



Thermal Performance Data

Premium Push Out Casement Windows - Operating (8217)

WEATHER SHIELD.

WINDOWS & DOORS

US Qualification Criteria	Climate Zone	U-Value	SHGC	
 <p>Energy Star Version 7.0 Starting October 2023</p>	Northern	<=0.22	>=0.17	Prescriptive
		=0.23	>=0.35	Equivalent Energy Performance
		=0.24	>=0.40	
		=0.25		
		=0.26		
	North-Central	<=0.25	<=0.40	
South-Central	<=0.28	<=0.23		
Southern	<=0.32	<=0.23		

Canadian Qualification Criteria	U-Value	or	Energy Rating
 <p>Energy Star Version 5.0 starting January 2020</p>	<=1.22		>=34
	Air Leakage <= 1.5 L/s/m2		

U-Value

A measurement of how much energy a material conducts. The lower the U-Value, the greater the insulating effect.

Solar Heat Gain Coefficient (SHGC)

Measures how well a window or door prevents heat from passing through it. The lower a window or door's SHGC, the less heat it allows to pass through it.

Visible Light Transmittance

The amount of light in the visible portion of the spectrum that passes through a glazing material.

Condensation Resistance Rating

Measures how well a window resists the formation of condensation on the inside surface. The higher the number the better resistance to condensation.

Energy Rating

A value demonstrating the balance between U-Value, SHGC and air leakage. The higher the number, the more efficient the product.

R-Value

A measurement of how much a material resists heat transfer. A higher R-Value means a greater insulating effect and a lower rate of heat flow out of the home. While **R-value** measures resistance to heat transfer, **U-value** measures the rate of heat transfer. In simple terms, **U-value** is the mathematical reciprocal of **R-value**; that is, **U = 1/R and R = 1/U**.

^a Total Unit calculations are derived from computer simulations that are then verified by 3rd party testing in accordance with NFRC 100, NFRC 200, and NFRC 500.

^b Published values reflect 3mm glass lite thicknesses.

ENERGY PERFORMANCE DATA													CANADIAN ENERGY PERFORMANCE DATA				
Premium Push Out Casement Windows - Operating (8217)													ENERGY STAR				
Grille Option	Glazing thickness	NFRC Total Unit Calculations Glazing Option	CPD #	U-Value	Solar Heat Gain Coefficient	Visible Light Transmittance	Condensation Resistance Rating	US ENERGY STAR V 7.0				U-Value (metric)	Maximum Air Leakage L/s/m2	Air Infiltration/Exfiltration Average	Energy Rating	CANADA ENERGY STAR v5.0	
								N	NC	SC	S						
No GIA or SDL	3/4"	Clear Insul	WEA-N-292-01416-00001	0.46	0.54	0.56	43					2.61	1.5	0.11	14		
	3/4"	Insul Low-E	WEA-N-292-01417-00001	0.34	0.29	0.49	54					1.93	1.5	0.11	14		
	3/4"	Insul Low E w/Argon	WEA-N-292-01425-00001	0.31	0.29	0.49	57					1.76	1.5	0.11	18		
	3/4"	Passive Solar	WEA-N-292-01420-00001	0.35	0.47	0.54	54					1.99	1.5	0.11	23		
	3/4"	Passive Solar w/Argon	WEA-N-292-01428-00001	0.32	0.48	0.54	57					1.82	1.5	0.11	28		
	3/4"	Passive Solar Extreme	WEA-N-292-01421-00001	0.30	0.43	0.53	42					1.70	1.5	0.11	27		
	3/4"	Passive Solar Extreme w/Argon	WEA-N-292-01429-00001	0.28	0.43	0.53	45					1.59	1.5	0.11	30		
	3/4"	Zo-e-shield 5	WEA-N-292-01418-00001	0.34	0.20	0.44	55					1.93	1.5	0.11	9		
	3/4"	Zo-e-shield 5 w/ Argon	WEA-N-292-01426-00001	0.30	0.19	0.44	58				Y	1.70	1.5	0.11	14		
	3/4"	Zo-e-shield 5 Extreme	WEA-N-292-01419-00001	0.29	0.19	0.43	43				Y	1.65	1.5	0.11	15		
	3/4"	Zo-e-shield 5 Extreme w/ Argon	WEA-N-292-01427-00001	0.27	0.19	0.43	46			Y	Y	1.53	1.5	0.11	17		
	1"	Zo-e-shield 6	WEA-N-292-01542-00001	0.33	0.19	0.44	55					1.87	1.5	0.11	10		
	1"	Zo-e-shield 6 w/ Argon	WEA-N-292-01550-00001	0.30	0.19	0.44	58				Y	1.70	1.5	0.11	14		
	1"	Zo-e SafeGuard Certified	WEA-N-292-01547-00001	0.33	0.19	0.43	56					1.87	1.5	0.11	10		
	1"	Zo-e SafeGuard Certified w/ Argon	WEA-N-292-01555-00001	0.30	0.19	0.43	59				Y	1.70	1.5	0.11	14		
	1"	Zo-e-shield 7	WEA-N-292-01480-00001	0.27	0.18	0.35	63			Y	Y	1.53	1.5	0.11	17		
	1"	Zo-e-shield 7 w/ Argon	WEA-N-292-01498-00001	0.24	0.18	0.35	67			Y	Y	Y	1.36	1.5	0.11	20	
	3/4"	Insul Low-E 240	WEA-N-292-01422-00001	0.34	0.18	0.27	54					1.93	1.5	0.11	8		
	3/4"	Insul Low-E 240 w/Argon	WEA-N-292-01430-00001	0.31	0.18	0.27	57				Y	1.76	1.5	0.11	12		
	3/4"	Insul Low-E 340	WEA-N-292-01423-00001	0.34	0.13	0.27	55					1.93	1.5	0.11	5		
3/4"	Insul Low-E 340 w/Argon	WEA-N-292-01431-00001	0.31	0.13	0.27	58				Y	1.76	1.5	0.11	9			
3/4"	Bronze Low E	WEA-N-292-01417-00011	0.34	0.28	0.36	54					1.93	1.5	0.11	14			
3/4"	Bronze Low E w/Argon	WEA-N-292-01425-00011	0.31	0.28	0.36	57					1.76	1.5	0.11	17			
Less Than 1" GIA or SDL	3/4"	Clear Insul	WEA-N-292-01416-00002	0.46	0.49	0.51	43					2.61	1.5	0.11	11		
	3/4"	Insul Low-E	WEA-N-292-01417-00002	0.34	0.27	0.44	54					1.93	1.5	0.11	13		
	3/4"	Insul Low E w/Argon	WEA-N-292-01425-00002	0.31	0.26	0.44	57					1.76	1.5	0.11	16		
	3/4"	Passive Solar	WEA-N-292-01420-00002	0.35	0.43	0.49	54					1.99	1.5	0.11	21		
	3/4"	Passive Solar w/Argon	WEA-N-292-01428-00002	0.32	0.43	0.49	57					1.82	1.5	0.11	25		
	3/4"	Passive Solar Extreme	WEA-N-292-01421-00002	0.30	0.39	0.48	42					1.70	1.5	0.11	25		
	3/4"	Passive Solar Extreme w/Argon	WEA-N-292-01429-00002	0.28	0.39	0.48	45					1.59	1.5	0.11	27		
	3/4"	Zo-e-shield 5	WEA-N-292-01418-00002	0.34	0.18	0.40	55					1.93	1.5	0.11	8		
	3/4"	Zo-e-shield 5 w/ Argon	WEA-N-292-01426-00002	0.30	0.18	0.40	58				Y	1.70	1.5	0.11	13		
	3/4"	Zo-e-shield 5 Extreme	WEA-N-292-01419-00002	0.29	0.18	0.39	43				Y	1.65	1.5	0.11	14		
	3/4"	Zo-e-shield 5 Extreme w/ Argon	WEA-N-292-01427-00002	0.27	0.17	0.39	46			Y	Y	1.53	1.5	0.11	16		
	1"	Zo-e-shield 6	WEA-N-292-01542-00002	0.33	0.18	0.39	55					1.87	1.5	0.11	9		
	1"	Zo-e-shield 6 w/ Argon	WEA-N-292-01550-00002	0.30	0.18	0.39	58				Y	1.70	1.5	0.11	13		
	1"	Zo-e SafeGuard Certified	WEA-N-292-01547-00002	0.33	0.18	0.39	56					1.87	1.5	0.11	9		
	1"	Zo-e SafeGuard Certified w/ Argon	WEA-N-292-01555-00002	0.30	0.17	0.39	59				Y	1.70	1.5	0.11	12		
	1"	Zo-e-shield 7	WEA-N-292-01481-00001	0.28	0.16	0.32	63			Y	Y	1.59	1.5	0.11	14		
	1"	Zo-e-shield 7 w/ Argon	WEA-N-292-01499-00001	0.25	0.16	0.32	67			Y	Y	Y	1.42	1.5	0.11	18	
	3/4"	Insul Low-E 240	WEA-N-292-01422-00002	0.34	0.17	0.25	54					1.93	1.5	0.11	7		
	3/4"	Insul Low-E 240 w/Argon	WEA-N-292-01430-00002	0.31	0.16	0.25	57				Y	1.76	1.5	0.11	10		
	3/4"	Insul Low-E 340	WEA-N-292-01423-00002	0.34	0.12	0.24	55					1.93	1.5	0.11	4		
3/4"	Insul Low-E 340 w/Argon	WEA-N-292-01431-00002	0.31	0.12	0.24	58				Y	1.76	1.5	0.11	8			
3/4"	Bronze Low E	WEA-N-292-01417-00012	0.34	0.25	0.33	54					1.93	1.5	0.11	12			
3/4"	Bronze Low E w/Argon	WEA-N-292-01425-00012	0.31	0.25	0.33	57					1.76	1.5	0.11	16			
1" Or Over GIA or SDL	3/4"	Clear Insul	WEA-N-292-01416-00005	0.46	0.44	0.46	43					2.61	1.5	0.11	8		
	3/4"	Insul Low-E	WEA-N-292-01417-00005	0.34	0.24	0.40	54					1.93	1.5	0.11	11		
	3/4"	Insul Low E w/Argon	WEA-N-292-01425-00005	0.31	0.24	0.40	57					1.76	1.5	0.11	15		
	3/4"	Passive Solar	WEA-N-292-01420-00005	0.35	0.39	0.44	54					1.99	1.5	0.11	19		
	3/4"	Passive Solar w/Argon	WEA-N-292-01428-00005	0.32	0.39	0.44	57					1.82	1.5	0.11	22		
	3/4"	Passive Solar Extreme	WEA-N-292-01421-00005	0.30	0.36	0.43	42					1.70	1.5	0.11	23		
	3/4"	Passive Solar Extreme w/Argon	WEA-N-292-01429-00005	0.28	0.36	0.43	45					1.59	1.5	0.11	26		
	3/4"	Zo-e-shield 5	WEA-N-292-01418-00005	0.34	0.16	0.36	55					1.93	1.5	0.11	7		
	3/4"	Zo-e-shield 5 w/ Argon	WEA-N-292-01426-00005	0.30	0.16	0.36	58				Y	1.70	1.5	0.11	12		
	3/4"	Zo-e-shield 5 Extreme	WEA-N-292-01419-00005	0.29	0.16	0.35	43				Y	1.65	1.5	0.11	13		
	3/4"	Zo-e-shield 5 Extreme w/ Argon	WEA-N-292-01427-00005	0.27	0.16	0.35	46			Y	Y	1.53	1.5	0.11	16		
	1"	Zo-e-shield 6	WEA-N-292-01542-00005	0.33	0.16	0.35	55					1.87	1.5	0.11	8		
	1"	Zo-e-shield 6 w/ Argon	WEA-N-292-01550-00005	0.30	0.16	0.35	58				Y	1.70	1.5	0.11	12		
	1"	Zo-e SafeGuard Certified	WEA-N-292-01547-00005	0.33	0.16	0.35	56					1.87	1.5	0.11	8		
	1"	Zo-e SafeGuard Certified w/ Argon	WEA-N-292-01555-00005	0.30	0.16	0.35	59				Y	1.70	1.5	0.11	12		
	1"	Zo-e-shield 7	WEA-N-292-01481-00004	0.28	0.15	0.29	63			Y	Y	1.59	1.5	0.11	14		
	1"	Zo-e-shield 7 w/ Argon	WEA-N-292-01499-00004	0.25	0.15	0.29	67			Y	Y	Y	1.42	1.5	0.11	17	
	3/4"	Insul Low-E 240	WEA-N-292-01422-00005	0.34	0.15	0.22	54					1.93	1.5	0.11	6		
	3/4"	Insul Low-E 240 w/Argon	WEA-N-292-01430-00005	0.31	0.15	0.22	57				Y	1.76	1.5	0.11	10		
	3/4"	Insul Low-E 340	WEA-N-292-01423-00005	0.34	0.11	0.22	55					1.93	1.5	0.11	4		
3/4"	Insul Low-E 340 w/Argon	WEA-N-292-01431-00005	0.31	0.11	0.22	58				Y	1.76	1.5	0.11	8			
3/4"	Bronze Low E	WEA-N-292-01417-00015	0.34	0.23	0.29	54					1.93	1.5	0.11	11			
3/4"	Bronze Low E w/Argon	WEA-N-292-01425-00015	0.31	0.23	0.29	57				Y	1.76	1.5	0.11	15			