Explore the Alternative with DOWSIL™ 5-1050 Polymer Processing Aid

A versatile, dependable polymer processing aid by Dow

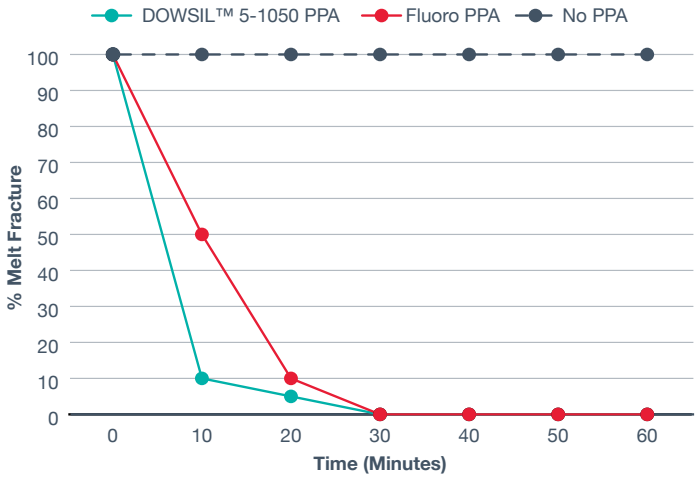
With a changing regulatory landscape and growing consumer demand for improved packaging, converters are searching for a reliable, effective processing aid that is an alternative to fluoro-based technology. To help our customers address these needs, Dow has introduced DOWSIL™ 5-1050 Polymer Processing Aid (PPA) – a polyethylene (PE) masterbatch designed for a variety of extrusion applications that require excellent abuse-resistance and optical properties. This innovative technology offers key performance benefits and versatility during processing.

Leveraging Our Experience in Silicone and Polyethylene Technologies

Our distinct and long-time combined experience in both silicone and PE technologies has helped enable Dow to design a PPA solution to address our customers' high-performance needs and the evolving demands of today's industry. DOWSIL™ 5-1050 contains a silicone additive in a PE carrier. As a result, this solution works on an industrial scale and can be used in a wide range of resins and applications.

Time to Clear Melt Fracture

DOWSIL™ 5-1050 PPA provides similar or better reduction in melt fracture when compared to fluoro-based technology.



Data acquiried on twin screw extruder using 2.5% PPA blended with LLDPE resin (octene coplymer, 0.5 g/10 min). Extruder parameters include melt temperature of 450°F, die temp of 190°C, L:D Ratio of 17 and apparent shear rate of 112/s. Typical values, not to be construed as specifications. Users should confirm results by their own tests.

Product Benefits

- Clears melt fracture and reduces screen and die pressure, improving processability of polyethylene resins
- Reduces film haze
- Addresses regulatory requirements for food contact (EU 10/2011 and US FDA 21 CFR 174.5 compliant)
- Can be dry- or melt-blended with LLDPE resins, offering flexibility in processing
- Reduces die lip build-up formation
- Results in similar film properties as fluoro-based technology, while exceeding film property performance when PPAs are not used

DOWSIL™ technologies by Dow

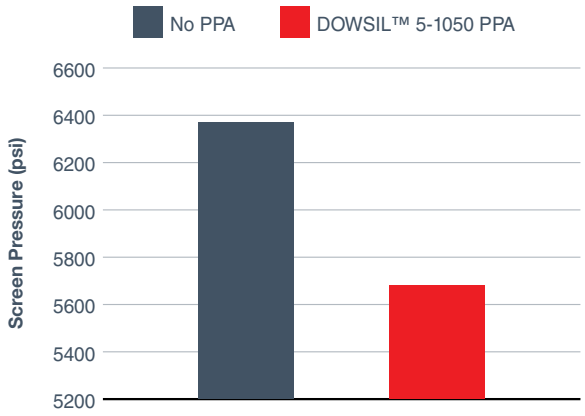
Reduced Melt Fracture in Blown Films

DOWSIL™ 5-1050 PPA can substantially reduce melt fracture compared to samples without a PPA in LLDPE blown films.

Data acquiried on monolayer blown film line using 1.5% PPA blended with LLDPE resin (octene coplymer, 0.5 g/10 min). Extruder parameters include melt temperature of 480°F, L:D Ratio of 14 and apparent shear rate of 300/s at 45 min.

Improved Production Efficiencies

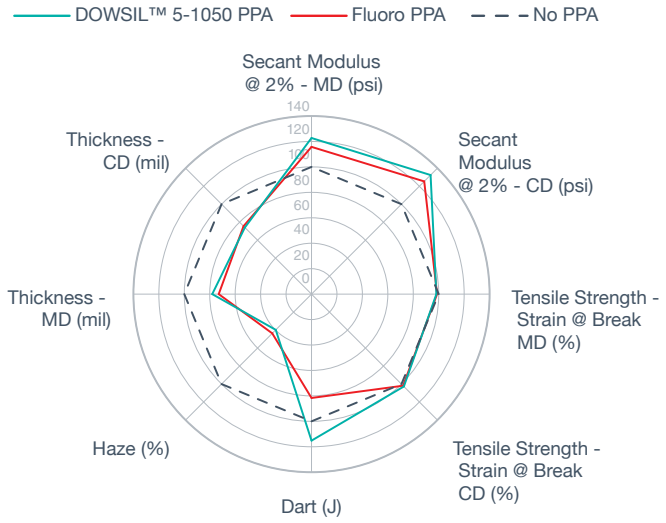
DOWSIL™ 5-1050 PPA reduces screen pressure during processing relative to resin without a PPA. This can lead to improved production efficiencies such as balancing line output versus melt fracture.



Data acquiried on monolayer blown film line using 1.5% PPA blended with LLDPE resin (octene coplomer, 0.5 g/10 min). Extruder parameters include melt temperature of 480°F, L:D Ratio of 14 and apparent shear rate of 300/s at 30 min. Typical values, not to be construed as specifications. Users should confirm results by their own tests.

Improved Aesthetics

DOWSIL™ 5-1050 PPA has no negative effects on film mechanicals with lowered haze, improving the aesthetic appeal of extruded films.



Data acquiried on blown films generated on monolayer blown film line using 1.5% PPA blended with LLDPE resin (octene coplomer, 0.5 g/10 min).

A Global Supplier with Local Support

Dow has a long history of supporting specialty product portfolios and extensive experience with compounding, extrusion, and incorporation of silicone additives into plastics as processing aids. We complement this experience with our strength as a global supplier with excellent local support. Let us know what you need. Our team of collaborative specialists are ready to work with you.

DOWSIL™ 5-1050 PPA **Contact a Specialist**

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