A specially modified thermoplastic polyolefin (TPO) coating forms the basis for the second generation of Habasit Cleanline® belts. In full compliance with FDA- and EU food regulations, these belts offer innovative product improvements and numerous customer benefits.

The new generation of Habasit Cleanline® conveyor and processing belts adds improved wear resistance of the surface coating against abrasive food stuffs, while maintaining the well-proven properties of Habasit Cleanline® conveyor belts:

- Outstanding release properties
- Excellent surface quality
- Superb chemical resistance
- Exceptionally easy to clean
- Prohibits mechanical shrinkage caused by particle ingress from the bottom
- Wide operating temperature range
- Excellent flexibility allows nosebar applications
The design of the new Habasit Cleanline® belts builds on the proven first generation. For even better hygienic design in sensitive applications, Habasit offers reverse-side coated Q-embossed and waffle-embossed versions.

Habasit Cleanline® types featuring the new TPO compound bear the addition “-A1” in their product code to indicate that they feature the abrasion-resistance improvement.
TPO-coated conveyor belts offer excellent release properties, and Habasit Cleanline® belts have been known for this since their introduction. The belts also offer very good flexibility, and were the first TPO-coated food belts with nosebar suitability.

However, it became clear that over time, the belt surface quality suffered due to abrasion caused by hard particles or mechanical cleaning processes.

To address this issue, Habasit has modified the coating material used on Habasit Cleanline® Generation II belts, which now feature substantially improved wear resistance properties:

The new surface quality keeps the release properties unchanged for a longer period of use, thus reducing the need for harsh cleaning methods. This is important because cleaning contributes greatly to premature wear of the belt surface – the key reason for losing release properties, requiring as a result more intense cleaning.

As the test above is only indicative, Habasit extended it to a test of cleaning the belt surface with scrapers, cleaning very abrasive material from the belt surface.

The test confirms:

- Substantial improvement compared to Habasit Cleanline® first generation and other TPO coated belts
- Surface wear resistance exceeding the durability of products with TPU / silicone blend as used also for good release and good surface wear
- Testing against a silicone surface was not possible due to short wear resistance of silicone in the environment
Test description:
Salted goods can be particularly aggressive on the surface of conveyor belts. In order to observe the improvement of the Habasit Cleanline® Generation II, the original Habasit Cleanline® formulation and the 2nd generation were tested for over 100 hours of continuous operation running using a TPU scraper with rock salt on the surface of the belts.

After 100 hours, significant damage to the CNB-6EB original Habasit Cleanline® material was visible, whereas no damage to the Habasit Cleanline® Generation II was observed after the same period. After continuing the test for a further 60 hours, no evidence of damage by the scraper or salt on the belt was observed.

As a result of these tests, it can be recommended that if the use of a scraper is desired, then a TPU scraper can be considered.

The use of steel scrapers with a Habasit Cleanline® belt is not recommended – wear resistance is not performing enough.

Belt samples after abrasion test with rock salt and TPU scraper
Extensive lab and field tests have shown that Habasit Cleanline® Generation II supports:

- Top product release over the belt lifetime without the disadvantages of mechanically weaker coating materials – making it ideal for use in the confectionery industry
- Ability to use less processing agents like flour in pastry production on both smooth and structured surfaces – making it the best choice for the release of sticky dough
- The modified coating material enables more gentle cleaning through less pressure on scrapers, or softer scrapers – so maintaining a clean undamaged belt surface with less adherence of product residues and thus less waste in product processing. This is key for small valuable food products like cereal bars or products with a high starch content, like Asian snacks, but also in processed meat or poultry.

For applications requiring the utmost of wear, abrasion, and / or cut resistance, Habasit continues to offer the well-proven TPU-coated food conveyor belts.

<table>
<thead>
<tr>
<th>Key features</th>
<th>Your benefits</th>
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<tbody>
<tr>
<td>Improved abrasion resistance</td>
<td>• Suitable for hard or abrasive goods</td>
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<tr>
<td>Outstanding release properties</td>
<td>• Ideal for very sticky goods</td>
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<td></td>
<td>• No residues from transported products</td>
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<td>Excellent surface quality</td>
<td>• Comparable to food industry stainless steel surfaces</td>
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<tr>
<td>Superb chemical resistance</td>
<td>• Withstands chlorine for disinfection</td>
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<td></td>
<td>• Resists acidic and alkaline cleaning agents</td>
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<td>Exceptionally easy to clean</td>
<td>• Resistant to 90 °C hot water</td>
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<td></td>
<td>• Excellent dirt release</td>
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<tr>
<td>Wide operating temperature range</td>
<td>• Wide application range from -40 up to 80 °C</td>
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<tr>
<td>Hydrolysis resistance</td>
<td>• Suitable for warm and damp environments</td>
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<tr>
<td>Nosebar suitable</td>
<td>• Permits smooth transfer of small products</td>
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<tr>
<td>Wear-resistant belt edges</td>
<td>• Reduces fraying risk of fibres</td>
</tr>
<tr>
<td>Tight-knitted bottom fabric</td>
<td>• Reduces risk of particle ingress and mechanical shrinkage of belt, leading to longer belt life</td>
</tr>
<tr>
<td>Edge sealable</td>
<td>• Prevents swelling of tensile layer and belt delamination</td>
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</tbody>
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**Habasit Cleanline® Generation II - the belt design with:**

- Excellent surface release for easier cleaning and less mechanical wear
- Greater wear resistance for longer surface integrity and belt service life
- Reduced processing waste
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Warning
Habasit belts and chains are made of various plastics that WILL BURN if exposed to sparks, incendiaries, open flame or excessive heat. NEVER expose plastic belts and chains to a potential source of ignition. Flames resulting from burning plastics may emit TOXIC SMOKE and gases as well as cause SERIOUS INJURIES and PROPERTY DAMAGE.

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