

## CASE STUDY

# ANBIQ™ FM1818 DELIVERS INCREASED TOUGHNESS AND IMPROVED APPEARANCE IN EDIBLE OIL PACKAGING FILMS



## THE BACKGROUND

### Saigal Packages Industries, Pakistan

Based in Pakistan, Saigal Packages Industries has production bases in Karachi with a total investment of USD 6 million. The company provides one-stop packaging solutions for the food industry, including barrier film for edible oil, film for Ghee packaging, lamination film and tin packaging for Ghee. They also serve segments such as adhesive tape, thin wall boxes and colour compounds. The company believes in the importance of advanced production equipment as well as innovative resins to meet their customer requirements. They have high quality machines to manufacture enhanced performance films.

## THE CHALLENGE

The fast growing company has been around for 10 years while continually keeping pace with new developments in flexible packaging demands. They entered into edible oil packaging film applications when very few European 5-layer machines were in the market. With plentiful opportunities in the market, there are also many challenges, some of which include:

1. Selection of cost effective yet technologically advanced materials
2. Technical assistance in processing such materials
3. Acceptability from end users
4. Competitive/high performance market solution

A major component of the recipe is using around 40% LLDPE. The selected LLDPE needs to have a good balance of mechanical properties, good organoleptic properties, low haze with high gloss and easy processing with enhanced sealing properties to support faster packaging.

## THE SOLUTION

To satisfy end user requirements, Anbiq™ FM1818 was introduced to Saigal Packages as an enhanced performance LLDPE to be combined with other materials in the 5 layer 95 mic. edible oil packaging film, supporting production in areas such as:

- Up to 40% improvement in dart impact compared to conventional C4 LLDPE
- Low haze down to 8% to give excellent shelf appearance and branding
- Easy processing – providing bubble stability with precise/controlled profile
- No additional PPA needed during processing



## THE BENEFITS

### Increased productivity and lower energy

Combining Borstar® bimodal technology and a smart catalyst system, the material consumes less extruder amperes during production. Anbiq™ FM1818 also gives low SIT to reduce the sealing temperature, resulting in greater energy savings while still offering excellent dart impact strength, which helps in downgauging. With this design, there are less rejections during FFS performance.

### Increased film toughness

Excellent dart impact and low haze down to 8% gave the customer very clear and glossy films, which attracted a few local brands who wish to replicate this recipe in their packaging production.

“We are very pleased with the processability and performance of Anbiq™ FM1818, which now enables us to achieve higher dart drop properties with good quality products,” said Mr. Furqan Javed, Manager of Extrusion, Saigal Packages Industries.

## SUMMARY

<b>Customer</b>	Saigal Packages Industries
<b>Application/Product</b>	Barrier film for edible oil
<b>Process</b>	Blown film extrusion
<b>Grade used</b>	Anbiq™ FM1818
<b>Functional requirements</b>	<ul style="list-style-type: none"> <li>▪ High dart drop impact strength</li> <li>▪ Excellent sealing with low SIT</li> <li>▪ Low haze with high gloss</li> <li>▪ Easy processability</li> </ul>
<b>Benefits</b>	<ul style="list-style-type: none"> <li>▪ Dart impact increase from 410g to 590g</li> <li>▪ Increased seal strength</li> <li>▪ Very clear film</li> <li>▪ Energy saving</li> </ul>

**About Borouge** A joint venture between ADNOC and Borealis, Borouge is a leading petrochemicals company that provides innovative plastics solutions for the energy, infrastructure, mobility, packaging, healthcare and agriculture industries. With 4.5 million tonnes of annual capacity, Borouge has the world's largest integrated polyolefin complex, with the ambition to double its current capacity by 2030.

**Disclaimer** The information contained herein is to our knowledge accurate and reliable as of the date of publication. Borealis and Borouge extend no warranties and make no representations as to the accuracy or completeness of the information contained herein, and assume no responsibility regarding the consequences of its use or for any printing errors. It is the customer's responsibility to inspect and test our products in order to satisfy himself as to the suitability of the products for the customer's particular purpose. The customer is also responsible for the appropriate, safe and legal use, processing and handling of our products. Nothing herein shall constitute any warranty (express or implied, of merchantability, fitness for a particular purpose, compliance with performance indicators, conformity to samples or models, non-infringement or otherwise), nor is protection from any law or patent to be inferred. Insofar as products supplied by Borealis and Borouge are used in conjunction with third-party materials, it is the responsibility of the customer to obtain all necessary information relating to the third-party materials and ensure that Borealis and Borouge products, when used together with these materials, are suitable for the customer's particular purpose. No liability can be accepted in respect of the use of Borealis and Borouge products in conjunction with other materials. The information contained herein relates exclusively to our products when not used in conjunction with any third-party materials.

**Borouge Pte Ltd**

One George Street #18-01 Singapore 049145  
Tel: +65 6275 4100 Fax: +65 6377 1233 Email: info@borouge.com