



UVSeal™

Transparent UV Protection, Even in Thin PET Structures

Transparent PET packaging keeps products visible but may expose light-sensitive contents to UV radiation, affecting their color, flavor, nutritional value, active ingredients, and overall quality.

This challenge is greater in thin films and packaging layers, where effective protection must be achieved with limited thickness. Traditional approaches, such as colored or opaque packaging, additional barrier materials, or thicker structures, may reduce visibility and limit design freedom.



Tosaf's UVSeal™ masterbatch provides effective UV protection for thin PET films and thin layers in co-extruded and co-injected PET packaging. It helps protect sensitive content and extend product shelf life while maintaining transparency, a clean non-yellowing appearance, and the recyclability of the PET structure.

UV Protection Without Hiding the Product

Clear packaging plays an important role in product presentation and consumer confidence. However, untreated PET may not provide the level of UV protection required by sensitive food, beverage, cosmetic, and personal care products.

UVSeal™ integrates tailored UV blocking functionality directly into the PET. It can be used throughout a thin film or concentrated within a thin functional layer, providing the required protection with minimal visual impact.

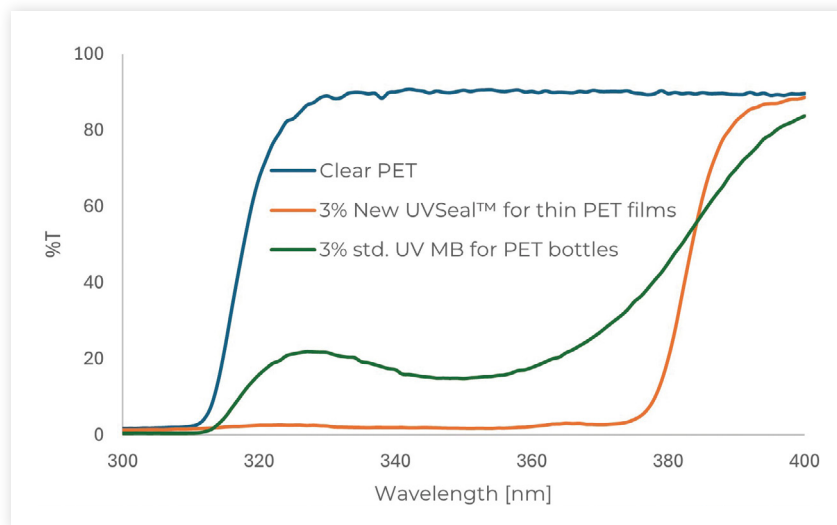
Main Applications

Thin PET Packaging Films • Co-extruded PET Packaging

Food and Beverage Packaging • Cosmetics and Personal Care Packaging

UV Barrier Performance in Thin PET

The new UVSeal™ grade for thin films provides superior UV blocking at low letdown ratios without yellowing and processing issues.



UV transmittance spectra of 50 micron films with UVSeal™ for thin PET films vs. standard UV MB for PET bottles and clear PET

Key Benefits

- ✓ **Effective UV Blocking:** Helps protect sensitive content from UV related degradation throughout storage, transportation, and retail display
- ✓ **Performance in Thin Structures:** Provides UV protection in thin PET films and thin layers in co-extruded and co-injected packaging
- ✓ **Maintains Transparency:** Preserves clear product visibility without requiring opaque or heavily colored packaging
- ✓ **Non-Yellowing Appearance:** Delivers a clean and transparent packaging appearance without an unwanted yellow tint
- ✓ **Extended Product Shelf Life:** Helps maintain product color, flavor, active ingredients, nutritional value, and overall quality for longer durations. Reduces food spoilage and food waste
- ✓ **Tailored Protection:** Can be adjusted according to the required UV blocking range, film or layer thickness, and sensitivity of the packaged product
- ✓ **Flexible Packaging Design:** Supports both monolayer film concepts and thin protective layers in co-extruded and co-injected PET structures
- ✓ **Enhanced Sustainability:** Supports fully circular PET packaging. Completely recyclable in clear rPET streams, non-yellowing, non-deteriorating, non-SVHC

From UV Protection Target to Finished Packaging

The required UV barrier depends on the sensitivity of the packaged product, the targeted wavelength range, film or layer thickness, PET formulation, package design, production conditions, and required shelf life.

Tosaf's PET, additive, and color experts work with film producers, packaging converters, and brand owners to select the right UVSeal™ solution, optimize its dosage and layer structure, and support implementation in production.

Looking to Protect Sensitive Products Without Losing Transparency? We'll help make it happen.