N3Cure

Make Plastic With Less Plastic

Introduction

Crossitol is a patented additive and a family of masterbatches. Crossitol innovation allows manufacturers to reduce production costs and achieve environmental and sustainability goals, while introducing new value-added products to the market.

CROSSITOL Technology

N3Cures' CROSSITOL enables a controlled, selective, and accurate crosslinking process of Polyethylene by using inline add-on UV energy source.

Full Production Solution

CROSSITOL is activated by an inline add-on UV energy source, allowing a fast, easy and affordable installation on the production line.

Advantages

Promotes Sustainability

- Reducing the use of raw materials is the most efficient way to make your product more sustainable. It saves limited resources, minimizes landfill, and decreases the carbon footprint.
- Using CROSSITOL can reduce up to 50% of raw material usage, while improving thermal stability with sealing and shrinkage properties, and also maintaining the mechanical properties.
- With CROSSITOL its possible to produce recyclable packaging with single-polymer structure ("Mono-polymer") and also to recycle post-consumer products.

Economical Value - Cost Reduction

- Less Raw Material - More than 60% of the product cost is derived from the price of the raw materials. A reduction in material usage and the logistic expenses related, can introduce cost effective products to the market, while maintaining all the essential product properties.
- Increase 2nd bubble stability during production and production line output.

Product Innovation

- CROSSITOL promotes the development of new plastic-based products with enhanced properties.

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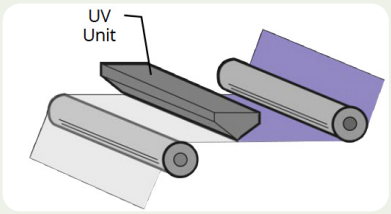
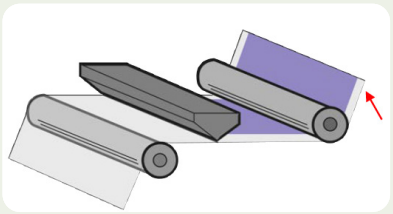
Crosslinked patterns

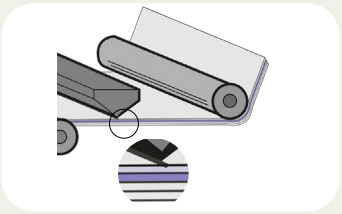
CROSSITOL offers controlled and accurate crosslinking process, unlike currently other available technologies. Crosslink percentage, specific areas for crosslinking and crosslink penetration depth/layers can all be fully controlled.



Homogeneous distribution
of crosslinking, on the entire width of the film.



Chosen crosslinked width
of the film, and ability to recycle (online or offline) the none crosslinked edges.

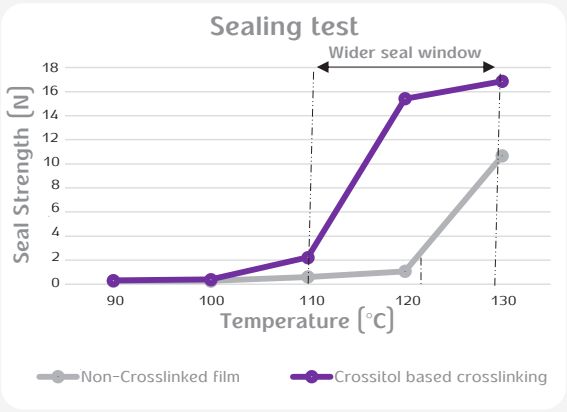


Crosslink of target layer only
without any damage to other layers of the film.

Impact on Film Properties

Enhanced seal properties

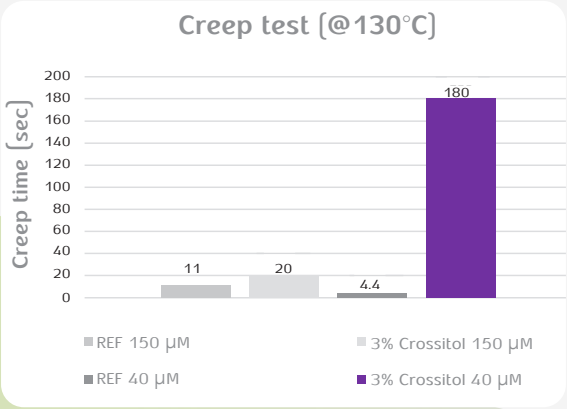
Wider sealing operation window compered to non-crosslinked film.



Double Bubble 3 layers film, 15 µm, 2% CROSSITOL® in skin layers

Thermal Resistance Improvements

Significant improvement in creep time compared to non-Crossitol film. Up to 82% creep time improvement in 150mic Crossitol film compared to non-Crossitol reference.



Cast 5 layers film, 3% CROSSITOL® in all layers

Applications

CROSSITOL additives are implemented in flexible film flexible film packaging as well as agriculture and medical equipment.

- Shrink wrapping
- Overwrap packaging
- Lidding films
- Weld bags
- Pouches
- Sachets
- Heavy duty films
- PE film for mono materiel packaging
- Agriculture pipes - PEX

Patented technology

Global patent coverage (issued patent in national phase: USA, Europe, China, Japan, India, Korea, Mexico, Russia, Canada, Australia, Brazil).

Global partners

- CROSSITOL is distributed under co-branding agreement with **Kafrit** – a leading producer of masterbatches and compounds for the plastics industry.
- The UV energy source supplied is manufactured in cooperation with **MACRO** and **GEW**.

Global Customers

CROSSITOL additives successfully serve a variety of customers, in a variety of fields (packaging, agriculture pipes) around the world.