



tomorrow's  
performance  
today

## Hygiene compression packaging films with sustainability benefits that maintain performance



Uses recycled material



Film integrity



Optical properties



Reduced film thickness

### Challenge:

**Help contribute to a circular economy by developing compression packaging films with sustainability benefits, while maintaining properties**

Plastik SpA, a leading polyethylene (PE) film converter based in Italy, wanted to develop hygiene compression packaging films with sustainability benefits in response to consumer demand and brand owner commitments. In developing a solution, the company was focused on maintaining the performance of the films.

“Consumers are demanding sustainable solutions for packaging hygiene products,” said Mr. Gianangelo Cattaneo, President, Plastik SpA. “As a converter, we can help the value chain develop hygiene compression packaging solutions with sustainability benefits that are capable of maintaining performance and processability. Options include downgauging the film to reduce material use, including PCR (post-consumer recycled) content, and developing mono-material solutions that can be recycled where programs and facilities to collect and recycle films exist.”

### Solution:

**One solution significantly reduces film thickness, a second includes 30% PCR content; both include Exceed™ XP and Enable™ polymers content which help deliver high integrity films**

Plastik worked with GDM, a manufacturer of converting machines and packaging for disposable hygiene products, and ExxonMobil to apply their respective converting, machinery, and polymer expertise to collaborate in testing two hygiene compression packaging film solutions. Both utilized Exceed™ XP and Enable™ performance polymers to boost performance: one with significantly reduced film thickness, and the second including 30% PCR.

Using Exceed™ XP 8358ML helps provide high integrity films with outstanding toughness and puncture resistance. Due to its higher density, Enable™ 4002MC delivers tough, stiff films for better handling, especially at reduced thicknesses. The use of HDPE also offers stiffness, and a higher tensile yield delivers resistance to deformation during and after packaging. The formulations also allow excellent, fast sealing and high machine output.

# Results:

## Two high-integrity hygiene compression packaging films that deliver sustainability benefits and are easy to process

Thanks to full value chain collaboration, two mono-material PE films, which can be recycled where programs and facilities to collect and recycle plastic films exist, were developed. Performance PE polymers from ExxonMobil help maintain packaging performance and processability.

### 'Invisible' hygiene packaging films

The first solution, termed 'invisible' by Plastik SpA, is an ultra-thin hygiene compression packaging film. Film thickness was downgauged by over 40% from 35 micron to 20 micron.

### Hygiene packaging films with PCR content

The second solution includes 30% PCR (post-consumer recycled) content while the mechanical properties of the film are maintained. Performance PE polymers serve as a blending partner allowing PCR content to be incorporated in demanding applications, which supports major brand owner commitments towards the inclusion of recycled content in their packaging.

The hygiene compression packaging film formulations deliver:

- High integrity films that can help prevent breakage, protect products and reduce waste.
- Good printability and optical properties, allowing brand owners to promote products effectively
- No operational changes to the end user's machine settings.
- Packaging efficiency for high output.

"The project with ExxonMobil was designed to create compression packaging for the sanitary hygiene sector that delivers sustainability benefits while maintaining the necessary converting and in-use performance," said Mrs. Laura Cattaneo, CEO, Plastik SpA. "An idea was born from the need to use less plastic by reducing packaging thicknesses without affecting the mechanical characteristics of the film. This was the inspiration for our 'invisible' compression packaging. The collaboration expanded to include GDM which successfully tested the material. This very promising solution is already being tested by some important customers. This was only possible thanks to the openness of the collaborating partners and their drive to continue innovating in response to market needs, even in a period of uncertainty as 2020 proved to be."

These two solutions are currently commercially available.

## Why ExxonMobil PE? Why today?

tomorrow's  
performance  
today

What some might view as solutions that will only happen in the future, ExxonMobil PE is making possible today – through our innovative and reliable products, collaborative approach, technology leadership and support, and our unmatched global supply and resources. Learn more about how we're helping our customers create solutions with sustainability benefits. Why wait for tomorrow to advance your business today? Contact your ExxonMobil PE representative and begin experiencing tomorrow's performance today in flexible packaging.

©2021 ExxonMobil. ExxonMobil, the ExxonMobil logo, the interlocking "X" device and other product or service names used herein are trademarks of ExxonMobil, unless indicated otherwise. This document may not be distributed, displayed, copied or altered without ExxonMobil's prior written authorization. To the extent ExxonMobil authorizes distributing, displaying and/or copying of this document, the user may do so only if the document is unaltered and complete, including all of its headers, footers, disclaimers and other information. You may not copy this document to or reproduce it in whole or in part on a website. ExxonMobil does not guarantee the typical (or other) values. Any data included herein is based upon analysis of representative samples and not the actual product shipped. The information in this document relates only to the named product or materials when not in combination with any other product or materials. We based the information on data believed to be reliable on the date compiled, but we do not represent, warrant, or otherwise guarantee, expressly or impliedly, the merchantability, fitness for a particular purpose, freedom from patent infringement, suitability, accuracy, reliability, or completeness of this information or the products, materials or processes described. The user is solely responsible for all determinations regarding any use of material or product and any process in its territories of interest. We expressly disclaim liability for any loss, damage or injury directly or indirectly suffered or incurred as a result of or related to anyone using or relying on any of the information in this document. This document is not an endorsement of any non-ExxonMobil product or process, and we expressly disclaim any contrary implication. The terms "we," "our," "ExxonMobil Chemical" and "ExxonMobil" are each used for convenience, and may include any one or more of ExxonMobil Chemical Company, Exxon Mobil Corporation, or any affiliate either directly or indirectly stewarded.

Contact us for more information:  
[exxonmobilchemical.com/pe](http://exxonmobilchemical.com/pe)

**ExxonMobil**  
Energy lives here™