

Architectural Window Film

Product Selection Guide and
Performance Measurements

Life In A Better Light.

MADICO[®]





MADICO[®]

Neutral films offer the perfect combination of performance, fade protection and visibility and are made with sputtered metals for durability and appearance. Available in grey and bronze tones.

Visible Light:

Transmitted %	68.0
Reflected Exterior %	21.0
Reflected Interior %	21.0
Glare Reduction %	24.0

Total Solar Energy:

Transmitted %	46.0
Reflected %	26.0
Absorbed %	28.0

Other Solar Properties:

Shading Coefficient	0.62
Solar Heat Gain Coefficient	0.54
U-Factor	0.95
Ultraviolet Rejection %	≥ 99.0
Emissivity	0.69
Light to Solar Gain	1.26
Total Solar Energy Rejection %	46.0
Infrared Rejection %*	78.0
Infrared Energy Rejection %	59.0

Nova 70 Performance on Installed Windows as Certified by the NFRC**

Type	Default Glazing Reference	SHGC w/o Film	SHGC with Film	VLT w/o Film	VLT with Film	U-Factor with Film
Residential	3 mm (1/8") clear	0.72	0.46	0.74	0.56	1.02
Residential †	3 mm (1/8") clear 3 mm (1/8") clear	0.64	0.46	0.67	0.51	0.69
Non Residential	6 mm (1/4") clear	0.73	0.49	0.78	0.59	0.96
Non Residential	6 mm (1/4") grey	0.52	0.40	0.39	0.29	0.96
Non Residential †	6 mm (1/4") clear 6 mm (1/4") clear	0.63	0.48	0.69	0.53	0.57
Non Residential †	6 mm (1/4") grey 6 mm (1/4") clear	0.41	0.34	0.35	0.26	0.57

* IR Rejection based on average transmission from 780-2500nm. ** As certified by the National Fenestration Rating Council (NFRC).

† Dual pane window. **Note:** Please refer to the last page for further detail regarding testing and performance data.



Visible Light:

Transmitted %	57.0
Reflected Exterior %	9.0
Reflected Interior %	10.0
Glare Reduction %	36.0

Total Solar Energy:

Transmitted %	50.0
Reflected %	8.0
Absorbed %	42.0

Other Solar Properties:

Shading Coefficient	0.73
Solar Heat Gain Coefficient	0.63
U-Factor	1.05
Ultraviolet Rejection %	≥ 99.0
Emissivity	0.89
Light to Solar Gain	0.90
Total Solar Energy Rejection %	37.0
Infrared Rejection %*	51.0
Infrared Energy Rejection %	38.0

Solar Grey 55 Performance on Installed Windows as Certified by the NFRC**

Type	Default Glazing Reference	SHGC w/o Film	SHGC with Film	VLT w/o Film	VLT with Film	U-Factor with Film
Residential	3 mm (1/8") clear	0.72	0.54	0.74	0.47	1.10
Residential †	3 mm (1/8") clear 3 mm (1/8") clear	0.64	0.55	0.67	0.43	0.72
Non Residential	6 mm (1/4") clear	0.73	0.57	0.78	0.50	1.04
Non Residential	6 mm (1/4") grey	0.52	0.45	0.39	0.24	1.04
Non Residential †	6 mm (1/4") clear 6 mm (1/4") clear	0.63	0.56	0.69	0.44	0.59
Non Residential †	6 mm (1/4") grey 6 mm (1/4") clear	0.41	0.39	0.35	0.22	0.59

* IR Rejection based on average transmission from 780-2500nm. ** As certified by the National Fenestration Rating Council (NFRC).
 † Dual pane window. Note: Please refer to the last page for further detail regarding testing and performance data.



Visible Light:

Transmitted %	35.0
Reflected Exterior %	17.0
Reflected Interior %	19.0
Glare Reduction %	61.0

Total Solar Energy:

Transmitted %	30.0
Reflected %	14.0
Absorbed %	56.0

Other Solar Properties:

Shading Coefficient	0.55
Solar Heat Gain Coefficient	0.47
U-Factor	1.03
Ultraviolet Rejection %	≥ 99.0
Emissivity	0.85
Light to Solar Gain	0.74
Total Solar Energy Rejection %	53.0
Infrared Rejection %*	71.0
Infrared Energy Rejection %	53.0

Solar Grey 35 Performance on Installed Windows as Certified by the NFRC**

Type	Default Glazing Reference	SHGC w/o Film	SHGC with Film	VLT w/o Film	VLT with Film	U-Factor with Film
Residential	3 mm (1/8") clear	0.72	0.41	0.74	0.29	1.09
Residential †	3 mm (1/8") clear 3 mm (1/8") clear	0.64	0.47	0.67	0.26	0.71
Non Residential	6 mm (1/4") clear	0.73	0.43	0.78	0.30	1.03
Non Residential	6 mm (1/4") grey	0.52	0.37	0.39	0.15	1.03
Non Residential †	6 mm (1/4") clear 6 mm (1/4") clear	0.63	0.49	0.69	0.27	0.59
Non Residential †	6 mm (1/4") grey 6 mm (1/4") clear	0.41	0.35	0.35	0.13	0.59

* IR Rejection based on average transmission from 780-2500nm. ** As certified by the National Fenestration Rating Council (NFRC).
 † Dual pane window. Note: Please refer to the last page for further detail regarding testing and performance data.



Visible Light:

Transmitted %	19.0
Reflected Exterior %	29.0
Reflected Interior %	31.0
Glare Reduction %	78.0

Total Solar Energy:

Transmitted %	17.0
Reflected %	23.0
Absorbed %	60.0

Other Solar Properties:

Shading Coefficient	0.41
Solar Heat Gain Coefficient	0.36
U-Factor	1.02
Ultraviolet Rejection %	≥ 99.0
Emissivity	0.83
Light to Solar Gain	0.54
Total Solar Energy Rejection %	64.0
Infrared Rejection %*	83.0
Infrared Energy Rejection %	64.0

Solar Grey 20 Performance on Installed Windows as Certified by the NFRC**

Type	Default Glazing Reference	SHGC w/o Film	SHGC with Film	VLT w/o Film	VLT with Film	U-Factor with Film
Residential	3 mm (1/8") clear	0.72	0.30	0.74	0.16	1.07
Residential †	3 mm (1/8") clear 3 mm (1/8") clear	0.64	0.39	0.67	0.15	0.71
Non Residential	6 mm (1/4") clear	0.73	0.33	0.78	0.17	1.01
Non Residential	6 mm (1/4") grey	0.52	0.32	0.39	0.08	1.01
Non Residential †	6 mm (1/4") clear 6 mm (1/4") clear	0.63	0.42	0.69	0.15	0.59
Non Residential †	6 mm (1/4") grey 6 mm (1/4") clear	0.41	0.31	0.35	0.07	0.59

* IR Rejection based on average transmission from 780-2500nm. ** As certified by the National Fenestration Rating Council (NFRC).
 † Dual pane window. Note: Please refer to the last page for further detail regarding testing and performance data.



Solar Bronze 35

Type: Sputtered | Color: Bronze

Product Code: SB 35 DA SR

Visible Light:

Transmitted %	35.0
Reflected Exterior %	18.0
Reflected Interior %	24.0
Glare Reduction %	61.0

Total Solar Energy:

Transmitted %	24.0
Reflected %	24.0
Absorbed %	52.0

Other Solar Properties:

Shading Coefficient	0.44
Solar Heat Gain Coefficient	0.38
U-Factor	0.91
Ultraviolet Rejection %	≥ 99.0
Emissivity	0.62
Light to Solar Gain	0.90
Total Solar Energy Rejection %	62.0
Infrared Rejection %*	87.0
Infrared Energy Rejection %	68.0

Solar Bronze 35 Performance on Installed Windows as Certified by the NFRC**

Type	Default Glazing Reference	SHGC w/o Film	SHGC with Film	VLT w/o Film	VLT with Film	U-Factor with Film
Residential	3 mm (1/8") clear	0.72	0.32	0.74	0.29	0.99
Residential †	3 mm (1/8") clear 3 mm (1/8") clear	0.64	0.39	0.67	0.26	0.68
Non Residential	6 mm (1/4") clear	0.73	0.35	0.78	0.30	0.92
Non Residential	6 mm (1/4") grey	0.52	0.32	0.39	0.15	0.92
Non Residential †	6 mm (1/4") clear 6 mm (1/4") clear	0.63	0.42	0.69	0.27	0.56
Non Residential †	6 mm (1/4") grey 6 mm (1/4") clear	0.41	0.30	0.35	0.13	0.56

* IR Rejection based on average transmission from 780-2500nm. ** As certified by the National Fenestration Rating Council (NFRC).

† Dual pane window. Note: Please refer to the last page for further detail regarding testing and performance data.



Solar Bronze 20

Type: Sputtered | Color: Bronze

Product Code: SB 20 DA SR

Visible Light:

Transmitted %	23.0
Reflected Exterior %	28.0
Reflected Interior %	33.0
Glare Reduction %	75.0

Total Solar Energy:

Transmitted %	14.0
Reflected %	33.0
Absorbed %	53.0

Other Solar Properties:

Shading Coefficient	0.33
Solar Heat Gain Coefficient	0.29
U-Factor	0.90
Ultraviolet Rejection %	≥ 99.0
Emissivity	0.61
Light to Solar Gain	0.78
Total Solar Energy Rejection %	71.0
Infrared Rejection %*	93.0
Infrared Energy Rejection %	76.0

Solar Bronze 20 Performance on Installed Windows as Certified by the NFRC**

Type	Default Glazing Reference	SHGC w/o Film	SHGC with Film	VLT w/o Film	VLT with Film	U-Factor with Film
Residential	3 mm (1/8") clear	0.72	0.24	0.74	0.19	0.98
Residential †	3 mm (1/8") clear 3 mm (1/8") clear	0.64	0.32	0.67	0.17	0.68
Non Residential	6 mm (1/4") clear	0.73	0.27	0.78	0.20	0.92
Non Residential	6 mm (1/4") grey	0.52	0.28	0.39	0.10	0.92
Non Residential †	6 mm (1/4") clear 6 mm (1/4") clear	0.63	0.37	0.69	0.18	0.56
Non Residential †	6 mm (1/4") grey 6 mm (1/4") clear	0.41	0.27	0.35	0.09	0.56

* IR Rejection based on average transmission from 780-2500nm. ** As certified by the National Fenestration Rating Council (NFRC).
 † Dual pane window. Note: Please refer to the last page for further detail regarding testing and performance data.



DUAL REFLECTIVE

MADICO[®]

Designed to minimize interior reflectivity found in other film types, these two-ply films offer optimal heat resistance, durability and a neutral tone perfect for both commercial and residential applications.



Optivision® 45

Type: Dual Reflective | Color: Neutral

Product Code: Optivision 45 DA SR

Visible Light:

Transmitted %	45.0
Reflected Exterior %	8.0
Reflected Interior %	7.0
Glare Reduction %	49.0

Total Solar Energy:

Transmitted %	47.0
Reflected %	8.0
Absorbed %	45.0

Other Solar Properties:

Shading Coefficient	0.70
Solar Heat Gain Coefficient	0.61
U-Factor	1.04
Ultraviolet Rejection %	≥ 99.0
Emissivity	0.87
Light to Solar Gain	0.74
Total Solar Energy Rejection %	39.0
Infrared Rejection %*	54.0
Infrared Energy Rejection %	38.0

Optivision® 45 Performance on Installed Windows as Certified by the NFRC**

Type	Default Glazing Reference	SHGC w/o Film	SHGC with Film	VLT w/o Film	VLT with Film	U-Factor with Film
Residential	3 mm (1/8") clear	0.72	0.53	0.74	0.37	1.09
Residential †	3 mm (1/8") clear 3 mm (1/8") clear	0.64	0.54	0.67	0.34	0.71
Non Residential	6 mm (1/4") clear	0.73	0.55	0.78	0.39	1.03
Non Residential	6 mm (1/4") grey	0.52	0.44	0.39	0.19	1.03
Non Residential †	6 mm (1/4") clear 6 mm (1/4") clear	0.63	0.55	0.69	0.35	0.59
Non Residential †	6 mm (1/4") grey 6 mm (1/4") clear	0.41	0.38	0.35	0.17	0.59

* IR Rejection based on average transmission from 780-2500nm. ** As certified by the National Fenestration Rating Council (NFRC).

† Dual pane window. Note: Please refer to the last page for further detail regarding testing and performance data.



Optivision® 35

Type: Dual Reflective | Color: Neutral

Product Code: Optivision 35 DA SR

Visible Light:

Transmitted %	37.0
Reflected Exterior %	13.0
Reflected Interior %	8.0
Glare Reduction %	58.0

Total Solar Energy:

Transmitted %	38.0
Reflected %	12.0
Absorbed %	50.0

Other Solar Properties:

Shading Coefficient	0.61
Solar Heat Gain Coefficient	0.53
U-Factor	1.01
Ultraviolet Rejection %	≥ 99.0
Emissivity	0.81
Light to Solar Gain	0.70
Total Solar Energy Rejection %	47.0
Infrared Rejection %*	66.0
Infrared Energy Rejection %	47.0

Optivision® 35 Performance on Installed Windows as Certified by the NFRC**

Type	Default Glazing Reference	SHGC w/o Film	SHGC with Film	VLT w/o Film	VLT with Film	U-Factor with Film
Residential	3 mm (1/8") clear	0.72	0.46	0.74	0.31	1.07
Residential †	3 mm (1/8") clear 3 mm (1/8") clear	0.64	0.49	0.67	0.28	0.71
Non Residential	6 mm (1/4") clear	0.73	0.48	0.78	0.32	1.01
Non Residential	6 mm (1/4") grey	0.52	0.40	0.39	0.16	1.01
Non Residential †	6 mm (1/4") clear 6 mm (1/4") clear	0.63	0.51	0.69	0.29	0.58
Non Residential †	6 mm (1/4") grey 6 mm (1/4") clear	0.41	0.36	0.35	0.14	0.58

* IR Rejection based on average transmission from 780-2500nm. ** As certified by the National Fenestration Rating Council (NFRC).
 † Dual pane window. Note: Please refer to the last page for further detail regarding testing and performance data.

Visible Light:

Transmitted %	27.0
Reflected Exterior %	27.0
Reflected Interior %	14.0
Glare Reduction %	70.0

Total Solar Energy:

Transmitted %	26.0
Reflected %	25.0
Absorbed %	50.0

Other Solar Properties:

Shading Coefficient	0.46
Solar Heat Gain Coefficient	0.40
U-Factor	0.97
Ultraviolet Rejection %	≥ 99.0
Emissivity	0.74
Light to Solar Gain	0.67
Total Solar Energy Rejection %	60.0
Infrared Rejection %*	81.0
Infrared Energy Rejection %	61.0

Optivision® 25 Performance on Installed Windows as Certified by the NFRC**

Type	Default Glazing Reference	SHGC w/o Film	SHGC with Film	VLT w/o Film	VLT with Film	U-Factor with Film
Residential	3 mm (1/8") clear	0.72	0.34	0.74	0.22	1.04
Residential †	3 mm (1/8") clear 3 mm (1/8") clear	0.64	0.40	0.67	0.21	0.70
Non Residential	6 mm (1/4") clear	0.73	0.37	0.78	0.24	0.98
Non Residential	6 mm (1/4") grey	0.52	0.34	0.39	0.12	0.98
Non Residential †	6 mm (1/4") clear 6 mm (1/4") clear	0.63	0.43	0.69	0.21	0.58
Non Residential †	6 mm (1/4") grey 6 mm (1/4") clear	0.41	0.31	0.35	0.10	0.58

* IR Rejection based on average transmission from 780-2500nm. ** As certified by the National Fenestration Rating Council (NFRC).

† Dual pane window. Note: Please refer to the last page for further detail regarding testing and performance data.



REFLECTIVE

MADICO[®]

Manufactured with a layer of highly efficient, vapor-deposited aluminum for optimal heat rejection and glare reduction performance, reflective films also provide a level of privacy.



Optivision® Reflective 15

Type: Dual Reflective | Color: Neutral

Product Code: Optivision Reflective 15 DA SR

Visible Light:

Transmitted %	14.0
Reflected Exterior %	47.0
Reflected Interior %	21.0
Glare Reduction %	84.0

Total Solar Energy:

Transmitted %	13.0
Reflected %	40.0
Absorbed %	47.0

Other Solar Properties:

Shading Coefficient	0.31
Solar Heat Gain Coefficient	0.27
U-Factor	0.95
Ultraviolet Rejection %	≥ 99.0
Emissivity	0.69
Light to Solar Gain	0.52
Total Solar Energy Rejection %	73.0
Infrared Rejection %*	91.0
Infrared Energy Rejection %	74.0

Optivision® Reflective 15 Performance on Installed Windows as Certified by the NFRC**

Type	Default Glazing Reference	SHGC w/o Film	SHGC with Film	VLT w/o Film	VLT with Film	U-Factor with Film
Residential	3 mm (1/8") clear	0.72	0.22	0.74	0.12	1.03
Residential †	3 mm (1/8") clear 3 mm (1/8") clear	0.64	0.29	0.67	0.11	0.69
Non Residential	6 mm (1/4") clear	0.73	0.25	0.78	0.12	0.96
Non Residential	6 mm (1/4") grey	0.52	0.28	0.39	0.06	0.96
Non Residential †	6 mm (1/4") clear 6 mm (1/4") clear	0.63	0.34	0.69	0.11	0.57
Non Residential †	6 mm (1/4") grey 6 mm (1/4") clear	0.41	0.26	0.35	0.05	0.57

* IR Rejection based on average transmission from 780-2500nm. ** As certified by the National Fenestration Rating Council (NFRC).

† Dual pane window. Note: Please refer to the last page for further detail regarding testing and performance data.



Optivision® Reflective 5

Type: Dual Reflective | Color: Neutral

Product Code: Optivision Reflective 5 DA SR

Visible Light:

Transmitted %	8.0
Reflected Exterior %	55.0
Reflected Interior %	15.0
Glare Reduction %	91.0

Total Solar Energy:

Transmitted %	9.0
Reflected %	45.0
Absorbed %	46.0

Other Solar Properties:

Shading Coefficient	0.25
Solar Heat Gain Coefficient	0.22
U-Factor	0.94
Ultraviolet Rejection %	≥ 99.0
Emissivity	0.69
Light to Solar Gain	0.36
Total Solar Energy Rejection %	78.0
Infrared Rejection %*	94.0
Infrared Energy Rejection %	77.0

Optivision® Reflective 5 Performance on Installed Windows as Certified by the NFRC**

Type	Default Glazing Reference	SHGC w/o Film	SHGC with Film	VLT w/o Film	VLT with Film	U-Factor with Film
Residential	3 mm (1/8") clear	0.72	0.18	0.74	0.07	1.02
Residential †	3 mm (1/8") clear 3 mm (1/8") clear	0.64	0.26	0.67	0.06	0.69
Non Residential	6 mm (1/4") clear	0.73	0.21	0.78	0.07	0.95
Non Residential	6 mm (1/4") grey	0.52	0.26	0.39	0.03	0.95
Non Residential †	6 mm (1/4") clear 6 mm (1/4") clear	0.63	0.30	0.69	0.06	0.57
Non Residential †	6 mm (1/4") grey 6 mm (1/4") clear	0.41	0.25	0.35	0.03	0.57

* IR Rejection based on average transmission from 780-2500nm. ** As certified by the National Fenestration Rating Council (NFRC).

† Dual pane window. Note: Please refer to the last page for further detail regarding testing and performance data.



Visible Light:

Transmitted %	44.0
Reflected Exterior %	27.0
Reflected Interior %	27.0
Glare Reduction %	51.0

Total Solar Energy:

Transmitted %	31.0
Reflected %	25.0
Absorbed %	44.0

Other Solar Properties:

Shading Coefficient	0.50
Solar Heat Gain Coefficient	0.44
U-Factor	0.94
Ultraviolet Rejection %	≥ 99.0
Emissivity	0.68
Light to Solar Gain	1.00
Total Solar Energy Rejection %	56.0
Infrared Rejection %*	82.0
Infrared Energy Rejection %	63.0

Reflective Silver 40 Performance on Installed Windows as Certified by the NFRC**

Type	Default Glazing Reference	SHGC w/o Film	SHGC with Film	VLT w/o Film	VLT with Film	U-Factor with Film
Residential	3 mm (1/8") clear	0.72	0.37	0.74	0.36	1.02
Residential †	3 mm (1/8") clear 3 mm (1/8") clear	0.64	0.41	0.67	0.33	0.69
Non Residential	6 mm (1/4") clear	0.73	0.40	0.78	0.38	0.95
Non Residential	6 mm (1/4") grey	0.52	0.35	0.39	0.19	0.95
Non Residential †	6 mm (1/4") clear 6 mm (1/4") clear	0.63	0.44	0.69	0.34	0.57
Non Residential †	6 mm (1/4") grey 6 mm (1/4") clear	0.41	0.32	0.35	0.17	0.57

* IR Rejection based on average transmission from 780-2500nm. ** As certified by the National Fenestration Rating Council (NFRC).
 † Dual pane window. Note: Please refer to the last page for further detail regarding testing and performance data.



Visible Light:

Transmitted %	30.0
Reflected Exterior %	42.0
Reflected Interior %	42.0
Glare Reduction %	67.0

Total Solar Energy:

Transmitted %	21.0
Reflected %	36.0
Absorbed %	43.0

Other Solar Properties:

Shading Coefficient	0.37
Solar Heat Gain Coefficient	0.33
U-Factor	0.91
Ultraviolet Rejection %	≥ 99.0
Emissivity	0.62
Light to Solar Gain	0.91
Total Solar Energy Rejection %	68.0
Infrared Rejection %*	89.0
Infrared Energy Rejection %	72.0

Reflective Silver 30 Performance on Installed Windows as Certified by the NFRC**

Type	Default Glazing Reference	SHGC w/o Film	SHGC with Film	VLT w/o Film	VLT with Film	U-Factor with Film
Residential	3 mm (1/8") clear	0.72	0.27	0.74	0.24	1.00
Residential †	3 mm (1/8") clear 3 mm (1/8") clear	0.64	0.33	0.67	0.23	0.68
Non Residential	6 mm (1/4") clear	0.73	0.30	0.78	0.26	0.92
Non Residential	6 mm (1/4") grey	0.52	0.30	0.39	0.13	0.92
Non Residential †	6 mm (1/4") clear 6 mm (1/4") clear	0.63	0.37	0.69	0.24	0.56
Non Residential †	6 mm (1/4") grey 6 mm (1/4") clear	0.41	0.28	0.35	0.11	0.56

* IR Rejection based on average transmission from 780-2500nm. ** As certified by the National Fenestration Rating Council (NFRC).
 † Dual pane window. Note: Please refer to the last page for further detail regarding testing and performance data.



Visible Light:

Transmitted %	19.0
Reflected Exterior %	55.0
Reflected Interior %	56.0
Glare Reduction %	79.0

Total Solar Energy:

Transmitted %	13.0
Reflected %	45.0
Absorbed %	42.0

Other Solar Properties:

Shading Coefficient	0.28
Solar Heat Gain Coefficient	0.24
U-Factor	0.88
Ultraviolet Rejection %	≥ 99.0
Emissivity	0.58
Light to Solar Gain	0.78
Total Solar Energy Rejection %	76.0
Infrared Rejection %*	94.0
Infrared Energy Rejection %	78.0

Reflective Silver 20 Performance on Installed Windows as Certified by the NFRC**

Type	Default Glazing Reference	SHGC w/o Film	SHGC with Film	VLT w/o Film	VLT with Film	U-Factor with Film
Residential	3 mm (1/8") clear	0.72	0.20	0.74	0.15	0.98
Residential †	3 mm (1/8") clear 3 mm (1/8") clear	0.64	0.26	0.67	0.15	0.67
Non Residential	6 mm (1/4") clear	0.73	0.23	0.78	0.16	0.90
Non Residential	6 mm (1/4") grey	0.52	0.26	0.39	0.08	0.90
Non Residential †	6 mm (1/4") clear 6 mm (1/4") clear	0.63	0.31	0.69	0.15	0.55
Non Residential †	6 mm (1/4") grey 6 mm (1/4") clear	0.41	0.25	0.35	0.07	0.55

* IR Rejection based on average transmission from 780-2500nm. ** As certified by the National Fenestration Rating Council (NFRC).
 † Dual pane window. **Note:** Please refer to the last page for further detail regarding testing and performance data.



MADICO[®]

Engineered specifically for exterior applications and manufactured with UV-stable, weatherable polyester for maximum durability, these films also provide a level of privacy and create a uniform exterior appearance.

EXTERIOR



Solar Grey Exterior 20

Type: Sputtered | Color: Grey

Product Code: SG 20 E PS SR

Visible Light:

Transmitted %	20.0
Reflected Exterior %	31.0
Reflected Interior %	27.0
Glare Reduction %	78.0

Total Solar Energy:

Transmitted %	17.0
Reflected %	30.0
Absorbed %	53.0

Other Solar Properties:

Shading Coefficient	0.39
Solar Heat Gain Coefficient	0.34
U-Factor	1.02
Ultraviolet Rejection %	≥ 99.0
Emissivity	0.84
Light to Solar Gain	0.59
Total Solar Energy Rejection %	67.0
Infrared Rejection %*	84.0
Infrared Energy Rejection %	68.0

Solar Grey Exterior 20 Performance on Installed Windows as Certified by the NFRC**

Type	Default Glazing Reference	SHGC w/o Film	SHGC with Film	VLT w/o Film	VLT with Film
Residential	3 mm (1/8") clear	0.72	0.29	0.74	0.16
Residential †	3 mm (1/8") clear 3 mm (1/8") clear	0.64	0.22	0.67	0.15
Non Residential	6 mm (1/4") clear	0.73	0.31	0.78	0.17
Non Residential	6 mm (1/4") grey	0.52	0.26	0.39	0.08
Non Residential †	6 mm (1/4") clear 6 mm (1/4") clear	0.63	0.22	0.69	0.16
Non Residential †	6 mm (1/4") grey 6 mm (1/4") clear	0.41	0.18	0.35	0.08

* IR Rejection based on average transmission from 780-2500nm. ** As certified by the National Fenestration Rating Council (NFRC).

† Dual pane window. Note: Please refer to the last page for further detail regarding testing and performance data.



Solar Bronze Exterior 35

Type: Sputtered | Color: Bronze

Product Code: SB 35 E PS SR

Visible Light:

Transmitted %	34.0
Reflected Exterior %	24.0
Reflected Interior %	22.0
Glare Reduction %	62.0

Total Solar Energy:

Transmitted %	23.0
Reflected %	37.0
Absorbed %	41.0

Other Solar Properties:

Shading Coefficient	0.41
Solar Heat Gain Coefficient	0.35
U-Factor	1.02
Ultraviolet Rejection %	≥ 99.0
Emissivity	0.78
Light to Solar Gain	0.96
Total Solar Energy Rejection %	65.0
Infrared Rejection %*	88.0
Infrared Energy Rejection %	73.0

Solar Bronze Exterior 35 Performance on Installed Windows as Certified by the NFRC**

Type	Default Glazing Reference	SHGC w/o Film	SHGC with Film	VLT w/o Film	VLT with Film
Residential	3 mm (1/8") clear	0.72	0.31	0.74	0.28
Residential †	3 mm (1/8") clear 3 mm (1/8") clear	0.64	0.25	0.67	0.26
Non Residential	6 mm (1/4") clear	0.73	0.32	0.78	0.30
Non Residential	6 mm (1/4") grey	0.52	0.26	0.39	0.15
Non Residential †	6 mm (1/4") clear 6 mm (1/4") clear	0.63	0.25	0.69	0.27
Non Residential †	6 mm (1/4") grey 6 mm (1/4") clear	0.41	0.19	0.35	0.13

* IR Rejection based on average transmission from 780-2500nm. ** As certified by the National Fenestration Rating Council (NFRC).

† Dual pane window. Note: Please refer to the last page for further detail regarding testing and performance data.



Solar Bronze Exterior 20

Type: Sputtered | Color: Bronze

Product Code: SB 20 E PS SR

Visible Light:

Transmitted %	21.0
Reflected Exterior %	34.0
Reflected Interior %	26.0
Glare Reduction %	77.0

Total Solar Energy:

Transmitted %	13.0
Reflected %	51.0
Absorbed %	35.0

Other Solar Properties:

Shading Coefficient	0.28
Solar Heat Gain Coefficient	0.24
U-Factor	1.02
Ultraviolet Rejection %	≥ 99.0
Emissivity	0.76
Light to Solar Gain	0.86
Total Solar Energy Rejection %	76.0
Infrared Rejection %*	94.0
Infrared Energy Rejection %	84.0

Solar Bronze Exterior 20 Performance on Installed Windows as Certified by the NFRC**

Type	Default Glazing Reference	SHGC w/o Film	SHGC with Film	VLT w/o Film	VLT with Film
Residential	3 mm (1/8") clear	0.72	0.21	0.74	0.17
Residential †	3 mm (1/8") clear 3 mm (1/8") clear	0.64	0.17	0.67	0.16
Non Residential	6 mm (1/4") clear	0.73	0.23	0.78	0.18
Non Residential	6 mm (1/4") grey	0.52	0.19	0.39	0.09
Non Residential †	6 mm (1/4") clear 6 mm (1/4") clear	0.63	0.17	0.69	0.16
Non Residential †	6 mm (1/4") grey 6 mm (1/4") clear	0.41	0.13	0.35	0.08

* IR Rejection based on average transmission from 780-2500nm. ** As certified by the National Fenestration Rating Council (NFRC).

† Dual pane window. Note: Please refer to the last page for further detail regarding testing and performance data.



Reflective Silver Exterior 20

Type: Aluminum | Color: Silver

Product Code: RS 20 E PS SR

Visible Light:

Transmitted %	18.0
Reflected Exterior %	65.0
Reflected Interior %	60.0
Glare Reduction %	80.0

Total Solar Energy:

Transmitted %	12.0
Reflected %	66.0
Absorbed %	22.0

Other Solar Properties:

Shading Coefficient	0.22
Solar Heat Gain Coefficient	0.19
U-Factor	1.02
Ultraviolet Rejection %	≥ 99.0
Emissivity	0.68
Light to Solar Gain	0.94
Total Solar Energy Rejection %	81.0
Infrared Rejection %*	95.0
Infrared Energy Rejection %	86.0

Reflective Silver Exterior 20 Performance on Installed Windows as Certified by the NFRC**

Type	Default Glazing Reference	SHGC w/o Film	SHGC with Film	VLT w/o Film	VLT with Film
Residential	3 mm (1/8") clear	0.72	0.17	0.74	0.15
Residential †	3 mm (1/8") clear 3 mm (1/8") clear	0.64	0.14	0.67	0.14
Non Residential	6 mm (1/4") clear	0.73	0.18	0.78	0.15
Non Residential	6 mm (1/4") grey	0.52	0.15	0.39	0.08
Non Residential †	6 mm (1/4") clear 6 mm (1/4") clear	0.63	0.14	0.69	0.14
Non Residential †	6 mm (1/4") grey 6 mm (1/4") clear	0.41	0.11	0.35	0.07

* IR Rejection based on average transmission from 780-2500nm. ** As certified by the National Fenestration Rating Council (NFRC).
 † Dual pane window. Note: Please refer to the last page for further detail regarding testing and performance data.

A photograph of a business meeting in a modern office. Two men in suits are shaking hands in the foreground, silhouetted against a large window. In the background, other people are walking, also silhouetted. The window looks out onto a city skyline with tall buildings under a bright sky. The overall color palette is blue and white, with a blue gradient overlay at the bottom.

MADICO[®]

Madico offers several solutions for unique applications which include decorative, privacy and two types of UV blocking films.

SPECIALTY

Visible Light:

Transmitted %	9.0
Reflected Exterior %	56.0
Reflected Interior %	85.0
Glare Reduction %	90.0

Total Solar Energy:

Transmitted %	13.0
Reflected %	42.0
Absorbed %	46.0

Other Solar Properties:

Shading Coefficient	0.31
Solar Heat Gain Coefficient	0.27
U-Factor	1.02
Ultraviolet Rejection %	≥ 99.0
Emissivity	0.85
Light to Solar Gain	0.34
Total Solar Energy Rejection %	73.0
Infrared Rejection %*	80.0
Infrared Energy Rejection %	68.0

* IR Rejection based on average transmission from 780-2500nm.

Note: Please refer to the last page for further detail regarding testing and performance data.

Visible Light:

Transmitted %	1.0
Reflected Exterior %	6.0
Reflected Interior %	5.0
Glare Reduction %	99.0

Total Solar Energy:

Transmitted %	1.0
Reflected %	5.0
Absorbed %	94.0

Other Solar Properties:

Shading Coefficient	0.37
Solar Heat Gain Coefficient	0.32
U-Factor	1.03
Ultraviolet Rejection %	≥ 99.0
Emissivity	0.86
Light to Solar Gain	0.02
Total Solar Energy Rejection %	68.0
Infrared Rejection %*	99.0
Infrared Energy Rejection %	68.0

* IR Rejection based on average transmission from 780-2500nm.

Note: Please refer to the last page for further detail regarding testing and performance data.

Visible Light:

Transmitted %	67.0
Reflected Exterior %	18.0
Reflected Interior %	18.0
Glare Reduction %	25.0

Total Solar Energy:

Transmitted %	62.0
Reflected %	14.0
Absorbed %	24.0

Other Solar Properties:

Shading Coefficient	0.80
Solar Heat Gain Coefficient	0.69
U-Factor	1.02
Ultraviolet Rejection %	≥ 99.0
Emissivity	0.85
Light to Solar Gain	0.97
Total Solar Energy Rejection %	31.0
Infrared Rejection %*	38.0
Infrared Energy Rejection %	31.0

* IR Rejection based on average transmission from 780-2500nm.

Note: Please refer to the last page for further detail regarding testing and performance data.

Visible Light:

Transmitted %	80.0
Reflected Exterior %	8.0
Reflected Interior %	8.0
Glare Reduction %	10.0

Total Solar Energy:

Transmitted %	74.0
Reflected %	8.0
Absorbed %	18.0

Other Solar Properties:

Shading Coefficient	0.92
Solar Heat Gain Coefficient	0.80
U-Factor	1.03
Ultraviolet Rejection %	≥ 99.0
Emissivity	0.87
Light to Solar Gain	1.00
Total Solar Energy Rejection %	20.0
Infrared Rejection %*	26.0
Infrared Energy Rejection %	20.0

* IR Rejection based on average transmission from 780-2500nm.

Note: Please refer to the last page for further detail regarding testing and performance data.

Visible Light:

Transmitted %	56.0
Reflected Exterior %	7.0
Reflected Interior %	7.0
Glare Reduction %	38.0

Total Solar Energy:

Transmitted %	63.0
Reflected %	7.0
Absorbed %	30.0

Other Solar Properties:

Shading Coefficient	0.83
Solar Heat Gain Coefficient	0.72
U-Factor	1.03
Ultraviolet Rejection %	≥ 99.0
Emissivity	0.87
Light to Solar Gain	0.77
Total Solar Energy Rejection %	28.0
Infrared Rejection %*	25.0
Infrared Energy Rejection %	20.0

* IR Rejection based on average transmission from 780-2500nm.

Note: Please refer to the last page for further detail regarding testing and performance data.

Visible Light:

Transmitted %	89.0
Reflected Exterior %	8.0
Reflected Interior %	8.0
Glare Reduction %	0.0

Total Solar Energy:

Transmitted %	80.0
Reflected %	8.0
Absorbed %	12.0

Other Solar Properties:

Shading Coefficient	0.96
Solar Heat Gain Coefficient	0.84
U-Factor	1.03
Ultraviolet Rejection %	39.0
Emissivity	0.86
Light to Solar Gain	1.06
Total Solar Energy Rejection %	16.0
Infrared Rejection %*	26.0
Infrared Energy Rejection %	20.0

* IR Rejection based on average transmission from 780-2500nm.

Note: Please refer to the last page for further detail regarding testing and performance data.

Film Performance Measurements Glossary

VISIBLE LIGHT TRANSMISSION % is the ratio of visible solar energy in the range (380–780 nm) that passes through a given glazing system to the total visible solar energy falling on the system.

VISIBLE LIGHT REFLECTION % is the ratio of visible solar energy in the range (380–780 nm) that is reflected by a given glazing system to the total visible solar energy falling on the system.

GLARE REDUCTION is the reduction in visible light transmitted compared to clear, unfilmed glass.

SOLAR TRANSMISSION % is the ratio of the amount of solar energy in the full solar wavelength range (300–2,500 nm) that passes directly through a glazing system to the amount of solar energy falling on that glazing system.

SOLAR REFLECTION % is the ratio of the amount of solar energy in the full solar wavelength range (300–2,500 nm) that is directly reflected by the glazing system to the amount of solar energy falling on that glazing system.

SOLAR ABSORPTION % is the ratio of the amount of solar energy in the full solar wavelength range (300–2,500 nm) that is directly absorbed by the glazing system to the amount of solar energy falling on that glazing system.

SHADING COEFFICIENT is the ratio of solar heat gain through a given glazing system to that of a standard glass pane under the same test conditions. It is a measure of the sun control capability. The lower the shading coefficient, the more efficient the glazing system.

SOLAR HEAT GAIN COEFFICIENT is similar to the shading coefficient, except this value also takes into account energy that is reradiated back into the room from the glass heating up due to absorption. A lower number means better heat rejection

Film Performance Measurements Glossary

U-FACTOR is a measure of the rate of heat conductivity of a glazing system and is independent of solar radiation. When multiplied by the difference between indoor and outdoor temperatures in Fahrenheit (F), it gives the amount of heat conducted in BTUs/hour/square foot of glazing. The lower the U-Factor, the better the heat loss reduction.

ULTRAVIOLET REJECTION % is the ratio of solar energy in the range (300–380 nm) that is rejected by a glazing system to the total solar UV energy falling on the glazing.

EMISSIVITY is a measure of the ability of a product to reflect long wave room radiant energy. The lower the emissivity, the higher the ability of the material in question to retain the room's heat.

LIGHT-TO-SOLAR-GAIN RATIO provides a gauge of the relative efficiency of different film types in transmitting daylight while blocking heat gains. It is determined by the ratio between visible light transmittance and the solar heat gain coefficient. The higher the number, the more light transmitted without adding excessive amounts of heat.

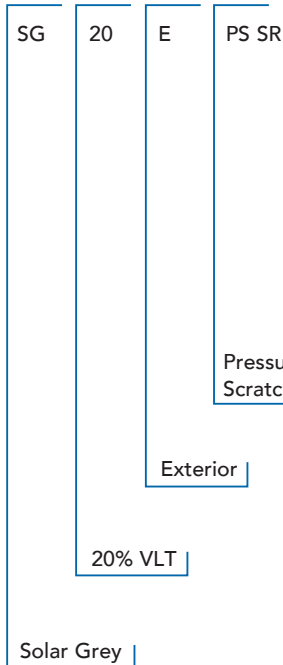
TOTAL SOLAR ENERGY REJECTION % is the ratio of the amount of total solar energy in the full solar wavelength range (300–2,500 nm) that is prevented from passing through a glazing system to the amount of total solar energy falling on that glazing system.

INFRARED REJECTION % is the amount of total solar infrared radiation in the range (780–2500 nm) prevented from passing through a glazing system.

INFRARED ENERGY REJECTION is a measurement of infrared rejection over the IR range of 780-2500 nm. IRER takes into account that a portion of absorbed IR energy will be reradiated into a car or building. Similar to Total Solar Energy Rejection, but only involves the solar infrared range.

Madico Architectural Films Nomenclature

The Product Code System consists of alternate groups of letters and numbers identifying the characteristics of the composites of our films.



Product Nomenclature

- E Exterior
- BL Blister Free
- RS Reflective Silver
- SB Solar Bronze
- SG Solar Grey
- PS Pressure Sensitive
- DA Detackified
- SR Scratch Resistant
- 200 2 Mill

Select films are also available in pressure sensitive (PS) adhesive in limited markets. Solar performance is unaffected by adhesive type.



The Clear Choice for Architectural Film

Madico Architectural Film Performance Measurement Data:

Read in accordance with National Fenestration Rating Council (NFRC) standards and calculated on single-pane, 6mm (1/4"), clear glass.

Reported values are typical properties and should not be used as a specification. Since the user is aware of the specific conditions in which the product is to be used, it is the user's responsibility to determine whether the product is suitable for intended use. If you need verification regarding specific use or additional information, please contact Madico or your local Madico Authorized Dealer. Since there can be variations in published data between printed materials, please visit madico.com for the latest reported performance measurements.



Quality architectural film for commercial and residential applications



Rejects more than 99%
of UV rays



Saves energy and makes
you feel more comfortable



Cuts glare and
unwanted heat



Resistant to scratches and
everyday wear



Holds shattered glass
together in case of breakage



Enhances privacy and
exterior appearance



Available in a wide range
of shades and colors



Reduces fading of
furnishings and flooring



Madico products are warranted for production quality. Contact Madico or your authorized Madico agent for applicable warranty terms and conditions in your region.



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