

# Glass Properties



## Windows and Doors

Glass Thickness (Inches)	Transmittance			Reflectance		U-Factor (BTU/hr-ft <sup>2</sup> -°F)	K-Factor (watts/m <sup>2</sup> -°C)	Shading Coefficient	Solar Heat Gain
	UV %	Visible %	Total Solar Energy %	Visible Light %	Total Solar Energy %				
<b>Clear</b>									
3/32	77	90	85	9	9	0.94	5.34	1.00	0.87
1/8	73	90	83	9	8	0.94	5.34	0.98	0.85
3/16	69	89	79	9	7	0.93	5.28	0.96	0.83
1/4	66	89	77	9	7	0.93	5.28	0.94	0.81
1/8 I.G.	59	81	69	16	13	0.50	2.86	0.87	0.75
1/8 Solarban® 60 I.G.	16	71	35	12	33	0.27	1.59	0.45	0.47
<b>Bronze / SolarBronze®</b>									
1/8	39	67	64	7	6	0.94	5.34	0.88	0.76
3/16	30	58	55	6	6	0.93	5.28	0.77	0.66
1/4	26	53	50	6	6	0.93	5.28	0.73	0.63
1/8 I.G.	33	60	54	11	10	0.50	2.86	0.71	0.62
1/8 Solarban® 60 I.G.	10	53	27	9	24	0.27	1.59	0.44	0.38
<b>Gray / SolarGray®</b>									
1/8	37	60	58	6	6	0.94	5.34	0.79	0.68
3/16	29	50	48	6	5	0.93	5.28	0.71	0.61
1/4	24	44	42	5	5	0.93	5.28	0.67	0.58
1/8 I.G.	32	54	49	10	9	0.50	2.86	0.66	0.57
1/8 Solarban® 60 I.G.	12	48	24	8	20	0.27	1.59	0.34	0.30
<b>Gray Lite®</b>									
1/8	17	30	43	5	5	0.94	5.34	0.68	0.58
1/4	7	14	26	5	5	0.93	5.28	0.55	0.47
1/8 I.G.	15	27	35	13	11	0.50	2.86	0.74	0.64
1/8 Solarban® 60 I.G.	6	24	14	5	17	0.28	1.59	0.28	0.24
<b>Forest Green / Atlantica™</b>									
1/8	28	77	48	8	6	0.94	5.34	0.72	0.62
1/4	16	67	34	7	5	0.93	5.28	0.61	0.52
1/8 I.G.	24	70	42	13	8	0.50	2.86	0.59	0.51
1/8 Solarban® 60 I.G.	9	61	25	10	12	0.28	1.59	0.41	0.36
<b>Bronze Reflective / Solarcool®</b>									
5/32	10	24	33	36	30	0.94	5.34	0.51	0.44
1/4	7	21	27	36	30	0.93	5.28	0.46	0.40
1/8 I.G.	10	24	29	39	29	0.51	2.87	0.57	0.50
1/8 Solarban® 60 I.G.	4	21	11	19	27	0.28	1.59	0.23	0.20
<b>Azurlite® / Azuria™</b>									
1/8	53	77	45	7	6	0.94	5.34	0.69	0.59
3/16	46	72	36	7	5	0.93	5.28	0.62	0.53
1/4	42	68	32	7	5	0.93	5.28	0.59	0.51
1/8 I.G.	45	70	39	12	8	0.50	2.96	0.55	0.48
1/8 Solarban® 60 I.G.	17	61	25	10	10	0.28	1.59	0.41	0.36
<b>Laminated - Clear</b>									
Clr 1/8 - 1/8	0	88	68	8	7	0.91	5.16	0.87	0.76
Clr 3/16 - 3/16	0	87	63	8	7	0.89	5.07	0.83	0.73
Clr 1/4 - 1/4	0	86	60	8	6	0.88	5.01	0.81	0.70
Gray 1/4 - 1/4	0	43	32	6	5	0.88	5.01	0.60	0.53

1. Performance data is based on calculated Center-of-Glass Thermal and Optical Properties from PPG's representative samples.  
 2. Actual data from NuAir production units may vary from those listed below.

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### Notes:

- Solarban® 60 glass values based interpolation from glass manufacturer's data.
- Single & Insulated glass values based on glass manufacturer's data.
- Solarban® 60 glass must be on the #2 surface of Insulated Glass.
- Insulated and Solarban® 60 Insulated glass values based on 2 pieces of 1/8" glass and a 1/2" airspace.
- Other tints available by special order.
- R-Value is the reciprocal of the U-Value (1 / U-Value).
- Meets the 1993 Model Lighting Ordinance for Marine Turtle Protection.
- Solarban® 60, Graylite®, Atlantica™, Solarcool®, Azuria™ and Azurlite® glass are registered trademarks of PPG.

### Definitions:

- U-Value (K-Value in metric) is the overall coefficient of heat transmittance or heat flow. Lower values indicate better insulating performance.
- Shading Coefficient is the ratio of the total amount of solar energy that passes through a glass relative to a 1/8" thick clear glass under the same design conditions. Lower shading coefficient values indicate better performance in reducing summer heat gain.
- Solar heat gain coefficient represents the solar heat gain through the glass relative to the incident solar radiation.

### Sound Transmission Table:

Glass Thickness	Average Sound Transmission Loss @ 125 - 4000 Hz.	Loudness Reduction compared to 1/8" glass	STC Rating
3/32	23.5 db	-	26
1/8	24.1 db	-	29
3/16	25.3 db	5 %	29
1/4	26.5 db	10 %	29
1/8" Laminated	N/A	N/A	34-36
3/16" Laminated	N/A	N/A	35-38
Double 1/8" Ins.	est. 25 db	est. 3%	30
Double 3/16" Ins.	est. 29 db	est. 17%	31

Above information is for glass only, and based on glass manufacturer's data and values published by the Glass Association of North America (GANA).

### Cross-section of Insulated Glass:

