

## NatureWorks® PLA: Shrink Sleeve Labels

Shrink sleeve labels help boost brand identity with a form-fitting look and 360° product decoration. Now with NatureWorks® PLA, beverage and food companies have a clear, nature-based option in shrink labels that can give product brands even greater appeal.

### Performance Characteristics

NatureWorks PLA is a high-performance shrink label that can envelop products in top-quality color and graphics for outstanding shelf-presence. The fact that NatureWorks PLA comes from nature is a bonus to the shrink film's unique decoration possibilities.

**Aesthetics.** Excellent gloss and clarity for outstanding graphic appeal. High clarity lets the product shine through for eye-catching, transparent applications.

**Printability.** Natural surface energy readily accepts many ink formulations for crisp presentation of all-around, high-impact graphics.

**Shrink properties.** Provides greater than 70 percent shrink ratio over a temperature range of 80 - 100 °C, ensuring the label's ability to cover almost any shape of container. Lower-temperature shrink initiation means shrink performance is more predictable and faster label application is possible.

**Strength.** Good abrasion resistance and dimensional stability over a wide temperature range. High modulus allows for the possibility of down gauging.

**Breathability.** High water transmission rate (WVTR) eliminates moisture trapped between the label and the container—particularly important for steam shrinking.

**Processing.** Equipment trials show NatureWorks PLA runs on a broad range of existing labeling equipment with good throughput and line speed. The film is also effective in roll-on-shrink-on (ROSO) applications.

**Disposal.** Studies have shown NatureWorks PLA can be recycled and is fully compostable in industrial facilities.\*

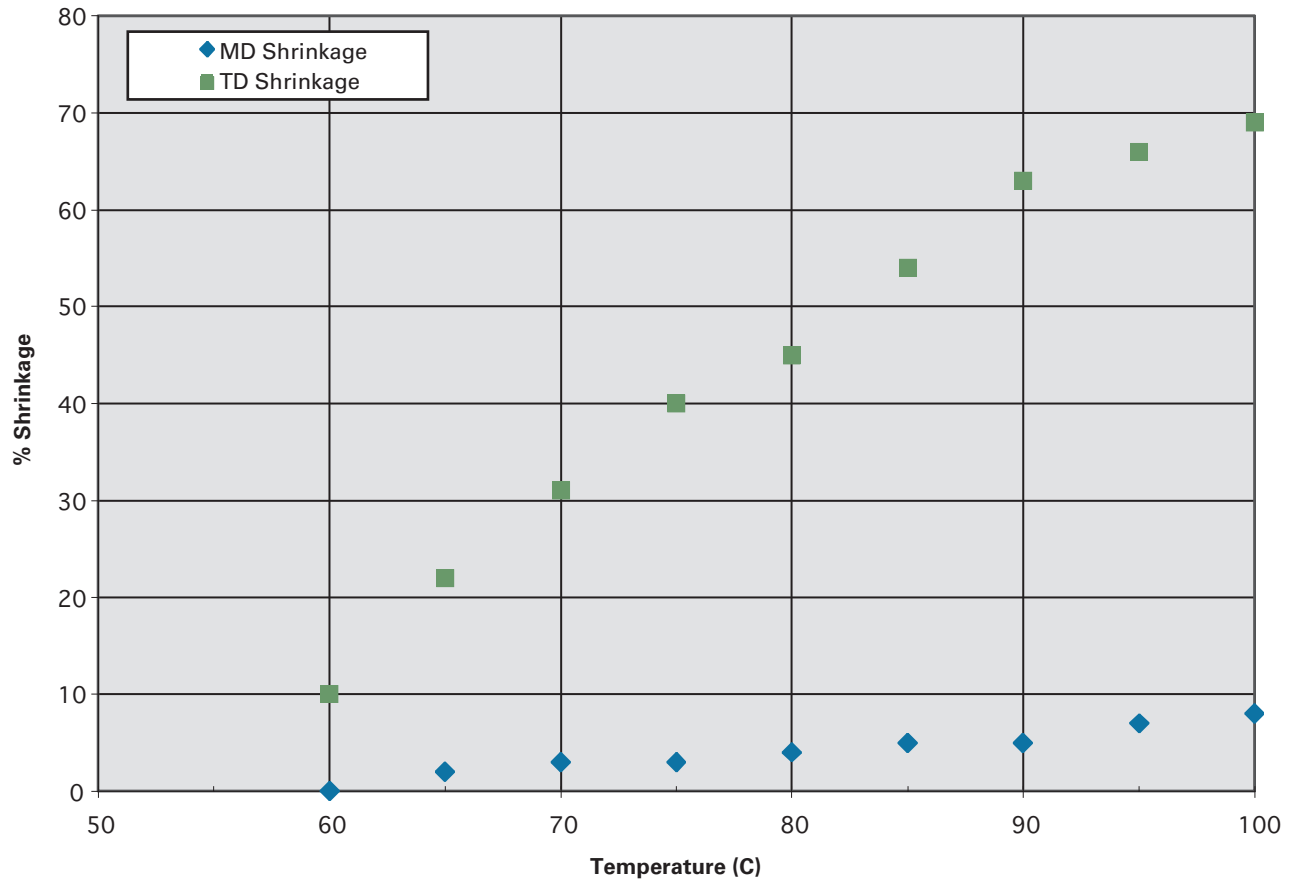
NatureWorks PLA delivers the excellent optics and good physical properties important to shrink labels.

Shrink Properties of NatureWorks PLA Film				
Formulation	% MD stretch	Film haze	% Elongation to break (MD/TD)	% Shrinkage at 100° C for 5 minutes (MD/TD)
High Clarity	10	0.6	3 43	7 70
High Clarity	30	0.7	49 39	22 69
High Clarity	50	0.7	73 34	33 68
High Impact	10	7.2	110 58	8 68
OPS Film	Unknown	6 (typical value)	109 60	6 72
PETG Film	Unknown	5 (typical value)	418 58	2.5 62.5
PVC Films	Unknown	Unknown	194 43	6.5 56.5

Samples are 1.5 mil film, stretched in TD by factor of 4.2x.

## Shrink Sleeve Labels, continued

Shrinkage Curve for NatureWorks PLA Film



Film stretched 10% in MD and 420% in TD

### Brand Advantage

Made from 100 percent field corn, NatureWorks PLA is a nature-based alternative to traditional plastic derived from fossil fuels. Because of its sustainable source, NatureWorks PLA has a natural appeal that resonates with today's consumers, creating an opportunity to use packaging as a value-added feature of a product brand.

For more information, please visit [www.natureworkspla.com](http://www.natureworkspla.com)



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\* Visit [www.natureworkspla.com](http://www.natureworkspla.com) for composting information.