



PRODUCT TECHNICAL SPECIFICATIONS

Crisis Shield CS-650

DESCRIPTION:

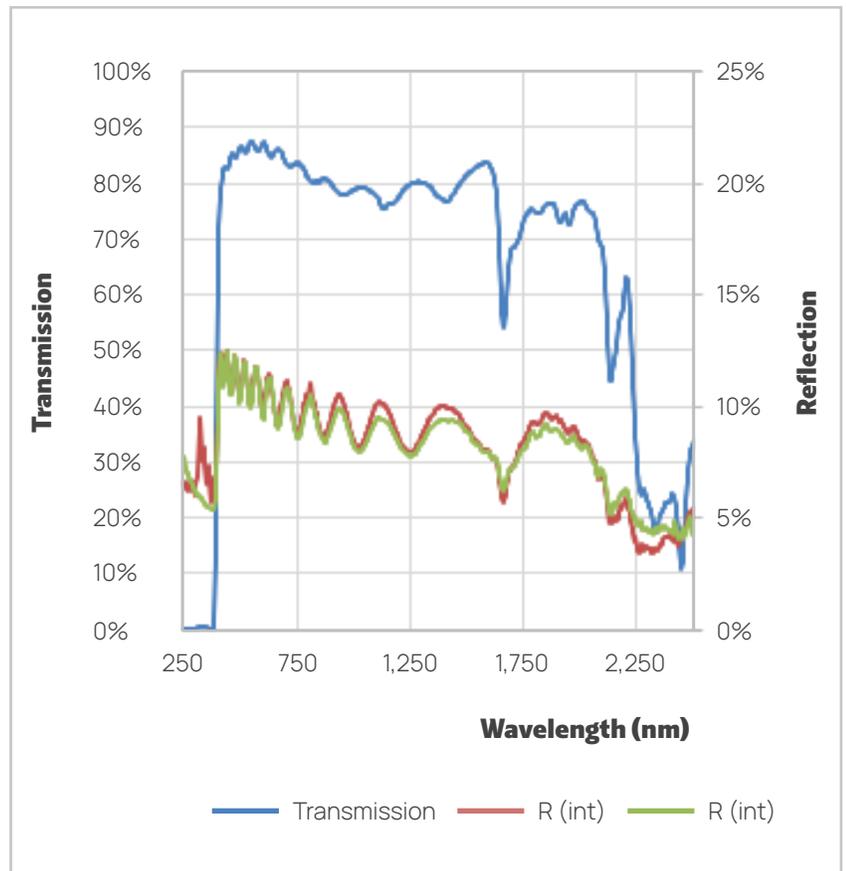
Premium safety window film for the Architectural segment. Multilayer structure based on ultra-clear PET, UV enhanced PSA layers - all laminated in a unique design set for advanced safety & security protection.

APPLICATION:

The product could be either retrofitted or dry laminated on glass.

OPTICAL & SOLAR PRODUCT SPECIFICATIONS¹:

PROPERTY	VALUE
Visible Light Transmitted	86%
Visible Light Reflected (int)	11%
Visible Light Reflected (ext)	11%
UV Rejection	>99%
Total Solar Energy Transmitted	78%
Total Solar Energy Reflected	10%
Total Solar Energy Absorbed	12%
Shading Coefficient	0.93
Solar Heat Gain Coefficient	0.80
Total Solar Energy Rejected	20%
Glare Reduction	4%
U-Factor	1.07
Light to Solar Gain	1.052



¹ Optical and Solar results are performed on 1/8" clear glass and simulated using LBNL software (Optics and WINDOW 5.2) according to NFRC methodology

PHYSICAL PROPERTIES²:

PROPERTY	TEST METHOD	VALUE
Overall Product thickness ³	Mahr Millimar Direct Measure	650 µm
Haze	ASTM D1003	< 4%
Tensile Strength @ Break (TD)	ASTM D882	32,000 psi
Break Strength (TD)	ASTM D882	655 lb/in
Elongation at Break (TD)	ASTM D882	90
Surface Burning Characteristics	ASTM E84	Class A
Puncture Strength (lbs)	ASTM D4830	310
Tear Resistance (N/m)	ASTM D1004	325
Peel Strength (lb/in)	ASTM D3330	8

INDEPENDENT LAB TESTING RESULTS⁴:

PROPERTY	STANDARD	DESCRIPTION	RESULT	LAB
Blast and Overpressure	ASTM F1642	Standard Test Method for Glazing and Glazing Systems Subject to Airblast Loadings	PASS - Minimal Hazard	Intertek
Blast and Overpressure	GSA-TS01	US General Services Administration Standard Test Method for Glazing and Window Systems Subject to Dynamic Overpressure Loadings	PASS - Category IIIA PASS - 6.84 psi PASS - 45 psi-msec PASS - 11.64 msec	Intertek
Forced Entry	ASTM F3561	Simulated Active Shooter Attack and Forced Entry Resistance	PASS - Level 1	Intertek
Forced Entry	UL 972	Burglary Resisting Glazing Material	PASS - Ball Impact Test (50 ft-lbs) PASS - Indoor Use Impact Test (55° and 95°; 50 ft-lbs) PASS - High Energy Impact Test (200 ft-lbs)	Intertek
Glass Safety	ANSI Z97.1	Safety Glazing Material Used in Buildings	Class A - Unlimited	Intertek
Glass Safety	CAN/CGSB 12.1	Safety Glazing	Class A - 1200 mm impact	Intertek
Glass Safety	CPSC 16 CFR 1201	Safety Standard for Architectural Glazing Materials	Category II	Intertek

² Physical properties are not tested on any substrate

³ Overall thickness includes 25 µm installation liner

⁴Independent Lab Testing is performed on ¼" tempered glass since it is the most likely substrate to be encountered in safety, security, storm and debris and forced entry applications.