

Product Overview

Shenghui Optical Tech I800T Embossable License Plate Grade sheeting is an all-weather, enclosed lens retro-reflective sheeting designed for the production of reflective numbers plates. Plates can be embossed and then roll coated or screen printed to manufacture durable license plates. The product is supplied with a permanent pressure-sensitive adhesive and easy-release paper liner. License plates produced with Shenghui Optical Tech I800T sheeting will perform both day and night and will retain retro-reflectivity when wet.

Physical Characteristics & Properties

Durability	Up to 5-years when properly converted and installed vertically
Retro-reflective Elements	Glass beads (Enclosed lens)
Film Thickness	Approximately 160µm (excluding release liner)
Face Film	Cast PVC Film
Adhesive	50µm (2 mils) Permanent pressure-sensitive adhesive
Release Liner	Poly-coated paper liner
Application Surface	Chemically treated or conversion coated aluminum
Application Temperature	18°C (65°F) minimum
Embossing Temperature	20°C (70°F) minimum
Embossing Depth	2mm (0.080 inches) maximum
In Use Temperature Range	25° to 65°C (-13° to 150°F)

Retroreflection

Minimum Coefficient of Retroreflection (cd/lx/m²) According to ISO 7591:1982

Color	Observation Angle	Entrance Engle	
		-4°	30°
White	0.2°	30	12
Yellow	0.2°	20	8

Color Availability

Product Code	Color
I800-00	White
I800-01	Yellow

Application & Conversion

Shenghui Optical Tech I800T sheeting should be conditioned above 18°C (65°F) for at least 24-hours prior to application. Sheeting should be applied to clean flat coil or sheet stock aluminum using a squeeze roll applicator. Tension of the sheeting during lamination should be maintained at a minimum to avoid over-stretching the material. The sheeting may not perform properly when stretch exceeds 2%. Allow a minimum dwell time of 48 hours to ensure a complete adhesive bond to the aluminum substrate prior to embossing or debossing. The minimum embossing temperature is 20°C (70°F). Laminated blanks should be conditioned at these temperatures prior to embossing or debossing. Shenghui Optical Tech I800T sheeting can be embossed to a maximum depth of 2mm (0.080 inches) under typical license plate embossing configurations. Embossed characters should be designed to avoid excessively steep slopes along the edges of embossed areas. The converter should always pretest Shenghui Optical Tech products with their specific embossing configuration prior to full production. Shenghui Optical Tech I800T sheeting can be roll coated or screen printed with a variety of solvent-based inks. To maximize contrast between alphanumeric characters and the white or yellow sheeting background, dark and opaque inks should be utilized.

Daytime Color

The color of the sheeting shall fall within the four pairs of chromaticity coordinates (CIE 1931 Standard Colorimetric System) when measured with Standard Illuminant D65 using a 0/45 (45/0) geometry instrument.

Color	1		2		3		4		Cap Y%	
	x	y	x	y	x	y	x	y	Min	Max
White	.303	.300	.368	.366	.340	.393	.274	.329	27	--
Yellow	.498	.412	.557	.442	.479	.520	.438	.472	15	45

Roll Sizes

Shenghui Optical Tech license plate products are available in 600 meter (660 yard) rolls in widths up to 305mm (12 inches). The products are also available in 45.7 meter (50 yard) rolls in 1220mm widths.

Storage

Store in a cool, dry area. Use within 1-year of receipt of the product. Store rolls in original shipping carton or suspend horizontally from a rod through the core.

Warranty Information

The information, technical data, and statements made herein are believed to be reliable, but the

accuracy or completeness thereof is not guaranteed and should not be construed as a warranty or representation for which Shenghui Optical Tech assumes legal responsibility. All Shenghui Optical Tech products are sold with the understanding that the Purchaser has independently determined the suitability of such products for its purposes. The following is made in lieu of all other express or implied warranties. No implied warranty of merchantability or fitness for a particular purpose is made. Shenghui Optical Tech products are warranted to be free from defects in material or workmanship for a period of one year from date of shipment if the product is properly stored and/or applied. Shenghui Optical Tech's sole obligation shall be to replace such quantity of product proven to be defective. Shenghui Optical Tech shall not be liable for any injury, loss or damage, direct or consequential, whether foreseeable or not, arising out of the use or of the inability to use the product.

This warranty does not cover the Products if the application surface is not properly prepared; nor does the warranty cover the Product or damage to the substrate because the layers of the substrate separate due to a lower bond between those layers than the bond between the Products and the top layer of the substrate, or surfaces which subsequently crack, peel, outgas, or become damaged beneath the Products.

For purposes of clarity, this is a limited warranty and excludes, among other items, installation, providing access to products (scaffolding, lifts, etc.), and special, incidental and consequential damages (such as loss of revenue/profits, damage to property or other miscellaneous costs not previously mentioned), and is further defined by the limitations and conditions set forth in the respective warranty policy and these terms and conditions. Upon request, Shenghui Optical Tech's representatives have to be allowed to access the defective Product, system or application for verification of non-compliance.

The warranty and remedies contained in the terms of the limited warranty are the only warranties given by Shenghui Optical Tech for the Products and are given in lieu of all other warranties, whether express or implied, including limitations for warranties of merchantability or fitness for a particular purpose, which warranties are hereby disclaimed. These terms and conditions state Shenghui Optical Tech's entire liability and obligation to the Purchaser and the Purchaser's sole and exclusive remedy for defective or non-conforming Products supplied by Shenghui Optical Tech to Purchaser, whether or not such damages are based on any warranty not explicitly mentioned in these terms and conditions, tort, contract or any other legal theory, as well as if Shenghui Optical Tech has been advised or is aware of such defects.