

# SHEER PERFORMANCE

ALKAMAX<sup>®</sup> 3RD GENERATION mLLDPE FROM QENOS



# A SUPERIOR METALLOCENE RESIN

Not all metallocene resins are alike.

The discovery of metallocene catalysts provided a breakthrough in controlling the molecular architecture of polyethylene.

Qenos Alkamax 3rd generation metallocene builds on the benefits of the earlier generation metallocene catalysts, delivering outstanding performance in flexible packaging applications.

#### TOUGHNESS & STIFFNESS COMBINED

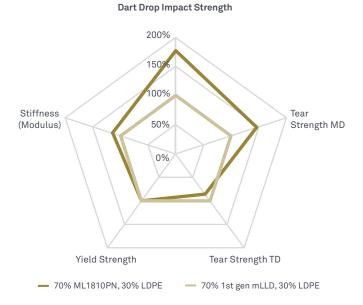
The Alkamax mLLDPE range combines excellent toughness with greater stiffness – a balance critical to many applications.

Toughness is fundamental to packaging integrity.

Stiffness not only improves web handling in operations such as printing, laminating and bag making but also helps maintain bag shape in the filling stage.

Dart impact strength testing shows the toughness advantage of Alkamax ML1810PN over a first generation mLLDPE, particularly in blends with LDPE which are the most common

applications for metallocene resins.

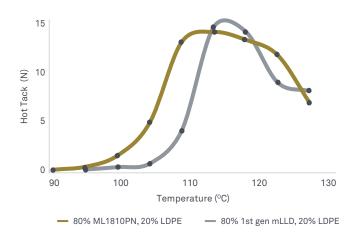




#### BETTER SEALING MEANS BETTER PERFORMANCE

Sealing is another characteristic fundamental to efficient packaging operations. Compared to conventional LLDPE and earlier generation mLLDPE resins, Alkamax 3rd generation mLLDPE provides improved hot tack strength at lower temperatures and over a wider temperature range.

Repeatable sealing over a wide range of conditions leads to reduced risk of bags leaking while maintaining high throughput.

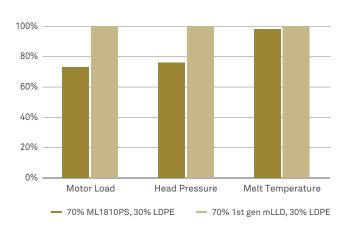


#### ENHANCED PROCESSABILITY = LOWER COSTS

Ease of processing is primarily a function of rheological properties. First generation metallocene resins were challenging to process, leading to high head pressure and even melt fracture at high output.

The superior processability of ML1810PN results in lower motor load and head pressure. Additionally the lower propensity for melt fracture reduces the need for a process aid masterbatch.

All of which adds up to a lower cost of production, especially when combined with the capability Alkamax provides to downgauge to a thinner film



#### COVERING ALL YOUR FILM RESIN NEEDS

The Alkamax mLLDPE range adds to the comprehensive suite of Qenos film resins:

- Alkathene LDPE
- Alkatuff LLDPE
- Alkatane HDPE

With over 20 film grades in 3 pack forms, these are just some of the applications Qenos covers:

- Heavy duty bags
- Stretch wrap
- Produce bags
- Bread bags
- Mulch and silage films
- Ice bags
- Frozen food packaging
- Lamination films
- Form, fill and seal films



# A SUSTAINABLE MULTILAYER SOLUTION

The use of multilayer films in the packaging world has become widespread because of the many functional benefits they provide and the downgauging capability they offer. With its superior mechanical properties and enhanced sealing characteristics, Alkamax mLLDPE is an obvious choice.

More recently the focus on recycling has raised questions about the future of films made from different materials. In this regard Akamax is well placed as combinations of LD, LLD, HD and mLLDPE can co-exist in the same recycling stream.





# LOCAL EXPERTISE PROVIDING PRACTICAL SUPPORT

Qenos has a team of technical service specialists providing both remote and on the ground support for flexible packaging applications. The Qenos Team has published a range of technical guides, application notes, white papers and troubleshooting guides to assist Australian film customers. Qenos also has the ability to draw on global resin developments via our technology partners.

Behind the scenes, the Qenos Technical Centre is the largest in the southern hemisphere containing an extensive suite of state of the art analytical and physical testing instrumentation as well as commercial and laboratory scale film lines that can perform detailed evaluation of products under conditions similar to those found at Qenos customers.

# NATIONAL LOGISTICS NETWORK

Qenos customers minimise working capital by ordering from Qenos only as the product is needed. With stock in multiple warehouses across Australia and New Zealand, there is no need to order weeks in advance. Often next day delivery can be arranged.

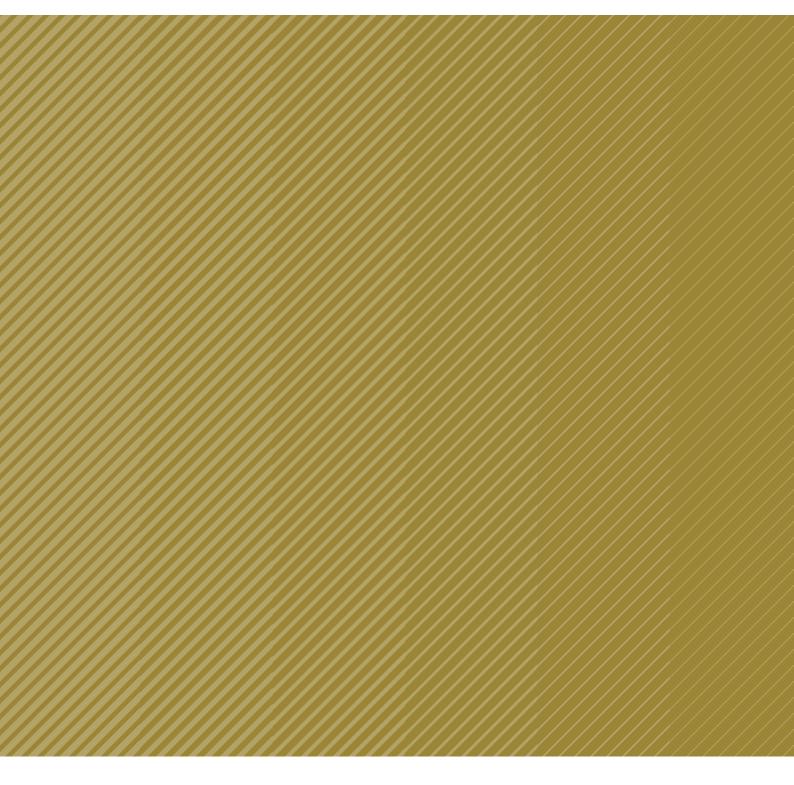




# THE QENOS ALKAMAX RANGE

Alkamax <sup>®</sup> mLLDPE Film Grades				Additives		
Grade	<b>MFI</b> (g/10 min)	Density# (g/cm <sup>3</sup> )	Antiblock		Processing Aid	
ML1810PN	1.0	0.918			$\checkmark$	
ML1810PS	1.0	0.918	$\checkmark$	н	$\checkmark$	
ML2610PN	1.0	0.926			$\checkmark$	
ML1710SC	1.0	0.917			$\checkmark$	





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