



Shamrock Poly Pty Ltd. ABN 48 006 055 956

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30th July 2019

The Director, Operations 1
Anti-Dumping Commission
GPO Box 2103
Canberra ACT 2601
AUSTRALIA

Dear Director

Re: Submissions to the investigation # 515

Shamrock Poly Pty Ltd is a medium sized manufacturer of polyethylene films for the food and industrial packaging industries. We would like to make the following submission with respect to the investigation into alleged dumping of HDPE from Korea, Singapore, Thailand and USA. We have read the Consideration Report No. 515, lodged on the public file, and offer the following comments.

Shamrock have regularly source HDPE resins from Thailand for over 15 years. The HDPE we source is a High Molecular Weight HDPE produced using a bimodal process (using Mitsui Technology) from SCG Chemicals, Qenos can not supply this form of material. Qenos did in the past produce a High Molecular Weight HDPE (not Mitsui Technology), however they ceased production of this material in 2011. The material we import (via a distributor), has distinct differences in characteristics and processability when compared to the available Qenos product. We have attached a document that explains the differences in HDPE. (Polymer Structure.pdf)

In the last 15+ years we have been importing the material we have never had a shortage of supply, the same cannot be said for Qenos. Over the period in question as part of this investigation, I have 3 examples where Qenos were unable to supply due to packing issues or plant outages. Without the availability of the price competitive imported material we would have had no option but to shut our HDPE manufacturing line.

Public Record

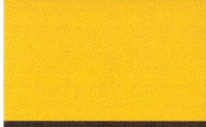
The HDPE material we use is a necessity for our business, as it allows us to compete with overseas film manufactures whose product is presently imported into the country. These manufactures are not restricted by a local supplier who only manufactures a basic (old technology) form of HDPE for PE film extrusion within the focus of this inquiry.

We are pleased to provide further information if required.

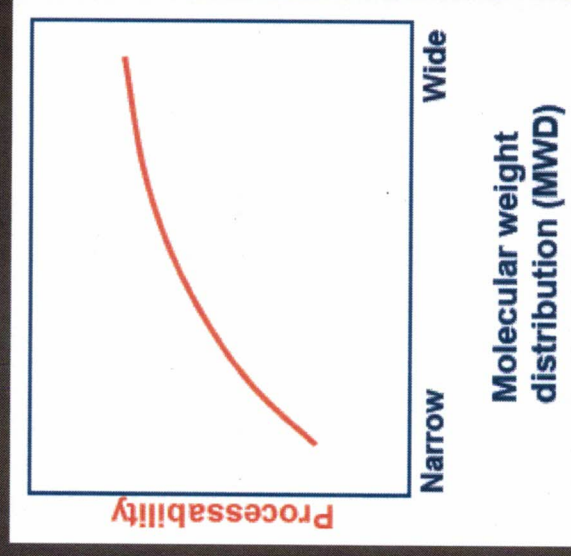
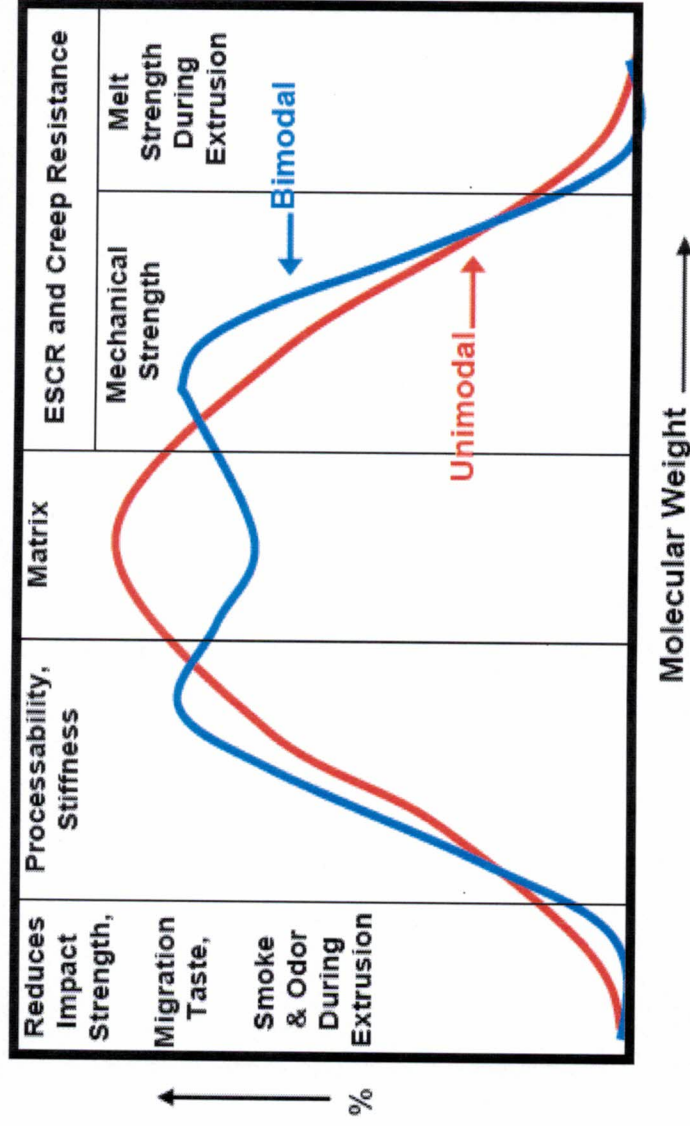
Yours sincerely,

Clifford Lobb
Operations Manager at
Shamrock Poly Pty Ltd

Polymer Structure – Properties Relationship



Molecular Weight Distribution



Low Molecular Weight will help processability to be increased due to low viscosity, but it will affect impact strength to be decreased. Furthermore, this part is involved in migration and smoke & odor during extrusion.

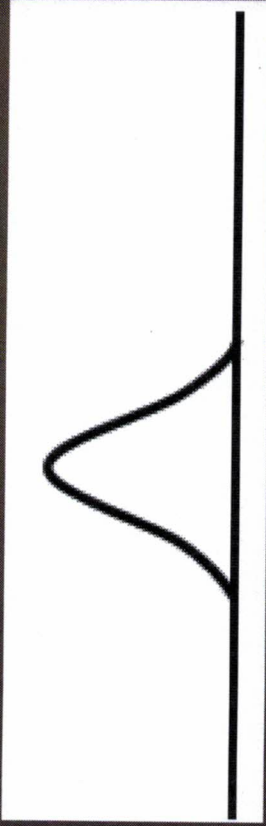
High Molecular Weight will help mechanical properties to be better such as stiffness, impact strength, tensile strength, chemical resistance (ESCR), creep resistance, and others.

Reference

1. <http://polymerprocessing.blogspot.com/2008/09/bimodal-high-density-polyethylene-hdpe.html?m=1>
2. <https://www.slideshare.net/bilavegnikei/bimodal-blow-moldingbrochure>

Properties of Unimodal and Bimodal

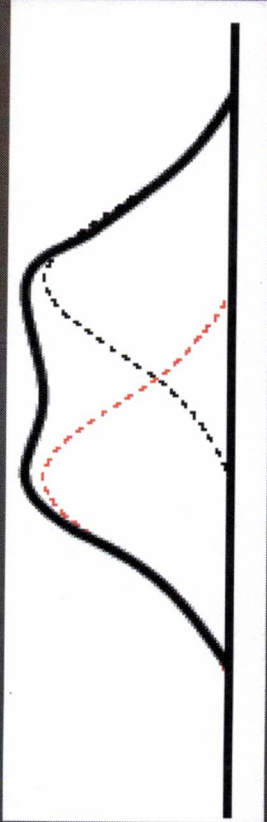
Single polymerization



Unimodal : Narrow Molecular weight distribution

Unimodal is a narrow molecular weight distribution which is designed for outstanding one characteristic such as good mechanical property, peak of graph will shift to high molecular weight section, or good process ability, peak of graph will shift to low molecular weight section.

Two-stage polymerization



Bimodal : Broad Molecular weight distribution

Bimodal is a broad molecular weight distribution which is designed for balancing processability and mechanical property because there are two peaks in a graph. One peak is on the low molecular weight section and another peak is on the high molecular weight which will affect graph to be broad. Therefore, broad molecular weight will give good processability and good mechanical properties.

Reference

1. <https://polymerprocessing.blogspot.com/2008/09/bimodal-high-density-polyethylene-hdpe.html?m=1>
2. <https://www.slideshare.net/piloyanike1/bimodal-blow-molding-structure>
3. Long-term properties of polyolefins By Ann-Christine Albertsson