



LAB TEST RESULTS

TEST REPORT #	CHARACTERISTIC TESTED	TEST STANDARD	FILM TYPE	RESULTS
1	Impact Resistance	16 CPSC 1201 Safety Glazing	4 & 7 mil	Passes Category I & II
2	Weathering	16 CPSC1201 Safety Glazing	4 & 7 mil	Meets the requirements of section 1201.4(e) 1(iv) and 2(iv)
3	Impact Resistance	ANSI Z97.1	4 & 7 mil	Passes Unlimited Requirements
4	Weathering	ANSI Z97.1	4 & 7 mil	Meets the requirements of section Z97.1.5.3.1
5	Impact Resistance	ANSI Z97.1	4 mil NSN 70, Gray 35, Solar 15, Bronze 20	Passes Unlimited Requirements
6	Impact Resistance	BS 2606	4 & 7 mil	Passes
7	Impact Resistance	Din A1 Din A3	14 mil one side 14 mil two side	Passes
8	Tensile Strength	ASTM D882-95a	12 mil 8 mil 7 mil 4 mil	348 lbf. 212 lbf. 203 lbf. 116 lbf.
9	Puncture Test	ASTM D4830-95	12 mil 8 mil 7 mil 4 mil	212 lbf. 160 lbf. 162 lbf. 77 lbf.
10	Puncture Propagation of Tear	ASTM 2582	12 mil 8 mil 7 mil 4 mil	13 lbf. 7 lbf. 8 lbf. 6 lbf.
11	Graves Tear Test	ASTM 1004	12 mil 8 mil 7 mil 4 mil	43 lbf. 28 lbf. 23 lbf. 11 lbf.
12	Peel Adhesion	ASTM D3330-96 ASTM G26	4 & 7 mil	5.5 lbs/in Pre-Weathered
13	Surface Abrasion Resistance	ASTM D1044-94	All Safety Security Film	Delta Haze <3%



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14	Ignition Properties of Plastics	ASTM D 1929-91	4 & 7 mil	Flash Ignition Temp. 530C Self-Ignition Temp. 550C Time to Ignition 1:23 min.
15	Surface Burning Characteristics	ASTM E84-97	4 & 7 mil	Flame Spread Index - 10 Smoke Developed Index - 10
16	Rate of Burning	ASTM D635-88	4 & 7 mil	Material did not stay ignited long enough to get a reading
17	Sound Transmission Loss Test	ASTM E90-90 ASTM E413-87	4, 7 & 12 mil	No Loss of Sound Transmission
18	Ultraviolet Light Transmission	ASTM E1348-90	IG Unit w/4 mil Film on Surface 2 and 3	Blocks 99.9% of UV
19	Wind borne debris	Dade County Small Missile Test	8 mil (with anchoring)	Tested per Dade County PA201, PA202 and PA203 standards up to 130 ft/sec.
20	Bomb Blast Mitigation	GSA's Method for Glazing Systems Subject to Air Blast Loading	4 & 7 mil	Performs to GSA Hazard Level 3 Open Arena
21	Ballistics .38 Special	HPW-TP-0500.02	12 mil on 3/4" glass	No Penetration-3 shots
22	Ballistics 9mm	HPW-TP-0500.02	12 mil on 3/4" glass	No Penetration-3 shots
23	Ballistics .38 Special	HPW-TP-0500.0	12 mil on 1/2" glass	3 shots 2-no penetration 1-penetration

ABBREVIATION TABLE

ANSI - American National Standards Institute	GSA - General Services Administration
ASTM - American Society for Testing and Materials	LBF - Pounds force
BS - British Standards	MIL - Thickness measurement
CPSC - Consumer Product Safety Commission	PSI - Pounds per square inch