

FILM-TO-GLASS APPLICATION CHART

Guidelines for Glass Breakage and Double Glazed Unit Seal Failure Limited

Film Type	Low-E Caution (LEC)	Solar Absorbance	Clear Single Pane	Tinted Single Pane	Clear Double Pane	Tinted Double Pane
Architectural						
Stainless Steel						
Film-to-Glass Application Ratings						
Stainless Steel 60		32	1	1	1	1
Stainless Steel 50		44	1	1	1	1
Stainless Steel 35	LEC	48	1	1	1	1
Stainless Steel 30		52	2	2	3	2
Stainless Steel 20		55	2	2	4	4
Stainless Steel 10		55	2	2	4	4
Quantum						
Quantum/Silver/						
Quantum 20		75	2	2	4	4
Quantum/Silver/						
Quantum 10		70	2	2	4	4
Solar Bronze						
Solar Bronze 50	LEC	34	1	1	1	1
Solar Bronze 35	LEC	35	1	1	1	1
Solar Bronze 20	LEC	38	1	1	1	1
Aluminium						
Silver 50		35	1	1	1	1
Silver 35		33	1	1	1	1
Silver 20	LEC	35	1	1	1	1
Grey/Silver 20		60	2	2	4	4
Grey/Silver 15		61	2	2	4	4
Bronze/Silver 20		56	2	2	4	4
Bronze/Silver 15		57	2	2	4	4
Gold/Silver 20	LEC	40	1	1	1	1
Blue/Silver 20	LEC	48	1	1	2	2
Green/Silver 20	LEC	50	1	1	2	2
Grey/Silver/Grey 10		63	2	2	4	4
Bronze/Silver/Bronze 10		62	2	2	4	4
Summer/Winter Lower-Emissivity						
Silver Ag 25 Low-E		41	1	1	1	1
Safety & Security						
Clear Safety & Security						
2 Mil Clear		9	1	1	1	1
4 Mil Clear		13	1	1	1	1
7 Mil Clear		13	1	1	1	1
8 Mil Clear		9	1	1	1	1
10 Mil Clear		14	1	1	1	1
11 Mil Clear		13	1	1	1	1
14 Mil Clear		15	1	1	1	1
Solar Safety & Security						
4 Mil Stainless Steel 50		46	1	1	1	1
4 Mil Stainless Steel 35	LEC	47	1	1	1	1
4 Mil Stainless Steel 20		56	2	2	4	4
8 Mil Stainless Steel 50		49	1	1	1	1
8 Mil Stainless Steel 35	LEC	52	1	1	1	1
8 Mil Stainless Steel 20		59	2	2	4	4
10 Mil Stainless Steel 50		43	1	1	1	1
10 Mil Stainless Steel 35	LEC	48	1	1	1	1
4 Mil Solar Bronze 35	LEC	39	1	1	1	1
4 Mil Solar Bronze 20	LEC	41	1	1	1	1
4 Mil Silver 20	LEC	37	1	1	1	1
8 Mil Silver 35		40	1	1	1	1
8 Mil Silver 20	LEC	39	1	1	1	1
10 Mil Silver 20	LEC	39	1	1	1	1
Specialty						
Clear Frost		19	1	1	1	1
Black Opaque		95	2	2	4	4
White Opaque		31	1	1	3	3
Rose Red		35	1	1	1	1
Royal Blue		38	1	1	1	1
Emerald Green		37	1	1	1	1
6 Mil GraffitiGuard		12	1	1	1	1

Film Type	Low-E Caution (LEC)	Solar Absorbance	Clear Single Pane	Tinted Single Pane	Clear Double Pane	Tinted Double Pane
Automotive						
High Performance						
HP Quantum						
Film-to-Glass Application Ratings						
HP Quantum 52		44	1	1	2	1
HP Quantum 37		55	2	2	4	4
HP Quantum 28		61	2	2	4	4
HP Quantum 19		65	2	2	4	4
HP Quantum 14		70	2	2	4	4
HP True Grey						
HP True Grey 50	LEC	37	1	1	2	2
HP True Grey 38	LEC	49	1	1	2	2
HP True Grey 28		55	2	2	4	4
HP True Grey 18		60	2	2	4	4
HP True Grey 6		71	2	2	4	4
HP Charcoal						
HP Charcoal 50	LEC	40	1	1	2	2
HP Charcoal 43	LEC	46	1	1	2	2
HP Charcoal 38		52	2	2	4	4
HP Charcoal 32		53	2	2	4	4
HP Charcoal 22		58	2	2	4	4
HP Charcoal 13		64	2	2	4	4
HP Charcoal 6		67	2	2	4	4
HP Titanium						
HP Titanium 33		55	2	2	4	4
HP Titanium 26		62	2	2	4	4
HP Titanium 16		65	2	2	4	4
HP Titanium 6		68	2	2	4	4
HP Bronze						
HP Bronze 33		53	2	2	4	4
HP Bronze 22		58	2	2	4	4
Automotive Non-Reflective						
NR Charcoal						
NR Charcoal 70		17	1	1	1	1
NR Charcoal 54		28	1	1	1	1
NR Charcoal 35		37	1	1	1	1
NR Charcoal 23		42	1	1	1	1
NR Charcoal 17	LEC	44	1	1	2	2
NR Charcoal 7		54	2	2	4	4
NR Grey						
NR Grey 32		39	1	1	1	1
NR Grey 22		39	1	1	1	1
NR Grey 12	LEC	48	1	1	2	2
NR Grey 6		54	2	2	4	4

Film-To-Glass Application Ratings

#1 Pre-approved for glass breakage and double glazed (DG) unit seal failure coverage.

#2 Not pre-approved for glass breakage and DG unit seal failure coverage, although coverage may be attainable with a film-to-glass application checklist.

#3 No DG unit seal failure coverage available, although glass breakage coverage may be attainable with a film-to-glass application checklist.

#4 Neither glass breakage nor DG unit seal failure warranty coverage available.

Notes

- All solar performance values are based on the film installed on the inside surface on 3mm (1/8") thick, clear glass.
- The film-to-glass application chart refers to the four most common types of glass. Additional film-to-glass application guidance, disclaimers, and information about installations over 250square M and/or Low-E caution (LEC).
- These film-to-glass application ratings are risk assessments based on the specific spectral characteristics of each unique film type. They are not based solely on total solar energy absorbance. The latter technique is not accurate for proper prediction of thermal induced glass use breakage because it gives no information as to the precise wavelength actually being transmitted, absorbed and/or reflected.