



Bio-degradable specs for all Cast Pre-Stretch, Hand and Machine film

- Applicable to all Machine and Hand films with Biodegradable Additive (Part no's ending with -BIO & Any other Bio films)
- Abiotic Degradation is Polymer Degradation by Oxidation (Not from Living Organisms)
- Pro Degradant Content Presence confirms the presence of additive in the film

Thermal Stability:	ASTM D5510	No Significant Degradation Observed
Abiotic Degradation:	ASTM D5510 ISO 10640	Significant Degradation Observed
Pro Degradant Content Confirmation:		Pro degradant Present

All values are representative of typical film performance and are not to be construed as manufacturing and/or sales specifications.

As per ASTM D5510, Polymer Degradation is evaluated by carbonyl products of polymer oxidation which is recorded as Carbonyl Optical Density.

- Carbonyl OD not exceeding 0.0010 represents no degradation
- Carbonyl OD exceeding 0.0010 represents polymer degradation

Thermal Stability		
Accelerated Aging Time	Exposure Type	Carbonyl OD
0 hrs	Thermal	0.0000
50 hrs	Thermal	0.0006
145 hrs	Thermal	0.0006
312 hrs	Thermal	0.0007
482 hrs	Thermal	0.0006
606 hrs	Thermal	0.0006

Abiotic Degradation		
Accelerated Aging Time	Exposure Type	Carbonyl OD
0 hrs	UV	0.0000
48 hrs	UV	0.0011
118 hrs	Thermal	0.0285
286 hrs	Thermal	0.0740

- Product shows 0.0006 Carbonyl OD under storage conditions representing Thermal Stability
- Product shows 0.0740 Carbonyl OD in 286 hours representing Significant Abiotic Degradation
- 1000 Hours of accelerated aging would be approx.6 months in real time. This is just an estimate for understanding purposes.