



This REFERENCE GUIDE shows NFRC Certified values for some of our common glazing configurations.

Please contact us if you have a specific glazing requirement not shown here.

# NFRC Thermal Properties REFERENCE GUIDE

## 5842 PVC / Aluminum Frame

rev. 8/19/2010



### 1" O.A. - TEMP / TEMP

	Cardinal 272					Cardinal 366					Cardinal 240					Solar Ban 60					Solar Ban 80				
	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)
Clear	0.50	0.39	0.69	0.16	0.55	0.50	0.26	0.62	0.05	0.43	0.50	0.24	0.38	0.16	0.35	0.50	0.37	0.69	0.21	0.56	0.50	0.22	0.46	0.13	0.37
White	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Grey	0.50	0.36	0.47	0.11	0.38	0.50	0.28	0.42	0.03	0.30	0.50	0.37	0.26	0.10	0.24	0.50	0.34	0.47	0.13	0.39	0.50	0.22	0.31	0.08	0.26
Bronze	0.50	0.37	0.52	0.10	0.39	0.50	0.29	0.46	0.03	0.31	0.50	0.39	0.29	0.09	0.25	0.50	0.35	0.52	0.13	0.40	0.50	0.23	0.35	0.08	0.27
Evergreen	0.50	0.35	0.58	0.08	0.43	0.50	0.30	0.52	0.02	0.34	0.50	0.35	0.32	0.07	0.27	0.50	0.27	0.50	0.05	0.35	0.50	0.23	0.39	0.06	0.29
Caribia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.50	0.28	0.52	0.08	0.41	0.50	0.21	0.34	0.06	0.27

### 1" O.A. - TEMP / LAM

	Cardinal 272					Cardinal 366					Cardinal 240					Solar Ban 60					Solar Ban 80				
	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)
Clear	0.51	0.39	0.67	0.00	0.45	0.50	0.25	0.60	0.00	0.39	0.51	0.23	0.37	0.00	0.28	0.50	0.36	0.67	0.00	0.47	-	-	-	-	-
White	0.51	0.37	0.48	0.01	0.34	0.50	0.24	0.43	0.00	0.28	0.51	0.22	0.27	0.01	0.21	0.50	0.34	0.49	0.01	0.34	-	-	-	-	-
Grey	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.50	0.34	0.47	0.01	0.26	-	-	-	-	-
Bronze	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.50	0.35	0.51	0.01	0.25	0.50	0.23	0.35	0.01	0.17
Evergreen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.50	0.34	0.58	0.01	0.42	0.50	0.23	0.39	0.01	0.28
Caribia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.50	0.28	0.51	0.01	0.45	-	-	-	-	-

### 1" O.A. - 1/4" TEMP / 1/4" (LAM, FTL, SGP)

	Cardinal 272					Cardinal 366					Cardinal 240					Solar Ban 60					Solar Ban 80				
	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)
Clear	0.51	0.38	0.66	0.00	0.45	0.50	0.26	0.60	0.00	0.38	0.51	0.22	0.35	0.00	0.27	0.50	0.36	0.66	0.00	0.47	0.50	0.22	0.45	0.00	0.32
White	0.51	0.35	0.47	0.01	0.33	0.50	0.24	0.43	0.00	0.27	0.51	0.21	0.25	0.01	0.20	0.50	0.33	0.48	0.01	0.34	0.50	0.21	0.33	0.01	0.23
Grey	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.50	0.34	0.47	0.01	0.26	0.50	0.22	0.31	0.00	0.17
Bronze	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.50	0.29	0.40	0.01	0.25	0.50	0.19	0.27	0.01	0.17
Evergreen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.50	0.28	0.50	0.01	0.41	0.50	0.20	0.33	0.01	0.28
Caribia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.50	0.28	0.51	0.01	0.45	0.50	0.21	0.34	0.01	0.30

### 1-5/16" O.A. TRIPLE GLAZED

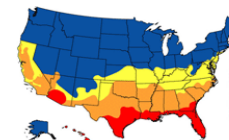
	T / T / T - Cardinal 272					T / T / L - Cardinal 272				
	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)
Clear	0.32	0.31	0.55	0.05	0.40	0.32	0.31	0.54	0.00	0.35
White	-	-	-	-	-	0.32	0.30	0.39	0.00	0.26
Grey	0.32	0.29	0.37	0.04	0.28	-	-	-	-	-
Bronze	0.32	0.30	0.41	0.04	0.29	-	-	-	-	-
Evergreen	0.32	0.29	0.46	0.03	0.32	-	-	-	-	-

More Triple Glazed options are shown on the Triple Glazed Reference.

ENERGY STAR compliance in the Northern Climate Zone.

### PLASTIC GLAZING

	Double Dome			Triple Dome			25mm Multi-Wall		
	U Fact	SHGC	VT	U Fact	SHGC	VT	U Fact	SHGC	VT
Clear	0.69	0.72	0.73	0.51	0.65	0.63	0.51	0.54	0.55
White	0.69	0.50	0.41	0.51	0.46	0.30	0.51	0.39	0.26
Bronze	0.69	0.39	0.21	0.51	0.33	0.18	0.51	0.39	0.23



Climate Zone	U-Factor <sup>1</sup>	SHGC <sup>2</sup>
Northern	≤ 0.55	Any
North-Central	≤ 0.55	≤ 0.40
South-Central	≤ 0.57	≤ 0.30
Southern	≤ 0.70	≤ 0.30





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# NFRC Thermal Properties REFERENCE GUIDE

## 5843 PVC / Aluminum Frame

rev. 8/19/2010



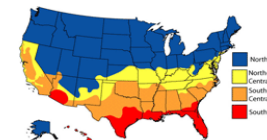
### 11/16" O.A. - TEMP / TEMP

	Cardinal 272					Cardinal 366					Cardinal 240					Solar Ban 60					Solar Ban 80				
	U Fact	SHGC	VT	T <sub>UV</sub>	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	T <sub>UV</sub>	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	T <sub>UV</sub>	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	T <sub>UV</sub>	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	T <sub>UV</sub>	T <sub>DW</sub> (ISO)
Clear	0.50	0.39	0.68	0.16	0.55	0.50	0.26	0.61	0.05	0.43	0.50	0.24	0.38	0.16	0.35	0.50	0.36	0.68	0.21	0.56	-	-	-	-	-

### 11/16" O.A. - TEMP / LAM

	Cardinal 272					Cardinal 366					Cardinal 240					Solar Ban 60					Solar Ban 80				
	U Fact	SHGC	VT	T <sub>UV</sub>	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	T <sub>UV</sub>	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	T <sub>UV</sub>	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	T <sub>UV</sub>	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	T <sub>UV</sub>	T <sub>DW</sub> (ISO)
Clear	0.48	0.39	0.67	0.00	0.45	0.48	0.26	0.60	0.00	0.39	0.48	0.25	0.37	0.00	0.28	0.48	0.36	0.67	0.00	0.47	-	-	-	-	-

ENERGY STAR compliance in the Northern Climate Zone.



Climate Zone	U-Factor <sup>1</sup>	SHGC <sup>2</sup>
Northern	≤ 0.55	Any
North-Central	≤ 0.55	≤ 0.40
South-Central	≤ 0.57	≤ 0.30
Southern	≤ 0.70	≤ 0.30





This REFERENCE GUIDE shows NFRC Certified values for some of our common glazing configurations.

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# NFRC Thermal Properties REFERENCE GUIDE

## 5841 PVC / Aluminum Frame

rev. 8/19/2010



### 1" O.A. - TEMP / TEMP

	Cardinal 272					Cardinal 366					Cardinal 240					Solar Ban 60					Solar Ban 80				
	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)
Clear	0.49	0.37	0.65	0.16	0.55	0.49	0.24	0.58	0.05	0.43	0.49	0.22	0.36	0.16	0.35	0.49	0.35	0.65	0.21	0.56	0.49	0.21	0.43	0.13	0.37
White	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Grey	0.49	0.34	0.44	0.11	0.38	0.49	0.26	0.40	0.03	0.30	0.49	0.35	0.24	0.10	0.24	0.49	0.32	0.44	0.13	0.39	0.49	0.21	0.29	0.08	0.26
Bronze	0.49	0.35	0.48	0.10	0.39	0.49	0.28	0.44	0.03	0.31	0.49	0.37	0.27	0.09	0.25	0.49	0.33	0.49	0.13	0.40	0.49	0.22	0.32	0.08	0.27
Evergreen	0.49	0.33	0.55	0.08	0.43	0.49	0.28	0.49	0.02	0.34	0.49	0.33	0.30	0.07	0.27	0.49	0.26	0.47	0.05	0.35	0.49	0.22	0.37	0.06	0.29
Caribia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.49	0.27	0.49	0.08	0.41	0.49	0.20	0.32	0.06	0.27

### 1" O.A. - TEMP / LAM

	Cardinal 272					Cardinal 366					Cardinal 240					Solar Ban 60					Solar Ban 80				
	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)
Clear	0.50	0.37	0.63	0.00	0.45	0.49	0.24	0.57	0.00	0.39	0.50	0.22	0.35	0.00	0.28	0.49	0.34	0.63	0.00	0.47	-	-	-	-	-
White	0.50	0.35	0.45	0.01	0.34	0.49	0.23	0.41	0.00	0.28	0.50	0.21	0.25	0.01	0.21	0.49	0.32	0.46	0.01	0.34	-	-	-	-	-
Grey	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.49	0.32	0.44	0.01	0.26	-	-	-	-	-
Bronze	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.49	0.33	0.48	0.01	0.25	0.49	0.22	0.32	0.01	0.17
Evergreen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.49	0.32	0.54	0.01	0.42	0.49	0.22	0.37	0.01	0.28
Caribia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.49	0.27	0.48	0.01	0.45	-	-	-	-	-

### 1" O.A. - 1/4" TEMP / 1/4" (LAM, FTL, SGP)

	Cardinal 272					Cardinal 366					Cardinal 240					Solar Ban 60					Solar Ban 80				
	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)
Clear	0.50	0.36	0.62	0.00	0.45	0.49	0.24	0.56	0.00	0.38	0.50	0.21	0.33	0.00	0.27	0.49	0.34	0.62	0.00	0.47	0.49	0.21	0.42	0.00	0.32
White	0.50	0.33	0.45	0.01	0.33	0.49	0.23	0.40	0.00	0.27	0.50	0.20	0.24	0.01	0.20	0.49	0.32	0.45	0.01	0.34	0.49	0.20	0.31	0.01	0.23
Grey	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.49	0.32	0.44	0.01	0.26	0.49	0.21	0.29	0.00	0.17
Bronze	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.49	0.27	0.38	0.01	0.25	0.49	0.18	0.25	0.01	0.17
Evergreen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.49	0.26	0.47	0.01	0.41	0.49	0.19	0.31	0.01	0.28
Caribia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.49	0.27	0.48	0.01	0.45	0.49	0.20	0.32	0.01	0.30

### 1-5/16" O.A. TRIPLE GLAZED

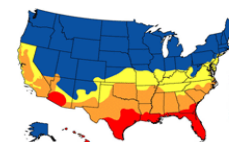
	T / T / T - Cardinal 272					T / T / L - Cardinal 272				
	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)
Clear	0.33	0.29	0.51	0.05	0.40	0.33	0.29	0.50	0.00	0.35
White	-	-	-	-	-	0.33	0.28	0.36	0.00	0.26
Grey	0.33	0.27	0.35	0.04	0.28	-	-	-	-	-
Bronze	0.33	0.29	0.39	0.04	0.29	-	-	-	-	-
Evergreen	0.33	0.27	0.43	0.03	0.32	-	-	-	-	-

More Triple Glazed options are shown on the Triple Glazed Reference.

ENERGY STAR compliance in the Northern Climate Zone.

### PLASTIC GLAZING

	Double Dome			Triple Dome			25mm Multi-Wall		
	U Fact	SHGC	VT	U Fact	SHGC	VT	U Fact	SHGC	VT
Clear	0.67	0.67	0.69	0.50	0.61	0.59	0.50	0.51	0.52
White	0.67	0.47	0.39	0.50	0.43	0.28	0.50	0.37	0.24
Bronze	0.67	0.37	0.20	0.50	0.31	0.17	0.50	0.37	0.22



Climate Zone	U-Factor <sup>1</sup>	SHGC <sup>2</sup>
Northern	≤ 0.55	Any
North-Central	≤ 0.55	≤ 0.40
South-Central	≤ 0.57	≤ 0.30
Southern	≤ 0.70	≤ 0.30





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# NFRC Thermal Properties REFERENCE GUIDE

## 3962 Aluminum Frame

rev. 8/19/2010



### 1" O.A. - TEMP / TEMP

	Cardinal 272					Cardinal 366					Cardinal 240					Solar Ban 60					Solar Ban 80				
	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)
Clear	0.58	0.40	0.70	0.16	0.55	0.58	0.26	0.63	0.05	0.43	0.58	0.24	0.39	0.16	0.35	0.58	0.38	0.71	0.21	0.56	0.58	0.23	0.47	0.13	0.37
White	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Grey	0.58	0.37	0.48	0.11	0.38	0.58	0.28	0.43	0.03	0.30	0.58	0.38	0.27	0.10	0.24	0.58	0.34	0.48	0.13	0.39	0.58	0.22	0.32	0.08	0.26
Bronze	0.58	0.38	0.53	0.10	0.39	0.58	0.30	0.48	0.03	0.31	0.58	0.40	0.29	0.09	0.25	0.58	0.36	0.53	0.13	0.40	0.58	0.23	0.35	0.08	0.27
Evergreen	0.58	0.36	0.60	0.08	0.43	0.58	0.31	0.54	0.02	0.34	0.58	0.36	0.33	0.07	0.27	0.58	0.28	0.52	0.05	0.35	0.58	0.24	0.40	0.06	0.29
Caribia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.58	0.29	0.53	0.08	0.41	0.58	0.21	0.35	0.06	0.27

### 1" O.A. - TEMP / LAM

	Cardinal 272					Cardinal 366					Cardinal 240					Solar Ban 60					Solar Ban 80				
	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)
Clear	0.59	0.40	0.69	0.00	0.45	0.58	0.26	0.62	0.00	0.39	0.59	0.24	0.38	0.00	0.28	0.58	0.37	0.69	0.00	0.47	-	-	-	-	-
White	0.59	0.38	0.49	0.01	0.34	0.58	0.25	0.44	0.00	0.28	0.59	0.23	0.27	0.01	0.21	0.58	0.35	0.50	0.01	0.34	-	-	-	-	-
Grey	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.58	0.34	0.48	0.01	0.26	-	-	-	-	-
Bronze	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.58	0.36	0.53	0.01	0.25	0.58	0.23	0.35	0.01	0.17
Evergreen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.58	0.34	0.59	0.01	0.42	0.58	0.24	0.40	0.01	0.28
Caribia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.58	0.29	0.53	0.01	0.45	-	-	-	-	-

### 1" O.A. - 1/4" TEMP / 1/4" (LAM, FTL, SGP)

	Cardinal 272					Cardinal 366					Cardinal 240					Solar Ban 60					Solar Ban 80				
	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)
Clear	0.59	0.39	0.68	0.00	0.45	0.58	0.26	0.61	0.00	0.38	0.59	0.23	0.36	0.00	0.27	0.58	0.37	0.68	0.00	0.47	0.58	0.23	0.46	0.00	0.32
White	0.59	0.36	0.49	0.01	0.33	0.58	0.25	0.44	0.00	0.27	0.59	0.22	0.26	0.01	0.20	0.58	0.34	0.49	0.01	0.34	0.58	0.21	0.34	0.01	0.23
Grey	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.58	0.34	0.48	0.01	0.26	0.58	0.22	0.32	0.00	0.17
Bronze	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.58	0.30	0.41	0.01	0.25	0.58	0.20	0.28	0.01	0.17
Evergreen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.58	0.28	0.51	0.01	0.41	0.58	0.21	0.34	0.01	0.28
Caribia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.58	0.29	0.53	0.01	0.45	0.58	0.21	0.35	0.01	0.30

### 1-5/16" O.A. TRIPLE GLAZED

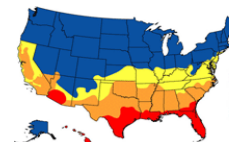
	T / T / T - Cardinal 272					T / T / L - Cardinal 272				
	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)
Clear	0.42	0.32	0.56	0.05	0.40	0.42	0.32	0.55	0.00	0.35
White	-	-	-	-	-	0.42	0.30	0.39	0.00	0.26
Grey	0.42	0.29	0.38	0.04	0.28	-	-	-	-	-
Bronze	0.42	0.31	0.42	0.04	0.29	-	-	-	-	-
Evergreen	0.42	0.29	0.47	0.03	0.32	-	-	-	-	-

More Triple Glazed options are shown on the Triple Glazed Reference.

ENERGY STAR compliance in the Northern Climate Zone.

### PLASTIC GLAZING

	Double Dome			Triple Dome			25mm Multi-Wall		
	U Fact	SHGC	VT	U Fact	SHGC	VT	U Fact	SHGC	VT
Clear	0.76	0.73	0.75	0.59	0.67	0.65	0.59	0.56	0.57
White	0.76	0.51	0.42	0.59	0.47	0.30	0.59	0.40	0.26
Bronze	0.76	0.40	0.22	0.59	0.33	0.19	0.59	0.40	0.23



Climate Zone	U-Factor <sup>1</sup>	SHGC <sup>2</sup>
Northern	≤ 0.55	Any
North-Central	≤ 0.55	≤ 0.40
South-Central	≤ 0.57	≤ 0.30
Southern	≤ 0.70	≤ 0.30





This REFERENCE GUIDE shows NFRC Certified values for some of our common glazing configurations.

Please contact us if you have a specific glazing requirement not shown here.

# NFRC Thermal Properties REFERENCE GUIDE

## 3921 Alum. w/ Thermal Break Frame

rev. 8/19/2010



### 1" O.A. - TEMP / TEMP

	Cardinal 272					Cardinal 366					Cardinal 240					Solar Ban 60					Solar Ban 80				
	U Fact	SHGC	VT	T <sub>UV</sub>	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	T <sub>UV</sub>	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	T <sub>UV</sub>	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	T <sub>UV</sub>	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	T <sub>UV</sub>	T <sub>DW</sub> (ISO)
Clear	0.54	0.38	0.65	0.16	0.55	0.54	0.25	0.59	0.05	0.43	0.54	0.23	0.36	0.16	0.35	0.54	0.35	0.66	0.21	0.56	0.54	0.21	0.44	0.13	0.37
White	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Grey	0.54	0.34	0.45	0.11	0.38	0.54	0.27	0.40	0.03	0.30	0.54	0.35	0.25	0.10	0.24	0.54	0.32	0.45	0.13	0.39	0.54	0.21	0.30	0.08	0.26
Bronze	0.54	0.36	0.49	0.10	0.39	0.54	0.28	0.44	0.03	0.31	0.54	0.37	0.27	0.09	0.25	0.54	0.34	0.50	0.13	0.40	0.54	0.22	0.33	0.08	0.27
Evergreen	0.54	0.33	0.55	0.08	0.43	0.54	0.29	0.50	0.02	0.34	0.54	0.33	0.31	0.07	0.27	0.54	0.26	0.48	0.05	0.35	0.54	0.22	0.37	0.06	0.29
Caribia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.54	0.27	0.49	0.08	0.41	0.54	0.20	0.33	0.06	0.27

### 1" O.A. - TEMP / LAM

	Cardinal 272					Cardinal 366					Cardinal 240					Solar Ban 60					Solar Ban 80				
	U Fact	SHGC	VT	T <sub>UV</sub>	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	T <sub>UV</sub>	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	T <sub>UV</sub>	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	T <sub>UV</sub>	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	T <sub>UV</sub>	T <sub>DW</sub> (ISO)
Clear	0.55	0.37	0.64	0.00	0.45	0.54	0.24	0.58	0.00	0.39	0.55	0.22	0.36	0.00	0.28	0.54	0.35	0.64	0.00	0.47	-	-	-	-	-
White	0.55	0.35	0.46	0.01	0.34	0.54	0.23	0.41	0.00	0.28	0.55	0.21	0.26	0.01	0.21	0.54	0.33	0.46	0.01	0.34	-	-	-	-	-
Grey	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.54	0.32	0.44	0.01	0.26	-	-	-	-	-
Bronze	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.54	0.34	0.49	0.01	0.25	0.54	0.22	0.33	0.01	0.17
Evergreen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.54	0.32	0.55	0.01	0.42	0.54	0.22	0.37	0.01	0.28
Caribia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.54	0.27	0.49	0.01	0.45	-	-	-	-	-

### 1" O.A. - 1/4" TEMP / 1/4" (LAM, FTL, SGP)

	Cardinal 272					Cardinal 366					Cardinal 240					Solar Ban 60					Solar Ban 80				
	U Fact	SHGC	VT	T <sub>UV</sub>	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	T <sub>UV</sub>	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	T <sub>UV</sub>	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	T <sub>UV</sub>	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	T <sub>UV</sub>	T <sub>DW</sub> (ISO)
Clear	0.55	0.36	0.63	0.00	0.45	0.54	0.25	0.57	0.00	0.38	0.55	0.21	0.34	0.00	0.27	0.54	0.34	0.63	0.00	0.47	0.54	0.21	0.43	0.00	0.32
White	0.55	0.34	0.45	0.01	0.33	0.54	0.23	0.41	0.00	0.27	0.55	0.20	0.24	0.01	0.20	0.54	0.32	0.46	0.01	0.34	0.54	0.20	0.31	0.01	0.23
Grey	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.54	0.32	0.44	0.01	0.26	0.54	0.21	0.30	0.00	0.17
Bronze	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.54	0.28	0.38	0.01	0.25	0.54	0.19	0.26	0.01	0.17
Evergreen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.54	0.26	0.47	0.01	0.41	0.54	0.19	0.32	0.01	0.28
Caribia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.54	0.27	0.49	0.01	0.45	0.54	0.20	0.33	0.01	0.30

### 1-5/16" O.A. TRIPLE GLAZED

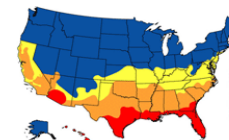
	T / T / T - Cardinal 272					T / T / L - Cardinal 272				
	U Fact	SHGC	VT	T <sub>UV</sub>	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	T <sub>UV</sub>	T <sub>DW</sub> (ISO)
Clear	0.38	0.30	0.52	0.05	0.40	0.38	0.29	0.51	0.00	0.35
White	-	-	-	-	-	0.38	0.28	0.37	0.00	0.26
Grey	0.38	0.27	0.35	0.04	0.28	-	-	-	-	-
Bronze	0.38	0.29	0.39	0.04	0.29	-	-	-	-	-
Evergreen	0.38	0.28	0.44	0.03	0.32	-	-	-	-	-

More Triple Glazed options are shown on the Triple Glazed Reference.

ENERGY STAR compliance in the Northern Climate Zone.

### PLASTIC GLAZING

	Double Dome			Triple Dome			25mm Multi-Wall		
	U Fact	SHGC	VT	U Fact	SHGC	VT	U Fact	SHGC	VT
Clear	0.76	0.68	0.70	0.58	0.62	0.60	0.58	0.52	0.53
White	0.76	0.47	0.39	0.58	0.44	0.28	0.58	0.37	0.25
Bronze	0.76	0.37	0.20	0.58	0.31	0.17	0.58	0.37	0.22



Climate Zone	U-Factor <sup>1</sup>	SHGC <sup>2</sup>
Northern	≤ 0.55	Any
North-Central	≤ 0.55	≤ 0.40
South-Central	≤ 0.57	≤ 0.30
Southern	≤ 0.70	≤ 0.30





This REFERENCE GUIDE shows NFRC Certified values for some of our common glazing configurations.

Please contact us if you have a specific glazing requirement not shown here.

# NFRC Thermal Properties REFERENCE GUIDE

## 5830 PVC / Aluminum Frame (opener)

rev. 8/19/2010



### 1" O.A. - TEMP / TEMP

	Cardinal 272					Cardinal 366					Cardinal 240					Solar Ban 60					Solar Ban 80				
	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)
Clear	0.51	0.36	0.63	0.16	0.55	0.50	0.24	0.57	0.05	0.43	0.51	0.22	0.35	0.16	0.35	0.50	0.34	0.63	0.21	0.56	0.50	0.20	0.42	0.13	0.37
White	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Grey	0.51	0.33	0.43	0.11	0.38	0.50	0.26	0.39	0.03	0.30	0.51	0.34	0.24	0.10	0.24	0.50	0.31	0.43	0.13	0.39	0.50	0.20	0.29	0.08	0.26
Bronze	0.51	0.34	0.47	0.10	0.39	0.50	0.27	0.43	0.03	0.31	0.51	0.36	0.26	0.09	0.25	0.50	0.33	0.48	0.13	0.40	0.50	0.21	0.32	0.08	0.27
Evergreen	0.51	0.32	0.53	0.08	0.43	0.50	0.28	0.48	0.02	0.34	0.51	0.32	0.30	0.07	0.27	0.50	0.25	0.46	0.05	0.35	0.50	0.21	0.36	0.06	0.29
Caribia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.50	0.26	0.48	0.08	0.41	0.50	0.19	0.32	0.06	0.27

### 1" O.A. - TEMP / LAM

	Cardinal 272					Cardinal 366					Cardinal 240					Solar Ban 60					Solar Ban 80				
	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)
Clear	0.51	0.36	0.62	0.00	0.45	0.51	0.24	0.55	0.00	0.39	0.51	0.22	0.34	0.00	0.28	0.51	0.34	0.62	0.00	0.47	-	-	-	-	-
White	0.51	0.34	0.44	0.01	0.34	0.51	0.22	0.40	0.00	0.28	0.51	0.20	0.25	0.01	0.21	0.51	0.32	0.45	0.01	0.34	-	-	-	-	-
Grey	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.51	0.31	0.43	0.01	0.26	-	-	-	-	-
Bronze	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.51	0.33	0.47	0.01	0.25	0.51	0.21	0.32	0.01	0.17
Evergreen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.51	0.31	0.53	0.01	0.42	0.51	0.21	0.36	0.01	0.28
Caribia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.51	0.26	0.47	0.01	0.45	-	-	-	-	-

### 1" O.A. - 1/4" TEMP / 1/4" (LAM, FTL, SGP)

	Cardinal 272					Cardinal 366					Cardinal 240					Solar Ban 60					Solar Ban 80				
	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)
Clear	0.51	0.35	0.61	0.00	0.45	0.51	0.24	0.55	0.00	0.38	0.51	0.21	0.33	0.00	0.27	0.51	0.33	0.61	0.00	0.47	0.51	0.20	0.41	0.00	0.32
White	0.51	0.33	0.44	0.01	0.33	0.51	0.22	0.39	0.00	0.27	0.51	0.20	0.23	0.01	0.20	0.51	0.31	0.44	0.01	0.34	0.51	0.19	0.30	0.01	0.23
Grey	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.51	0.31	0.43	0.01	0.26	0.51	0.20	0.29	0.00	0.17
Bronze	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.51	0.27	0.37	0.01	0.25	0.51	0.18	0.25	0.01	0.17
Evergreen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.51	0.25	0.46	0.01	0.41	0.51	0.19	0.31	0.01	0.28
Caribia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.51	0.26	0.47	0.01	0.45	0.51	0.19	0.32	0.01	0.30

### 1-5/16" O.A. TRIPLE GLAZED

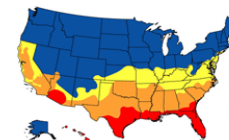
	T / T / T - Cardinal 272					T / T / L - Cardinal 272				
	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)
Clear	0.35	0.29	0.50	0.05	0.40	0.35	0.28	0.49	0.00	0.35
White	-	-	-	-	-	0.35	0.27	0.35	0.00	0.26
Grey	0.35	0.26	0.34	0.04	0.28	-	-	-	-	-
Bronze	0.35	0.28	0.38	0.04	0.29	-	-	-	-	-
Evergreen	0.35	0.27	0.42	0.03	0.32	-	-	-	-	-

More Triple Glazed options are shown on the Triple Glazed Reference.

ENERGY STAR compliance in the Northern Climate Zone.

### PLASTIC GLAZING

	Double Dome			Triple Dome			25mm Multi-Wall		
	U Fact	SHGC	VT	U Fact	SHGC	VT	U Fact	SHGC	VT
Clear	0.68	0.66	0.67	0.52	0.60	0.58	0.51	0.50	0.51
White	0.68	0.46	0.38	0.52	0.42	0.27	0.51	0.36	0.24
Bronze	0.68	0.36	0.19	0.52	0.30	0.17	0.51	0.36	0.21



Climate Zone	U-Factor <sup>1</sup>	SHGC <sup>2</sup>
Northern	≤ 0.55	Any
North-Central	≤ 0.55	≤ 0.40
South-Central	≤ 0.57	≤ 0.30
Southern	≤ 0.70	≤ 0.30





This REFERENCE GUIDE shows NFRC Certified values for some of our common glazing configurations.

Please contact us if you have a specific glazing requirement not shown here.

# NFRC Thermal Properties REFERENCE GUIDE

## 5842 Slope Glazing

rev. 8/19/2010



### 1" O.A. - TEMP / TEMP

	Cardinal 272					Cardinal 366					Cardinal 240					Solar Ban 60					Solar Ban 80				
	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)
Clear	0.43	0.37	0.65	0.16	0.55	0.42	0.25	0.58	0.05	0.43	0.43	0.23	0.36	0.16	0.35	0.42	0.35	0.65	0.21	0.56	0.42	0.21	0.43	0.13	0.37
White	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Grey	0.43	0.34	0.44	0.11	0.38	0.42	0.26	0.40	0.03	0.30	0.43	0.35	0.25	0.10	0.24	0.42	0.32	0.45	0.13	0.39	0.42	0.21	0.30	0.08	0.26
Bronze	0.43	0.35	0.49	0.10	0.39	0.42	0.28	0.44	0.03	0.31	0.43	0.37	0.27	0.09	0.25	0.42	0.34	0.49	0.13	0.40	0.42	0.22	0.33	0.08	0.27
Evergreen	0.43	0.33	0.55	0.08	0.43	0.42	0.28	0.49	0.02	0.34	0.43	0.33	0.31	0.07	0.27	0.42	0.26	0.47	0.05	0.35	0.42	0.22	0.37	0.06	0.29
Caribia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.42	0.27	0.49	0.08	0.41	0.42	0.20	0.33	0.06	0.27

### 1" O.A. - TEMP / LAM

	Cardinal 272					Cardinal 366					Cardinal 240					Solar Ban 60					Solar Ban 80				
	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)
Clear	0.43	0.37	0.64	0.00	0.45	0.43	0.24	0.57	0.00	0.39	0.43	0.22	0.35	0.00	0.28	0.43	0.35	0.63	0.00	0.47	-	-	-	-	-
White	0.43	0.35	0.46	0.01	0.34	0.43	0.23	0.41	0.00	0.28	0.43	0.21	0.25	0.01	0.21	0.43	0.32	0.46	0.01	0.34	-	-	-	-	-
Grey	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.43	0.32	0.44	0.01	0.26	-	-	-	-	-
Bronze	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.43	0.34	0.49	0.01	0.25	0.43	0.22	0.33	0.01	0.17
Evergreen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.43	0.32	0.55	0.01	0.42	0.43	0.22	0.37	0.01	0.28
Caribia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.43	0.27	0.48	0.01	0.45	-	-	-	-	-

### 1" O.A. - 1/4" TEMP / 1/4" (LAM, FTL, SGP)

	Cardinal 272					Cardinal 366					Cardinal 240					Solar Ban 60					Solar Ban 80				
	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)
Clear	0.43	0.36	0.63	0.00	0.45	0.43	0.24	0.56	0.00	0.38	0.43	0.21	0.34	0.00	0.27	0.43	0.34	0.63	0.00	0.47	0.43	0.21	0.42	0.00	0.32
White	0.43	0.34	0.45	0.01	0.33	0.43	0.23	0.40	0.00	0.27	0.43	0.20	0.24	0.01	0.20	0.43	0.32	0.45	0.01	0.34	0.43	0.20	0.31	0.01	0.23
Grey	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.43	0.32	0.44	0.01	0.26	0.43	0.21	0.30	0.00	0.17
Bronze	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.43	0.28	0.38	0.01	0.25	0.43	0.19	0.25	0.01	0.17
Evergreen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.43	0.26	0.47	0.01	0.41	0.43	0.19	0.32	0.01	0.28
Caribia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.43	0.27	0.48	0.01	0.45	0.43	0.20	0.33	0.01	0.30

### 1-5/16" O.A. TRIPLE GLAZED

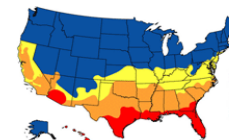
	T / T / T - Cardinal 272					T / T / L - Cardinal 272				
	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)
Clear	0.27	0.30	0.52	0.05	0.40	0.27	0.29	0.51	0.00	0.35
White	-	-	-	-	-	0.27	0.28	0.36	0.00	0.26
Grey	0.27	0.27	0.35	0.04	0.28	-	-	-	-	-
Bronze	0.27	0.29	0.39	0.04	0.29	-	-	-	-	-
Evergreen	0.27	0.27	0.44	0.03	0.32	-	-	-	-	-

More Triple Glazed options are shown on the Triple Glazed Reference.

ENERGY STAR compliance in the Northern Climate Zone.

### PLASTIC GLAZING

	25mm Multi-Wall		
	U Fact	SHGC	VT
Clear	0.43	0.52	0.52
White	0.43	0.37	0.24
Bronze	0.43	0.37	0.22



Climate Zone	U-Factor <sup>1</sup>	SHGC <sup>2</sup>
Northern	≤ 0.55	Any
North-Central	≤ 0.55	≤ 0.40
South-Central	≤ 0.57	≤ 0.30
Southern	≤ 0.70	≤ 0.30





This REFERENCE GUIDE shows NFRC Certified values for some of our common glazing configurations.

Please contact us if you have a specific glazing requirement not shown here.

# NFRC Thermal Properties REFERENCE GUIDE

## 3962 Slope Glazing (light frame)

rev. 8/19/2010



### 1" O.A. - TEMP / TEMP

	Cardinal 272					Cardinal 366					Cardinal 240					Solar Ban 60					Solar Ban 80				
	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)
Clear	0.49	0.40	0.69	0.16	0.55	0.49	0.26	0.62	0.05	0.43	0.49	0.24	0.39	0.16	0.35	0.49	0.37	0.69	0.21	0.56	0.49	0.22	0.46	0.13	0.37
White	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Grey	0.49	0.36	0.47	0.11	0.38	0.49	0.28	0.42	0.03	0.30	0.49	0.37	0.26	0.10	0.24	0.49	0.34	0.48	0.13	0.39	0.49	0.22	0.32	0.08	0.26
Bronze	0.49	0.38	0.52	0.10	0.39	0.49	0.30	0.47	0.03	0.31	0.49	0.39	0.29	0.09	0.25	0.49	0.36	0.52	0.13	0.40	0.49	0.23	0.35	0.08	0.27
Evergreen	0.49	0.35	0.59	0.08	0.43	0.49	0.30	0.53	0.02	0.34	0.49	0.35	0.33	0.07	0.27	0.49	0.28	0.51	0.05	0.35	0.49	0.23	0.39	0.06	0.29
Caribia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.49	0.28	0.52	0.08	0.41	0.49	0.21	0.35	0.06	0.27

### 1" O.A. - TEMP / LAM

	Cardinal 272					Cardinal 366					Cardinal 240					Solar Ban 60					Solar Ban 80				
	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)
Clear	0.50	0.39	0.68	0.00	0.45	0.50	0.26	0.61	0.00	0.39	0.50	0.24	0.38	0.00	0.28	0.50	0.37	0.68	0.00	0.47	-	-	-	-	-
White	0.50	0.37	0.49	0.01	0.34	0.50	0.24	0.44	0.00	0.28	0.50	0.22	0.27	0.01	0.21	0.50	0.34	0.49	0.01	0.34	-	-	-	-	-
Grey	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.50	0.34	0.47	0.01	0.26	-	-	-	-	-
Bronze	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.50	0.36	0.52	0.01	0.25	0.50	0.23	0.35	0.01	0.17
Evergreen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.50	0.34	0.58	0.01	0.42	0.50	0.23	0.39	0.01	0.28
Caribia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.50	0.29	0.52	0.01	0.45	-	-	-	-	-

### 1" O.A. - 1/4" TEMP / 1/4" (LAM, FTL, SGP)

	Cardinal 272					Cardinal 366					Cardinal 240					Solar Ban 60					Solar Ban 80				
	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)
Clear	0.50	0.38	0.67	0.00	0.45	0.50	0.26	0.60	0.00	0.38	0.50	0.23	0.36	0.00	0.27	0.50	0.36	0.67	0.00	0.47	0.50	0.22	0.45	0.00	0.32
White	0.50	0.36	0.48	0.01	0.33	0.50	0.24	0.43	0.00	0.27	0.50	0.21	0.26	0.01	0.20	0.50	0.34	0.49	0.01	0.34	0.50	0.21	0.33	0.01	0.23
Grey	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.50	0.34	0.47	0.01	0.26	0.50	0.22	0.32	0.00	0.17
Bronze	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.50	0.29	0.41	0.01	0.25	0.50	0.20	0.27	0.01	0.17
Evergreen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.50	0.28	0.50	0.01	0.41	0.50	0.20	0.34	0.01	0.28
Caribia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.50	0.29	0.52	0.01	0.45	0.50	0.21	0.35	0.01	0.30

### 1-5/16" O.A. TRIPLE GLAZED

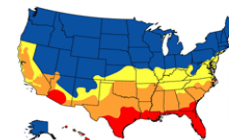
	T / T / T - Cardinal 272					T / T / L - Cardinal 272				
	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)
Clear	0.33	0.31	0.55	0.05	0.40	0.33	0.31	0.54	0.00	0.35
White	-	-	-	-	-	0.33	0.30	0.39	0.00	0.26
Grey	0.33	0.29	0.38	0.04	0.28	-	-	-	-	-
Bronze	0.33	0.30	0.41	0.04	0.29	-	-	-	-	-
Evergreen	0.33	0.29	0.47	0.03	0.32	-	-	-	-	-

More Triple Glazed options are shown on the Triple Glazed Reference.

ENERGY STAR compliance in the Northern Climate Zone.

### PLASTIC GLAZING

	25mm Multi-Wall		
	U Fact	SHGC	VT
Clear	0.43	0.55	0.56
White	0.43	0.39	0.26
Bronze	0.43	0.39	0.23



Climate Zone	U-Factor <sup>1</sup>	SHGC <sup>2</sup>
Northern	≤ 0.55	Any
North-Central	≤ 0.55	≤ 0.40
South-Central	≤ 0.57	≤ 0.30
Southern	≤ 0.70	≤ 0.30





This REFERENCE GUIDE shows NFRC Certified values for some of our common glazing configurations.

Please contact us if you have a specific glazing requirement not shown here.

# NFRC Thermal Properties REFERENCE GUIDE

## 5841 Slope Glazing

rev. 8/19/2010



### 1" O.A. - TEMP / TEMP

	Cardinal 272					Cardinal 366					Cardinal 240					Solar Ban 60					Solar Ban 80				
	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)
Clear	0.42	0.36	0.62	0.16	0.55	0.42	0.24	0.56	0.05	0.43	0.42	0.22	0.35	0.16	0.35	0.42	0.34	0.63	0.21	0.56	0.42	0.20	0.42	0.13	0.37
White	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Grey	0.42	0.33	0.43	0.11	0.38	0.42	0.25	0.38	0.03	0.30	0.42	0.34	0.24	0.10	0.24	0.42	0.31	0.43	0.13	0.39	0.42	0.20	0.28	0.08	0.26
Bronze	0.42	0.34	0.47	0.10	0.39	0.42	0.27	0.42	0.03	0.31	0.42	0.36	0.26	0.09	0.25	0.42	0.32	0.47	0.13	0.40	0.42	0.21	0.31	0.08	0.27
Evergreen	0.42	0.32	0.53	0.08	0.43	0.42	0.27	0.48	0.02	0.34	0.42	0.32	0.29	0.07	0.27	0.42	0.25	0.46	0.05	0.35	0.42	0.21	0.35	0.06	0.29
Caribia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.42	0.26	0.47	0.08	0.41	0.42	0.19	0.31	0.06	0.27

### 1" O.A. - TEMP / LAM

	Cardinal 272					Cardinal 366					Cardinal 240					Solar Ban 60					Solar Ban 80				
	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)
Clear	0.43	0.35	0.61	0.00	0.45	0.43	0.23	0.55	0.00	0.39	0.43	0.21	0.34	0.00	0.28	0.43	0.33	0.61	0.00	0.47	-	-	-	-	-
White	0.43	0.34	0.44	0.01	0.34	0.43	0.22	0.39	0.00	0.28	0.43	0.20	0.24	0.01	0.21	0.43	0.31	0.44	0.01	0.34	-	-	-	-	-
Grey	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.43	0.31	0.42	0.01	0.26	-	-	-	-	-
Bronze	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.43	0.32	0.47	0.01	0.25	0.43	0.21	0.31	0.01	0.17
Evergreen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.43	0.31	0.53	0.01	0.42	0.43	0.21	0.35	0.01	0.28
Caribia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.43	0.26	0.47	0.01	0.45	-	-	-	-	-

### 1" O.A. - 1/4" TEMP / 1/4" (LAM, FTL, SGP)

	Cardinal 272					Cardinal 366					Cardinal 240					Solar Ban 60					Solar Ban 80				
	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)
Clear	0.43	0.34	0.60	0.00	0.45	0.43	0.24	0.54	0.00	0.38	0.43	0.21	0.32	0.00	0.27	0.43	0.33	0.60	0.00	0.47	0.43	0.20	0.41	0.00	0.32
White	0.43	0.32	0.43	0.01	0.33	0.43	0.22	0.39	0.00	0.27	0.43	0.19	0.23	0.01	0.20	0.43	0.31	0.44	0.01	0.34	0.43	0.19	0.30	0.01	0.23
Grey	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.43	0.31	0.42	0.01	0.26	0.43	0.20	0.28	0.00	0.17
Bronze	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.43	0.27	0.37	0.01	0.25	0.43	0.18	0.24	0.01	0.17
Evergreen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.43	0.25	0.45	0.01	0.41	0.43	0.19	0.30	0.01	0.28
Caribia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.43	0.26	0.47	0.01	0.45	0.43	0.19	0.31	0.01	0.30

### 1-5/16" O.A. TRIPLE GLAZED

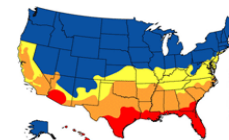
	T / T / T - Cardinal 272					T / T / L - Cardinal 272				
	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)
Clear	0.27	0.29	0.50	0.05	0.40	0.26	0.28	0.49	0.00	0.35
White	-	-	-	-	-	0.26	0.27	0.35	0.00	0.26
Grey	0.27	0.26	0.34	0.04	0.28	-	-	-	-	-
Bronze	0.27	0.28	0.37	0.04	0.29	-	-	-	-	-
Evergreen	0.27	0.26	0.42	0.03	0.32	-	-	-	-	-

More Triple Glazed options are shown on the Triple Glazed Reference.

ENERGY STAR compliance in the Northern Climate Zone.

### PLASTIC GLAZING

	25mm Multi-Wall		
	U Fact	SHGC	VT
Clear	0.43	0.50	0.50
White	0.43	0.36	0.23
Bronze	0.43	0.36	0.21



Climate Zone	U-Factor <sup>1</sup>	SHGC <sup>2</sup>
Northern	≤ 0.55	Any
North-Central	≤ 0.55	≤ 0.40
South-Central	≤ 0.57	≤ 0.30
Southern	≤ 0.70	≤ 0.30





This REFERENCE GUIDE shows NFRC Certified values for some of our common glazing configurations.

Please contact us if you have a specific glazing requirement not shown here.

# NFRC Thermal Properties REFERENCE GUIDE

## 3921 Slope Glazing (light frame)

rev. 8/19/2010



### 1" O.A. - TEMP / TEMP

	Cardinal 272					Cardinal 366					Cardinal 240					Solar Ban 60					Solar Ban 80				
	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)
Clear	0.47	0.38	0.66	0.16	0.55	0.47	0.25	0.60	0.05	0.43	0.47	0.23	0.37	0.16	0.35	0.47	0.35	0.66	0.21	0.56	0.47	0.21	0.44	0.13	0.37
White	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Grey	0.47	0.34	0.45	0.11	0.38	0.47	0.27	0.41	0.03	0.30	0.47	0.36	0.25	0.10	0.24	0.47	0.32	0.46	0.13	0.39	0.47	0.21	0.30	0.08	0.26
Bronze	0.47	0.36	0.50	0.10	0.39	0.47	0.29	0.45	0.03	0.31	0.47	0.38	0.28	0.09	0.25	0.47	0.34	0.50	0.13	0.40	0.47	0.22	0.33	0.08	0.27
Evergreen	0.47	0.34	0.56	0.08	0.43	0.47	0.29	0.50	0.02	0.34	0.47	0.34	0.31	0.07	0.27	0.47	0.26	0.48	0.05	0.35	0.47	0.23	0.38	0.06	0.29
Caribia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.47	0.27	0.50	0.08	0.41	0.47	0.20	0.33	0.06	0.27

### 1" O.A. - TEMP / LAM

	Cardinal 272					Cardinal 366					Cardinal 240					Solar Ban 60					Solar Ban 80				
	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)
Clear	0.48	0.37	0.65	0.00	0.45	0.47	0.25	0.58	0.00	0.39	0.48	0.23	0.36	0.00	0.28	0.47	0.35	0.65	0.00	0.47	-	-	-	-	-
White	0.48	0.35	0.47	0.01	0.34	0.47	0.23	0.42	0.00	0.28	0.48	0.21	0.26	0.01	0.21	0.47	0.33	0.47	0.01	0.34	-	-	-	-	-
Grey	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.47	0.32	0.45	0.01	0.26	-	-	-	-	-
Bronze	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.47	0.34	0.50	0.01	0.25	0.47	0.22	0.33	0.01	0.17
Evergreen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.47	0.32	0.56	0.01	0.42	0.47	0.23	0.38	0.01	0.28
Caribia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.47	0.27	0.49	0.01	0.45	-	-	-	-	-

### 1" O.A. - 1/4" TEMP / 1/4" (LAM, FTL, SGP)

	Cardinal 272					Cardinal 366					Cardinal 240					Solar Ban 60					Solar Ban 80				
	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)
Clear	0.48	0.36	0.64	0.00	0.45	0.47	0.25	0.57	0.00	0.38	0.48	0.22	0.34	0.00	0.27	0.47	0.35	0.64	0.00	0.47	0.47	0.21	0.43	0.00	0.32
White	0.48	0.34	0.46	0.01	0.33	0.47	0.23	0.41	0.00	0.27	0.48	0.21	0.24	0.01	0.20	0.47	0.32	0.46	0.01	0.34	0.47	0.20	0.32	0.01	0.23
Grey	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.47	0.32	0.45	0.01	0.26	0.47	0.21	0.30	0.00	0.17
Bronze	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.47	0.28	0.39	0.01	0.25	0.47	0.19	0.26	0.01	0.17
Evergreen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.47	0.27	0.48	0.01	0.41	0.47	0.19	0.32	0.01	0.28
Caribia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.47	0.27	0.49	0.01	0.45	0.47	0.20	0.33	0.01	0.30

### 1-5/16" O.A. TRIPLE GLAZED

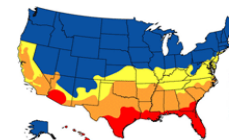
	T / T / T - Cardinal 272					T / T / L - Cardinal 272				
	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)
Clear	0.31	0.30	0.53	0.05	0.40	0.31	0.30	0.52	0.00	0.35
White	-	-	-	-	-	0.31	0.29	0.37	0.00	0.26
Grey	0.31	0.28	0.36	0.04	0.28	-	-	-	-	-
Bronze	0.31	0.29	0.40	0.04	0.29	-	-	-	-	-
Evergreen	0.31	0.28	0.45	0.03	0.32	-	-	-	-	-

More Triple Glazed options are shown on the Triple Glazed Reference.

ENERGY STAR compliance in the Northern Climate Zone.

### PLASTIC GLAZING

	25mm Multi-Wall		
	U Fact	SHGC	VT
Clear	0.48	0.53	0.53
White	0.48	0.38	0.25
Bronze	0.48	0.38	0.22



Climate Zone	U-Factor <sup>1</sup>	SHGC <sup>2</sup>
Northern	≤ 0.55	Any
North-Central	≤ 0.55	≤ 0.40
South-Central	≤ 0.57	≤ 0.30
Southern	≤ 0.70	≤ 0.30





This REFERENCE GUIDE shows NFRC Certified values for some of our common glazing configurations.

Please contact us if you have a specific glazing requirement not shown here.

# NFRC Thermal Properties REFERENCE GUIDE

## 4843 Slope Glazing (medium frame)

rev. 8/19/2010



### 1" O.A. - TEMP / TEMP

	Cardinal 272					Cardinal 366					Cardinal 240					Solar Ban 60					Solar Ban 80				
	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)
Clear	0.55	0.33	0.57	0.16	0.55	0.55	0.22	0.51	0.05	0.43	0.55	0.21	0.32	0.16	0.35	0.55	0.31	0.57	0.21	0.56	0.55	0.19	0.38	0.13	0.37
White	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Grey	0.55	0.30	0.39	0.11	0.38	0.55	0.24	0.35	0.03	0.30	0.55	0.31	0.21	0.10	0.24	0.55	0.29	0.39	0.13	0.39	0.55	0.19	0.26	0.08	0.26
Bronze	0.55	0.32	0.43	0.10	0.39	0.55	0.25	0.38	0.03	0.31	0.55	0.33	0.24	0.09	0.25	0.55	0.30	0.43	0.13	0.40	0.55	0.20	0.28	0.08	0.27
Evergreen	0.55	0.30	0.48	0.08	0.43	0.55	0.26	0.43	0.02	0.34	0.55	0.30	0.27	0.07	0.27	0.55	0.23	0.41	0.05	0.35	0.55	0.20	0.32	0.06	0.29
Caribia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.55	0.24	0.43	0.08	0.41	0.55	0.18	0.28	0.06	0.27

### 1" O.A. - TEMP / LAM

	Cardinal 272					Cardinal 366					Cardinal 240					Solar Ban 60					Solar Ban 80				
	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)
Clear	0.56	0.33	0.55	0.00	0.45	0.55	0.22	0.50	0.00	0.39	0.56	0.20	0.31	0.00	0.28	0.55	0.31	0.55	0.00	0.47	-	-	-	-	-
White	0.56	0.31	0.40	0.01	0.34	0.55	0.21	0.36	0.00	0.28	0.56	0.19	0.22	0.01	0.21	0.55	0.29	0.40	0.01	0.34	-	-	-	-	-
Grey	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.55	0.29	0.38	0.01	0.26	-	-	-	-	-
Bronze	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.55	0.30	0.42	0.01	0.25	0.55	0.20	0.28	0.01	0.17
Evergreen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.55	0.29	0.48	0.01	0.42	0.55	0.20	0.32	0.01	0.28
Caribia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.55	0.24	0.42	0.01	0.45	-	-	-	-	-

### 1" O.A. - 1/4" TEMP / 1/4" (LAM, FTL, SGP)

	Cardinal 272					Cardinal 366					Cardinal 240					Solar Ban 60					Solar Ban 80				
	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)
Clear	0.56	0.32	0.55	0.00	0.45	0.55	0.22	0.49	0.00	0.38	0.56	0.19	0.29	0.00	0.27	0.55	0.30	0.55	0.00	0.47	0.55	0.19	0.37	0.00	0.32
White	0.56	0.30	0.39	0.01	0.33	0.55	0.21	0.35	0.00	0.27	0.56	0.18	0.21	0.01	0.20	0.55	0.29	0.40	0.01	0.34	0.55	0.18	0.27	0.01	0.23
Grey	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.55	0.29	0.38	0.01	0.26	0.55	0.19	0.26	0.00	0.17
Bronze	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.55	0.25	0.33	0.01	0.25	0.55	0.17	0.22	0.01	0.17
Evergreen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.55	0.24	0.41	0.01	0.41	0.55	0.18	0.28	0.01	0.28
Caribia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.55	0.24	0.42	0.01	0.45	0.55	0.18	0.28	0.01	0.30

### 1-5/16" O.A. TRIPLE GLAZED

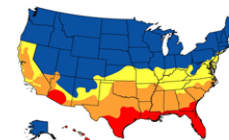
	T / T / T - Cardinal 272					T / T / L - Cardinal 272				
	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)
Clear	0.41	0.27	0.45	0.05	0.40	0.41	0.26	0.44	0.00	0.35
White	-	-	-	-	-	0.41	0.25	0.32	0.00	0.26
Grey	0.41	0.24	0.31	0.04	0.28	-	-	-	-	-
Bronze	0.41	0.26	0.34	0.04	0.29	-	-	-	-	-
Evergreen	0.41	0.25	0.38	0.03	0.32	-	-	-	-	-

More Triple Glazed options are shown on the Triple Glazed Reference.

ENERGY STAR compliance in the Northern Climate Zone.

### PLASTIC GLAZING

	25mm Multi-Wall		
	U Fact	SHGC	VT
Clear	0.57	0.46	0.46
White	0.57	0.33	0.21
Bronze	0.57	0.33	0.19



Climate Zone	U-Factor <sup>1</sup>	SHGC <sup>2</sup>
Northern	≤ 0.55	Any
North-Central	≤ 0.55	≤ 0.40
South-Central	≤ 0.57	≤ 0.30
Southern	≤ 0.70	≤ 0.30





This REFERENCE GUIDE shows NFRC Certified values for some of our common glazing configurations.

Please contact us if you have a specific glazing requirement not shown here.

# NFRC Thermal Properties REFERENCE GUIDE

## 30258 Slope Glazing (heavy frame)

rev. 8/19/2010



### 1" O.A. - TEMP / TEMP

	Cardinal 272					Cardinal 366					Cardinal 240					Solar Ban 60					Solar Ban 80				
	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)
Clear	0.37	0.36	0.61	0.16	0.55	0.37	0.24	0.55	0.05	0.43	0.37	0.22	0.34	0.16	0.35	0.37	0.33	0.61	0.21	0.56	0.37	0.20	0.41	0.13	0.37
White	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Grey	0.37	0.33	0.42	0.11	0.38	0.37	0.26	0.37	0.03	0.30	0.37	0.34	0.23	0.10	0.24	0.37	0.31	0.42	0.13	0.39	0.37	0.20	0.28	0.08	0.26
Bronze	0.37	0.34	0.46	0.10	0.39	0.37	0.27	0.41	0.03	0.31	0.37	0.35	0.25	0.09	0.25	0.37	0.32	0.46	0.13	0.40	0.37	0.21	0.31	0.08	0.27
Evergreen	0.37	0.32	0.52	0.08	0.43	0.37	0.28	0.46	0.02	0.34	0.37	0.32	0.29	0.07	0.27	0.37	0.25	0.45	0.05	0.35	0.37	0.22	0.35	0.06	0.29
Caribia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.37	0.26	0.46	0.08	0.41	0.37	0.19	0.31	0.06	0.27

### 1" O.A. - TEMP / LAM

	Cardinal 272					Cardinal 366					Cardinal 240					Solar Ban 60					Solar Ban 80				
	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)
Clear	0.38	0.35	0.60	0.00	0.45	0.38	0.24	0.54	0.00	0.39	0.38	0.22	0.33	0.00	0.28	0.38	0.33	0.60	0.00	0.47	-	-	-	-	-
White	0.38	0.33	0.43	0.01	0.34	0.38	0.22	0.39	0.00	0.28	0.38	0.20	0.24	0.01	0.21	0.38	0.31	0.43	0.01	0.34	-	-	-	-	-
Grey	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.38	0.31	0.41	0.01	0.26	-	-	-	-	-
Bronze	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.38	0.32	0.46	0.01	0.25	0.29	0.21	0.31	0.01	0.17
Evergreen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.38	0.31	0.51	0.01	0.42	0.29	0.22	0.35	0.01	0.28
Caribia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.38	0.26	0.46	0.01	0.45	-	-	-	-	-

### 1" O.A. - 1/4" TEMP / 1/4" (LAM, FTL, SGP)

	Cardinal 272					Cardinal 366					Cardinal 240					Solar Ban 60					Solar Ban 80				
	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)
Clear	0.38	0.34	0.59	0.00	0.45	0.38	0.24	0.53	0.00	0.38	0.38	0.21	0.32	0.00	0.27	0.38	0.33	0.59	0.00	0.47	0.37	0.21	0.40	0.00	0.32
White	0.38	0.32	0.42	0.01	0.33	0.38	0.22	0.38	0.00	0.27	0.38	0.20	0.23	0.01	0.20	0.38	0.31	0.43	0.01	0.34	0.37	0.19	0.29	0.01	0.23
Grey	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.38	0.31	0.41	0.01	0.26	0.37	0.20	0.28	0.00	0.17
Bronze	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.38	0.27	0.36	0.01	0.25	0.37	0.18	0.24	0.01	0.17
Evergreen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.38	0.25	0.44	0.01	0.41	0.37	0.19	0.30	0.01	0.28
Caribia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.38	0.26	0.46	0.01	0.45	0.37	0.20	0.31	0.01	0.30

### 1-5/16" O.A. TRIPLE GLAZED

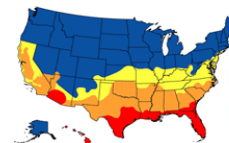
	T / T / T - Cardinal 272					T / T / L - Cardinal 272				
	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)
Clear	0.21	0.29	0.49	0.05	0.40	0.21	0.28	0.48	0.00	0.35
White	-	-	-	-	-	0.21	0.27	0.34	0.00	0.26
Grey	0.21	0.26	0.33	0.04	0.28	-	-	-	-	-
Bronze	0.21	0.28	0.37	0.04	0.29	-	-	-	-	-
Evergreen	0.21	0.26	0.41	0.03	0.32	-	-	-	-	-

More Triple Glazed options are shown on the Triple Glazed Reference.

ENERGY STAR compliance in the Northern Climate Zone.

### PLASTIC GLAZING

	25mm Multi-Wall		
	U Fact	SHGC	VT
Clear	0.38	0.49	0.49
White	0.38	0.36	0.23
Bronze	0.38	0.36	0.20



Climate Zone	U-Factor <sup>1</sup>	SHGC <sup>2</sup>
Northern	≤ 0.55	Any
North-Central	≤ 0.55	≤ 0.40
South-Central	≤ 0.57	≤ 0.30
Southern	≤ 0.70	≤ 0.30





This REFERENCE GUIDE shows NFRC Certified values for some of our common glazing configurations.

Please contact us if you have a specific glazing requirement not shown here.

# NFRC Thermal Properties REFERENCE GUIDE

## 4000 Vertical Wall

rev. 8/19/2010



### 1" O.A. - TEMP / TEMP

	Cardinal 272					Cardinal 366					Cardinal 240					Solar Ban 60					Solar Ban 80				
	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)
Clear	0.38	0.36	0.63	0.16	0.55	0.38	0.24	0.56	0.05	0.43	0.38	0.22	0.35	0.16	0.35	0.38	0.34	0.63	0.21	0.56	0.38	0.21	0.42	0.13	0.37
White	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Grey	0.38	0.33	0.43	0.11	0.38	0.38	0.26	0.38	0.03	0.30	0.38	0.34	0.24	0.10	0.24	0.38	0.31	0.43	0.13	0.39	0.38	0.20	0.28	0.08	0.26
Bronze	0.38	0.35	0.47	0.10	0.39	0.38	0.28	0.42	0.03	0.31	0.38	0.36	0.26	0.09	0.25	0.38	0.33	0.47	0.13	0.40	0.38	0.21	0.31	0.08	0.27
Evergreen	0.38	0.32	0.53	0.08	0.43	0.38	0.28	0.48	0.02	0.34	0.38	0.32	0.30	0.07	0.27	0.38	0.26	0.46	0.05	0.35	0.38	0.22	0.36	0.06	0.29
Caribia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.38	0.26	0.47	0.08	0.41	0.38	0.20	0.31	0.06	0.27

### 1" O.A. - TEMP / LAM

	Cardinal 272					Cardinal 366					Cardinal 240					Solar Ban 60					Solar Ban 80				
	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)
Clear	0.38	0.36	0.61	0.00	0.45	0.38	0.24	0.55	0.00	0.39	0.38	0.22	0.34	0.00	0.28	0.38	0.34	0.61	0.00	0.47	-	-	-	-	-
White	0.38	0.34	0.44	0.01	0.34	0.38	0.22	0.40	0.00	0.28	0.38	0.21	0.24	0.01	0.21	0.38	0.32	0.44	0.01	0.34	-	-	-	-	-
Grey	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.38	0.31	0.42	0.01	0.26	-	-	-	-	-
Bronze	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.38	0.33	0.47	0.01	0.25	0.38	0.21	0.31	0.01	0.17
Evergreen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.38	0.31	0.53	0.01	0.42	0.38	0.22	0.36	0.01	0.28
Caribia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.38	0.26	0.47	0.01	0.45	-	-	-	-	-

### 1" O.A. - 1/4" TEMP / 1/4" (LAM, FTL, SGP)

	Cardinal 272					Cardinal 366					Cardinal 240					Solar Ban 60					Solar Ban 80				
	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)
Clear	0.38	0.35	0.60	0.00	0.45	0.38	0.24	0.54	0.00	0.38	0.38	0.21	0.32	0.00	0.27	0.38	0.33	0.60	0.00	0.47	0.38	0.21	0.41	0.00	0.32
White	0.38	0.33	0.43	0.01	0.33	0.38	0.23	0.39	0.00	0.27	0.38	0.20	0.23	0.01	0.20	0.38	0.31	0.44	0.01	0.34	0.38	0.20	0.30	0.01	0.23
Grey	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.38	0.31	0.42	0.01	0.26	0.38	0.21	0.28	0.00	0.17
Bronze	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.38	0.27	0.37	0.01	0.25	0.38	0.18	0.24	0.01	0.17
Evergreen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.38	0.26	0.45	0.01	0.41	0.38	0.19	0.30	0.01	0.28
Caribia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.38	0.26	0.47	0.01	0.45	0.38	0.20	0.31	0.01	0.30

### 1-5/16" O.A. TRIPLE GLAZED

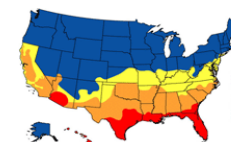
	T / T / T - Cardinal 272					T / T / L - Cardinal 272				
	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)	U Fact	SHGC	VT	Tuv	T <sub>DW</sub> (ISO)
Clear	0.23	0.29	0.50	0.05	0.40	0.23	0.29	0.49	0.00	0.35
White	-	-	-	-	-	0.23	0.28	0.35	0.00	0.26
Grey	0.23	0.27	0.34	0.04	0.28	-	-	-	-	-
Bronze	0.23	0.28	0.37	0.04	0.29	-	-	-	-	-
Evergreen	0.23	0.27	0.42	0.03	0.32	-	-	-	-	-

More Triple Glazed options are shown on the Triple Glazed Reference.

ENERGY STAR compliance in the Northern Climate Zone.

### PLASTIC GLAZING

	25mm Multi-Wall		
	U Fact	SHGC	VT
Clear	0.37	0.50	0.50
White	0.37	0.36	0.23
Bronze	0.37	0.36	0.21



Climate Zone	U-Factor <sup>1</sup>	SHGC <sup>2</sup>
Northern	≤ 0.55	Any
North-Central	≤ 0.55	≤ 0.40
South-Central	≤ 0.57	≤ 0.30
Southern	≤ 0.70	≤ 0.30

