



Solar Control Low-e Glass  
Pilkington **Solar-E™** and **Solar-E™ Plus**





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## Pilkington Solar-E™ and Pilkington Solar-E™ Plus

### Glazing our way into the future

With all the benefits of a pyrolytic low-e, it's hard to imagine making it even better.

The Pilkington **Solar-E™** Plus low-e coating provides the lowest solar heat gain coefficient (SHGC) of any pyrolytic family of products.

With a slightly deeper tint and improved solar performance, as noted by a lower SHGC, the Pilkington **Solar-E™** Plus tints are perfect for any new commercial building project or renovation. This range of tints includes Grey, Blue-Green, Graphite Blue, and Arctic Blue.

Pilkington **Solar-E™** and Pilkington **Solar-E™** Plus coatings offers low solar heat gain, low reflectivity, and glare control, which all contribute to sustainable commercial construction.

Pilkington **Solar-E™** Plus can help earn LEED® or any other green building certification. Sustainability credits can be achieved through improvements in proposed building performance ratings for new and renovated buildings.

### Features and Benefits

- The low-e coating reduces the emissivity of glass and lowers the U-factor.
- Low SHGC values result in utility cost savings.
- Provides good visible light transmittance, helping to reduce the need for interior lighting.
- Low internal/external reflection, reducing sun glare and the need for blinds and shades.
- Low UV (ultraviolet) transmittance, reducing UV rays results in less fading.
- For further improved thermal control, add Pilkington **Energy Advantage™** low-e to an insulated unit (coating on the #4 surface).
- Can be laminated, toughened, bent and enameled using standard techniques.

### Monolithic Performance Data<sup>1,10</sup>

	Nominal Glass Thickness		Visible Light <sup>2</sup>			Solar Energy <sup>2</sup>			U-Factor <sup>5</sup>			Solar Heat Gain Coefficient <sup>7</sup>	Shading Coefficient <sup>8</sup>
	in.	mm	Transmittance <sup>3</sup> %	Reflectance <sup>4</sup> %		Transmittance <sup>3</sup> %	Reflectance <sup>4</sup> %	UV Transmittance <sup>2</sup> %	U.S. Summer <sup>*</sup>	U.S. Winter <sup>*</sup>	European <sup>6**</sup>		
				Outside	Inside								
Pilkington <b>Solar-E™</b> solar control low-e (coating on #2 surface)													
Clear	1/8	3	60	8	9	46	8	48	0.50	0.66	3.7	0.54	0.63
	5/32	4	60	8	9	45	8	46	0.50	0.65	3.7	0.54	0.62
	3/16	5	60	7	9	44	7	44	0.50	0.65	3.7	0.53	0.61
	1/4	6	60	8	9	44	7	44	0.50	0.65	3.7	0.53	0.61
	5/16	8	59	8	9	42	7	41	0.50	0.64	3.7	0.52	0.59
	3/8	10	60	8	9	40	7	38	0.49	0.64	3.6	0.50	0.58
EverGreen	1/4	6	45	6	9	20	5	8	0.50	0.65	3.7	0.35	0.40
	5/16	8	40	7	9	16	5	5	0.50	0.64	3.7	0.32	0.36
Pilkington <b>Solar-E™</b> Plus solar control low-e (coating on #2 surface)													
Grey	1/4	6	24	5	9	19	5	12	0.50	0.65	3.7	0.34	0.39
	5/16	8	19	5	8	15	5	9	0.50	0.65	3.7	0.31	0.36
Blue-Green	1/4	6	41	6	9	24	5	19	0.50	0.65	3.7	0.38	0.43
	5/16	8	39	6	9	21	5	15	0.50	0.65	3.7	0.35	0.40
Graphite Blue	1/4	6	35	6	9	28	5	23	0.50	0.65	3.7	0.41	0.47
	5/16	8	30	6	9	23	5	18	0.50	0.65	3.7	0.37	0.43
Arctic Blue	1/4	6	30	5	8	17	5	11	0.50	0.65	3.7	0.32	0.37
	5/16	8	27	6	8	14	5	9	0.50	0.65	3.7	0.30	0.35

An insulating unit consists of two lites of equal glass thickness, and a 1/2 in. (12.7 mm) airspace.

\*U.S. U-Factor (Btu/hr.sq ft. °F) is based on NFRC/ASTM standards, \*\*European U-Factor (W/sq m K) is based on EN 410/673 (CEN) standard.

All performance values are center-of-glass values calculated using the LBNL Window 6.3 program. See Pilkington Architectural Product Guide for explanation of references - 1, 10.



## Insulating Glass Unit Performance Data<sup>1,10</sup>

	Nominal Glass Thickness		Visible Light <sup>2</sup>			Solar Energy <sup>2</sup>			U-Factor <sup>5</sup>						Solar Heat Gain Coefficient <sup>7</sup>	Shading Coefficient <sup>8</sup>
	in.	mm	Transmittance <sup>3</sup> %	Reflectance <sup>4</sup> %		Transmittance <sup>3</sup> %	Reflectance <sup>4</sup> %	UV Transmittance <sup>2</sup> %	U.S. Summer <sup>*</sup>		U.S. Winter <sup>*</sup>		European <sup>6**</sup>			
				Outside	Inside				Air	Argon	Air	Argon	Air	Argon		
Pilkington <b>Solar-E™</b> outer lite (coating on #2 surface) and Pilkington <b>Optifloat™</b> Clear inner lite																
Clear	1/4	6	53	10	15	34	9	31	0.33	0.28	0.33	0.29	1.8	1.5	0.43	0.50
	5/16	8	52	10	15	32	8	29	0.33	0.28	0.33	0.29	1.8	1.5	0.43	0.49
EverGreen	1/4	6	40	8	15	17	6	7	0.33	0.28	0.33	0.29	1.8	1.5	0.26	0.30
	5/16	8	35	8	15	14	6	4	0.33	0.28	0.33	0.29	1.8	1.5	0.23	0.27
Pilkington <b>Solar-E™</b> Plus outer lite (coating on #2 surface) and Pilkington <b>Optifloat™</b> Clear inner lite																
Grey	1/4	6	21	6	15	16	6	10	0.33	0.28	0.33	0.29	1.9	1.6	0.26	0.30
	5/16	8	17	6	14	12	5	7	0.33	0.28	0.33	0.29	1.8	1.5	0.23	0.26
Blue-Green	1/4	6	37	8	15	20	6	15	0.33	0.28	0.33	0.29	1.9	1.6	0.30	0.34
	5/16	8	34	7	15	17	6	12	0.33	0.28	0.33	0.29	1.8	1.5	0.27	0.31
Graphite Blue	1/4	6	31	7	15	22	6	18	0.33	0.28	0.33	0.29	1.9	1.6	0.32	0.37
	5/16	8	26	7	15	18	6	14	0.33	0.28	0.33	0.29	1.8	1.5	0.28	0.33
Arctic Blue	1/4	6	27	6	14	14	5	9	0.33	0.28	0.33	0.29	1.9	1.6	0.24	0.27
	5/16	8	24	6	14	12	5	7	0.33	0.28	0.33	0.29	1.8	1.5	0.22	0.25
Pilkington <b>Solar-E™</b> (coating on #2 surface) outer lite and Pilkington <b>Energy Advantage™</b> Low-e (coating on the #4 surface) inner lite <sup>9</sup>																
Clear	1/4	6	49	11	17	32	9	26	0.24	0.22	0.26	0.23	1.6	1.3	0.41	0.47
	5/16	8	48	11	17	29	9	23	0.24	0.21	0.26	0.23	1.5	1.3	0.40	0.45
EverGreen	1/4	6	37	8	17	16	6	5	0.24	0.22	0.26	0.23	1.6	1.3	0.24	0.27
	5/16	8	33	8	17	12	6	3	0.24	0.21	0.26	0.23	1.5	1.3	0.21	0.24
Pilkington <b>Solar-E™</b> Plus (coating on #2 surface) outer lite and Pilkington <b>Energy Advantage™</b> Low-e (coating on the #4 surface) inner lite <sup>9</sup>																
Grey	1/4	6	20	6	17	14	6	8	0.25	0.22	0.26	0.23	1.6	1.3	0.23	0.26
	5/16	8	16	6	16	11	5	5	0.24	0.22	0.26	0.23	1.6	1.3	0.20	0.23
Blue-Green	1/4	6	34	8	17	18	6	12	0.25	0.22	0.26	0.23	1.6	1.3	0.27	0.31
	5/16	8	32	7	16	15	6	9	0.24	0.22	0.26	0.23	1.6	1.3	0.24	0.28
Graphite Blue	1/4	6	29	7	17	20	6	14	0.25	0.22	0.26	0.23	1.6	1.3	0.29	0.34
	5/16	8	25	7	16	16	6	11	0.24	0.22	0.26	0.23	1.6	1.3	0.26	0.29
Arctic Blue	1/4	6	25	6	16	13	5	7	0.25	0.22	0.26	0.23	1.6	1.3	0.21	0.25
	5/16	8	22	6	16	11	5	5	0.24	0.22	0.26	0.23	1.6	1.3	0.19	0.22

An insulating unit consists of two lites of equal glass thickness, and a 1/2 in. (12.7 mm) airspace.

\*U.S. U-Factor (Btu/hr.sq ft. °F) is based on NFRC/ASTM standards, \*\*European U-Factor (W/sq m K) is based on EN 410/673 (CEN) standard.

All performance values are center-of-glass values calculated using the LBNL Window 6.3 program. See Pilkington Architectural Product Guide for explanation of references - 1, 10.

### Durability of the Coating

Pyrolytic coated glass can be handled, cut, tempered, bent and fabricated into insulating glass units using standard techniques. It has a virtually unlimited shelf-life and can be single glazed, inventoried locally and edge deletion is not required. Also, ceramic frit can be applied or silk screened to the coated surface and it will not oxidize or change color over time.

### Applications

- Commercial buildings requiring solar control
- Low/mid/high rise buildings
- Medical/Hospital
- Educational facilities/Schools
- Office buildings
- Retail buildings



This publication provides only a general description of the product. Further, more detailed, information may be obtained from your local supplier of Pilkington products. It is the responsibility of the user to ensure that the use of this product is appropriate for any particular application and that such use complies with all relevant legislation, standards, codes of practice and other requirements. To the fullest extent permitted by applicable laws, Nippon Sheet Glass Co. Ltd. and its subsidiary companies disclaim all liability for any error in or omission from this publication and for all consequences of relying on it. Pilkington, "Solar-E" "Energy Advantage" "Optifloat" are trademarks owned by Nippon Sheet Glass Co. Ltd, or a subsidiary thereof.



**Pilkington North America**

811 Madison Ave Toledo, Ohio 43604-5684

buildingproducts.pna@nsg.com

Tel 800 221 0444 • Fax 419 247 4573

**[www.pilkington.us](http://www.pilkington.us)**