TeckWrap Light Protection Film

Technical Data Sheet

HEADLIGHT AND TAILLIGHT PROTECTION FILM

- **Product Overview & Descript**
- **Core Features**
- **Technical Specifications**
- **Application, Storage & Care Guidelines**

PRODUCT OVERVIEW & DESCRIPTION

TeckWrap® THL Series Light Protection Film is an optical-grade thermoplastic polyurethane (TPU) smoked film designed specifically for headlights, taillights, fog lights, and auxiliary lenses. Engineered to combine aesthetic light tuning with high-durability paint protection film (PPF) characteristics, the THL Series safeguards polycarbonate lenses against stone chips, gravel abrasion, UV radiation, and road contaminants. Equipped with a heat-activated self-healing top coating, minor surface scratches repair automatically under heat exposure (sunlight, hot water, or heat gun).

CORE FEATURES

- **Heat-Activated Thermal Self-Healing**

Surface scuffs and wash marks self-repair when warmed.

- **99% UV Rejection & Lens Preservation**

Blocks UV radiation to prevent lens yellowing, hazing, and cracking.

- **350% Elongation & High Elasticity**

Ensures seamless wet conformability around complex 3D curved lenses.

TECHNICAL SPECIFICATIONS

TECHNICAL PARAMETER	THL30 (LUMEX)	THL55 (SPECTRA)
Substrate / Top Coating	Thermal Self-Healing	Thermal Self-Healing
Total Product Thickness	330 µm	330 µm
Application Layer Thickness (Film + Adhesive)	210 µm (8.27 mil)	210 µm (8.27 mil)
Visible Light Transmittance (VLT)	30% ± 3%	54% ± 3%
UV Resistance / Rejection (290–380 nm)	99% Blockage	99% Blockage
Optical Haze / Gloss Level (60°)	1.5% / 90 GU	1.5% / 90 GU
Peel Adhesion (Tack, 20-min PSTC-101)	≈ 2200 g/in	≈ 2200 g/in
Tensile Strength	≈ 18 MPa	≈ 18 MPa
Coating Elongation at Break	110%	110%
Product Elongation at Break	350%	350%
Maximum Temperature Resistance	100 °C	100 °C
Standard Roll Dimensions (W × L)	0.4m × 15m	0.4m × 15m
Outdoor Durability & Warranty Period	3 Years Warranty	3 Years Warranty

APPLICATION, STORAGE & CARE GUIDELINES

Installation Procedure:

Application: Wet method using slip solution (water + PPF soap).
Preparation: Thoroughly clean & degrease lens with 50% IPA solution.
Post-Heating: Heat stretched borders to 80°C–90°C to lock adhesive.

Storage & Care:

Storage: Store at 20°C–25°C, 50% RH out of direct sunlight.
Cure Time: Allow 48 hours cure time prior to pressure washing.
Maintenance: Do not use harsh solvents or abrasive compounds.