IRP ENGINEERING
PLASTICS & CONVEYING SOLUTIONS

POWERED BY

SYSTEM FLEX
CONVEYOR COMPONENT SOLUTIONS

NGE "Next Generation Engineering"

Plastic Chains & Modular Belts

What are Next Generation Engineering (NGE) plastic materials?

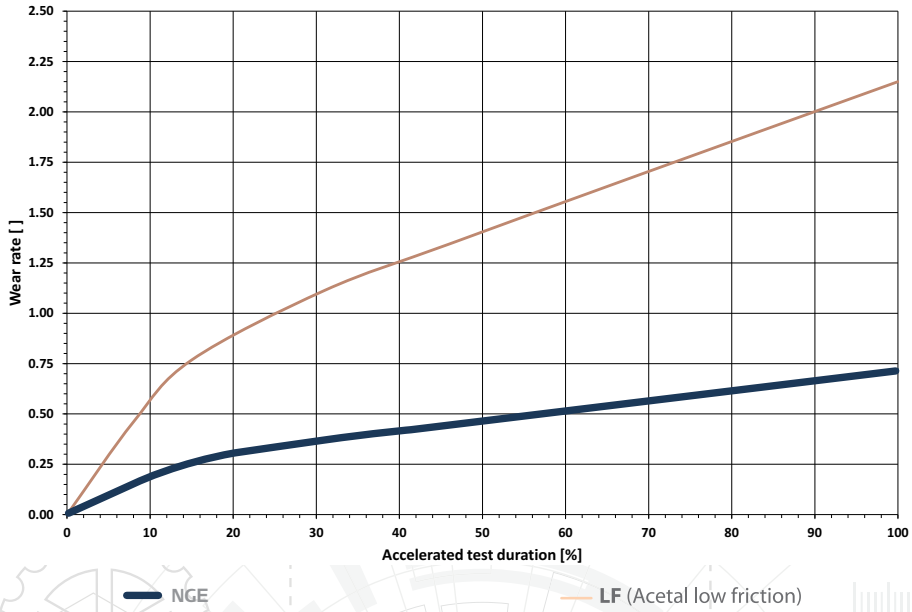
Next Generation Engineering (NGE) chains and belts are SystemFlex's new engineered resins designed to provide a sustainable advantage over “industry standard” materials. Their reduced coefficient of friction properties enable end users to reduce or eliminate their chain/belt lubrication thus providing 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.

SystemFlex is leading the way with Development!

SystemFlex is leading the way with local manufacturing and providing exciting new products and developments like that of our Next Generation Engineering material (NGE). Recognizing the opportunity to locally manufacture NGE products that 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.

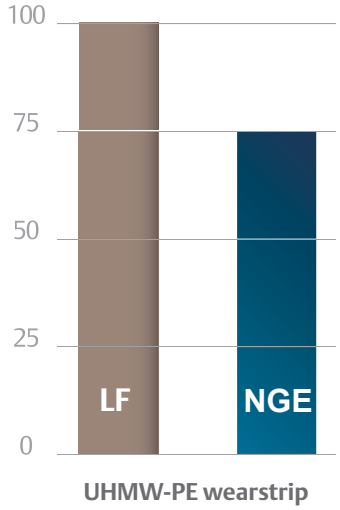
SystemFlex's expertise with unique materials, coupled with in-house integrated tool development and in-house manufacturing is critical for consistent control over the supply and delivery of the right replacement parts for production lines.

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



Benefits of NGE

- Lower friction
- Higher strength
- Higher abrasion resistance
- Approved for direct food contact according to EU and FDA regulations



UHMW-PE wearstrip

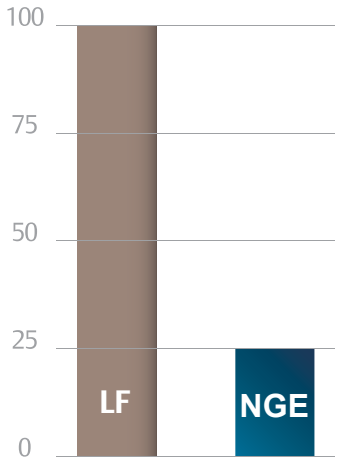


Plate wear

Lowest coefficient of friction between chain /belt and wearstrip

Coefficient of friction NGE against UHMW-PE wearstrip:

25% lower than LF acetal

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 accellerated abrasion test after 5400 km run length

75% less wear than LF acetal

Increased wear provides many advantages

- Less dust generation
- Reduced contamination
- Reduced cleaning requirements

NGE is approved for direct food contact according to EU and FDA regulations

Noise reduction:

With NGE 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 NGE higher speeds and higher loads are achievable in dry running lines compared to LF Acetal chains.

Chemical resistance:

NGE has a better chemical resistance than LF acetal materials, being compatible with most cleaning agents, especially in aseptic filling with the presence of H_2O_2 (hydrogen peroxide). NGE material, unlike many other materials used in this market, does not get attacked by this chemical.

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Enhanced running dry possibilities with NGE:

Contact SystemFlex 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

WHY PARTNER WITH US?

LESS MAINTENANCE ISSUES

INDUSTRY LEADING EXPERTISE

EXPERIENCE LESS DOWNTIME

INCREASE ROI & REDUCED COSTS

HOW WE ADD VALUE:

- IRP provides extensive audits to assess current conveyor and production setups in order to provide the correct conveyor solutions.
- With over 30 years of providing solutions to the food, beverage, and packaging industries, IRP has the expertise to guide and advise on the correct solutions.
- With your production at the center of our focus, we at IRP pride ourselves on customer satisfaction and delivery.
- Being South Africa's largest local manufacturer in our field, we have the advantage of providing competitive solutions in line with your budget, providing you maximum return on investment.

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