

NG™ EVOLUTION

PLASTIC CHAIN & MODULAR BELTS

- Longer life
- Lower friction
- Good chemical resistance
- High abrasion resistance
- Approved for direct food contact
- Less dust than with acetal chains

REGAL™

WHAT ARE NEW GENERATION PLASTIC MATERIALS?

The New Generation family of chain and belt resins are System Plast™ proprietary engineered resins designed to provide a sustainable advantage over “industry standard” materials. Their reduced coefficient of friction properties enable end users to reduce or eliminate their chain/belt lubrication thus providing a true “dry running” conveyor. Better sliding properties also result in reduced power consumption, increased wear life, reduced dust generation and the ability to run at higher speeds.

SYSTEM PLAST™ IS LEADING THE WAY WITH INNOVATION!

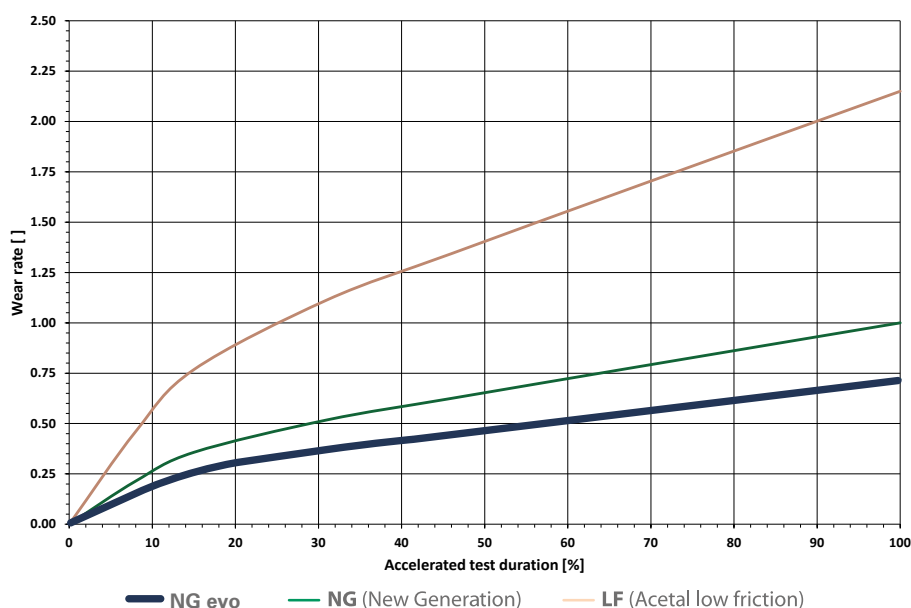
System Plast introduced the New Generation (NG™) material 20 years ago. It was soon recognized to offer new possibilities for running conveyors lines without lubrication. This enabled the reduction/elimination of soap & water or dry lubricants creating a safer work environment and cost savings. NG material has also proven it provides longer wear life in comparison to acetal materials, and reduces noise levels in dry applications.

System Plast expertise with unique materials and in-house integrated tool development is critical for consistent control over design and manufacturing processes.

MATERIAL EVOLUTION TO MEET YOUR GOALS

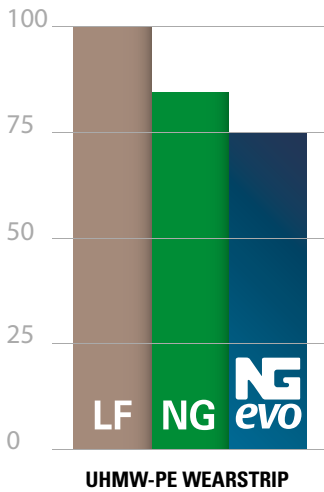
Understanding the growing demands on safety, hygiene, sustainability and TCO (Total cost of ownership) - System Plast challenged itself to improve the original formulation. This successful development created a new and improved resin called NG™ Evolution (NG™evo) which helps to meet your goals. Your floors can be drier, bacteria growth can be reduced, energy and water consumption can be less and your TCO will be improved.

- Improved base material
- Improved additives
- Tested in our laboratory
- Tested in production



IMPROVEMENTS OF NG EVO COMPARED TO NG

- Lower friction - Friction is reduced up to 15%.
- Higher strength - Up to 10%
- Higher abrasion resistance
- Approved for direct food contact according to EU and FDA regulations



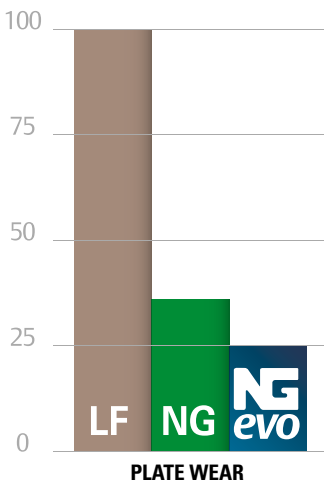
LOWEST COEFFICIENT OF FRICTION BETWEEN CHAIN /BELT AND WEARSTRIP

Coefficient of friction NG evo against UHMW-PE wearstrip:

- 25%** lower than LF acetal
- 15%** lower than NG

Coefficient of friction values of 0,10 or even less are achievable in running dry applications

- Less power consumption
- Improved product stability
- Improved product flow
- Improved productivity



HIGHEST PLATE WEAR RESISTANCE

Plate wear in accelerated abrasion test after 5400 km run length

- 75%** less wear than LF acetal
- 30%** less wear than NG

Increased wear provides many advantages

- Less dust generation
- Reduced contamination
- Reduced cleaning requirements

NG EVO IS APPROVED FOR DIRECT FOOD CONTACT ACCORDING TO EU AND FDA REGULATIONS

NOISE REDUCTION:

With NG evo the risk of noisy chains is greatly reduced compared to LF acetal chains. Squealing curves can be resolved and improve the work environment.

HIGH PV (PRESSURE VELOCITY) LIMIT:

With NG evo higher speeds and higher loads are achievable in dry running lines compared to LF Acetal chains. Additional speed and wear advantages can be also gained when used in combination with NOLU[®]-S or NOLU-SR curves.

CHEMICAL RESISTANCE:

NG evo has a better chemical resistance than LF acetal materials, being compatible with most cleaning agents, especially in aseptic filling with the presence of H₂O₂ (hydrogen peroxide). NG evo material, unlike many other materials used in this market, does not get attacked by this chemical.

THE NG™ SUCCESS STORY



DRY RUNNING SYSTEM PLAST™ CONVEYOR COMPONENTS HELP HEINEKEN BREW A BETTER FUTURE WITH WATERLESS BOTTLING CONVEYORS IN ZOETERWOUDE PLANT

THE TWO WATER FOOTPRINT NETWORK PARTNERS TEAM UP TO IMPROVE PLANT SAFETY AND SUSTAINABILITY BY REDUCING WATER USE, ENERGY CONSUMPTION, AND SOUND LEVELS AT ZOETERWOUDE BREWERY.

Zoeterwoude, Netherlands 2014 – Heineken N.V.'s global sustainability strategy, known as "Brewing a Better Future," produced a company-wide reduction of 20 percent in water use between 2008 and 2013. Playing a role in that improvement are System Plast™ NG™ conveyor chain/belts and NOLU®-S wear track from Regal Power Transmission Solutions. The ultra-low-friction components, which are being deployed in phases at Heineken's Zoeterwoude brewery, eliminate the need for water and chemical-based lubrication on the filling lines – including those where abrasive particles from aluminum cans, party kegs and returnable glass bottles have been a problem in the past.

According to managers at the brewery, the dry running conveyor is producing a cascade of sustainability improvements with a cleaner, quieter, more energy-efficient and reliable plant. "We have experienced a wide variety of gains from the System Plast dry running conveyor," said Mr. Cok Duivenvoorden, Technical Line Manager at Zoeterwoude. "Specifically, we have improved plant safety and hygiene with dry equipment and floors. Maintenance is easier because of the cleanliness and better access where drip trays have been removed. We have reduced costs for water, lubricating chemicals and wastewater discharge. Dry operation is easier on conveyor bearings and frames, yet still reduces energy consumption because of the low-friction components. System Plast NG chain lasts up to five times longer than low-friction acetal in some of our applications. And when installed to replace worn-out conveyor, the new chain pays for itself in as little as a year."

A JOINT GOAL TO REDUCE WATER USE IN BEVERAGE PROCESSING

One goal of Heineken's "Brewing a Better Future" sustainability program is to reduce water consumption by at least 25% by 2020, and both Heineken and Regal are pursuing dry conveying solutions as members of the Water Footprint Network. The network is a global organization of businesses, governmental agencies and environmental groups that promotes the transition to sustainable use of fresh water resources through increased awareness of how production and consumption of goods affect fresh water systems.



RUNNING DRY

ENHANCED RUNNING DRY POSSIBILITIES WITH NG™EVO:

- Contact System Plast™ for assistance to help you achieve this goal.
- An overview of the process is shown below :

STEP 1: GOAL TO RUN DRY

- Save water / lubricant consumption
- Eliminate wet floors • safety
- Less bacteria growth • hygiene
- Reduce maintenance
- Reduce energy consumption

STEP 2: DEFINE PROCESS PARAMETERS

- Layout
- Production / hour • speeds
- Geometry bottle, can, etc.

STEP 3: DEVELOP A ROBUST PROCESS

- Analyze the data from the previous step
- Discuss requirements and conditions with OEM and End user
- Select the correct products

STEP 4: IMPLEMENT DRY RUNNING

- Advise during installation
- Train operators

STEP 5: CONTROL AND IMPROVE PROCESS

- Monitor, follow up and make changes if necessary
- Analyze the collected data

SYSTEM PLAST™

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APPLICATION CONSIDERATIONS

The proper selection and application of power transmission products and components, including the related area of product safety, is the responsibility of the customer. Operating and performance requirements and potential associated issues will vary appreciably depending upon the use and application of such products and components. The scope of the technical and application information included in this publication is necessarily limited. Unusual operating environments and conditions, lubrication requirements, loading supports, and other factors can materially affect the application and operating results of the products and components and the customer should carefully review its requirements. Any technical advice or review furnished by Regal Beloit America, Inc. and its affiliates with respect to the use of products and components is given in good faith and without charge, and Regal assumes no obligation or liability for the advice given, or results obtained, all such advice and review being given and accepted at customer's risk.

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