

# Propafilm™

Proven Barrier to  
Mineral Oils



[packaging@innoviafilms.com](mailto:packaging@innoviafilms.com)

 **INNOVIA**

*use our imagination...*

### What are mineral oils?

- A complex mixture of substances, commonly described as MOSH and MOAH.
- MOSH (Mineral Oil Saturated Hydrocarbons) – short chain MOSH can accumulate in the body and cause dysfunctions.
- MOAH (Mineral Oil Aromatic Hydrocarbons) – suspected mutagens and carcinogens.

### Innovia Films - a scientific approach

- Innovia Films has dedicated extensive scientific research into the subject of mineral oil migration through BOPP films.
- Quantitative analyses were completed in our in-house laboratories and published in the Packaging Technology and Science journal.
- The effectiveness of our solutions has also been confirmed in tests performed by the laboratories of Kantonales Labor Zürich.

### Propafilm™ RCU – the solution

- Designed to meet the finding of our study from 2014 <sup>1</sup>
- Shown to significantly reduce the migration of mineral oil residues from recycled cardboard packaging into foodstuffs when compared to conventional plastic substrates e.g. PE, coextruded OPP. <sup>1</sup>
- Confirmed to provide an equivalent mineral oil barrier to 3 years at room temperature. <sup>2</sup>

### Contamination risks

- Studies have shown that mineral oils can be present in food at concerning levels.
- The suspected sources of contamination are mainly primary food packaging – in particular, cardboard packaging made from recycled materials.

### Latest findings

Additional Propafilm™ BOPP films, including our new Strata SL and SLF barrier films, have now had their effective mineral oil barrier demonstrated by an independent laboratory.

#### Demonstrated effective barrier for different films<sup>2</sup> Accelerated testing at 40°C

Product	Weeks recalculated 25°C	Equivalent years
Propafilm™ RCU	155	3 years
Propafilm™ SL	105	2 years
Propafilm™ SLF	105	2 years
Propafilm™ FFX	105	2 years
Propafilm™ RDU	105	2 years
Propafilm™ RD	52	1 year

### Contact us to discuss in more detail

<sup>1</sup> Reference - Mineral Oil Barrier Testing of Cellulose-Based and Polypropylene-Based Films, G. O'Connor, N. Hudson and S. Buckley, Packaging Technology and Science, DOI: 10.1002/pts.2082, Copyright © (2014), John Wiley & Sons Ltd. Published online in Wiley Online Library (onlinelibrary.wiley.com)

<sup>2</sup> The test method used for these tests is based on the publication 'Barriers against the migration from recycled paperboard into food : Measuring efficiency by surrogate components', S. Biedermann-Brem, K. Grob, Packaging Technology and Science 27 (2014) 713-726'.

- Certain parts of the test procedure were modified as followed :
  - The 3 surrogates were applied to the recycled cardboard (donor) and the concentrations were of 30-40 mg/kg for each component.
  - Triethyl citrate (TEC) is no longer used as surrogate.
  - Surrogate components : n-heptadecane (C17), 4-methyl benzophenone (MBP) and dipropyl phthalate (DPP).
- The barrier is considered sufficient if <1% of the surrogates migrate in the shelf life of the product.

**Disclaimer:** Innovia Films or any of its affiliated companies (hereinafter 'Innovia Films') declines any liability with respect to the use made by any third party of the information contained herein. The information contained herein represents Innovia Films' best knowledge thereon without constituting any express or implied guarantee or warranty of any kind (including, but not limited to, the accuracy, the completeness or relevance of the data set out herein). Innovia Films is the sole owner or authorised user of the intellectual property rights relating to the information communicated. The information relating to the use of the products is given for information purposes only. No guarantee or warranty is provided that the product is adapted to the client's specific use. The client should perform his own tests to determine the suitability for a particular purpose. The final choice of use of a product remains the sole responsibility of the client.

#### Regional Offices:

Europe (UK) Tel +44 16973 42281  
Americas (USA) Tel +1 877 822 6273  
Asia-Pacific (Aus) Tel +61 3 9303 0600

www.innoviafilms.com  
email: packaging@innoviafilms.com  
™Trademark of Innovia Films

