats	no delamination and cracking
 -22° F	no belt delamination	long, trouble-free running
 Enhanced temperature resistance 212° F	superior stain resistance, good release properties	easy to clean, maintains the "new look" for long time
	high durability thanks to TPU belt surface	improved wear life
	TPU-coating	Resistant toward high and low temperatures (-22° F to 212° F)
	USDA/FDA	meets government regulations

Additional sanitation benefits of HabasitLINK® plastic modular belts

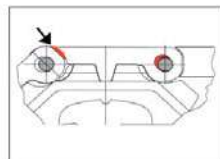
Open Hinge

Conventional Design



HabasitLINK®

Improved Design



Benefits

- Gap opens when belt moves over sprocket
- Improved water access

Open Hinge

Conventional Design



HabasitLINK®

Improved Design



Benefits

- Easy cleaning through enlarged hinge gap

Bore of Hinge

Conventional Design



HabasitLINK®

Improved Design



Benefits of oblong hole

- Better access for cleaning fluid to rod
- Pivot rod exposed at full length

Reverse Side

Conventional Design



HabasitLINK®

Improved Design



Benefits

- Water jet is deflected by offset hinges
- Water jet enters oblong hole
- Increased water – surface contact

At Habasit, we listen to our customers, innovate continuously and deliver reliable solutions to meet your every need.

Customers come first

At Habasit we understand that our success depends on your success. This is why we offer solutions, not just products; partnership, not just sales.

Since our foundation in 1946, Habasit has brought this understanding of customer needs to life every day and for every application. That's why we're the No. 1 in belting today. Worldwide.



Committed to innovation

Habasit is strongly committed to the continuous development of innovative, value-added solutions. Over 3% of our staff are dedicated exclusively to R&D, and our annual investment in this area exceeds 8% of turnover.



Worldwide leading product range

Habasit offers the largest selection of belting, conveying, processing and complementary products in the industry. Our response to any request is nothing less than a specific, tailor-made solution.

A selection of our product ranges:



HabaFLOW®
Fabric based conveyor and processing belts



HabasitLINK® & KVP®
Plastic modular belts



HabaDRIVE®
Power transmission belts



HabaSYNC®
Timing belts



HabaCHAIN®
Chains (slat and conveyor chains)



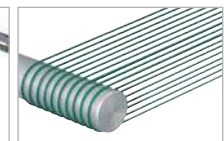
HabiPLAST®
Profiles, guides, wear strips



Machine tapes



Seamless belts



Round belts



Fabrication tools (joining tools)



Gear reducers, gearmotors, motion control



Electric motors

Worldwide support

Our extensive organization is ready to support you anywhere in the world. Engineering and emergency assistance, quotes and order status are just a phone call away. Wherever you are. Whenever you need us.

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ROSSI GERMOTORS

a partner of Habasisit, is one of Europe's largest industry groups for the production and sale of gear reducers, gearmotors, inverters, standard and brakemotors.

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