

*(Effective until July 1, 2020)*

WAC 51-11C-402300 Table C402.4—Building envelope requirements—Fenestration.

**Table C402.4  
Building Envelope Fenestration Maximum U-factor and SHGC Requirements**

CLIMATE ZONE	5 AND MARINE 4	
<b>Vertical Fenestration</b>		
<b>U-factor</b>		
Nonmetal framing (all) <sup>a</sup>	0.30	
Metal framing (fixed) <sup>b</sup>	0.38	
Metal framing (operable) <sup>c</sup>	0.40	
Metal framing (entrance doors) <sup>d</sup>	0.60	
<b>SHGC</b>		
Orientation	SEW	N
PF < 0.2	0.40	0.53
0.2 < PF < 0.5	0.48	0.58
PF > 0.5	0.64	0.64
<b>Skylights</b>		
<b>U-factor</b>	0.50	
<b>SHGC</b>	0.35	

NR = No requirement.

<sup>a</sup> "Nonmetal framing" includes framing materials other than metal, with or without metal reinforcing or cladding.

<sup>b</sup> "Metal framing" includes metal framing, with or without thermal break. "Fixed" includes curtain wall, storefront, picture windows, and other fixed windows.

<sup>c</sup> "Metal framing" includes metal framing, with or without thermal break. "Operable" includes openable fenestration products other than "entrance doors."

<sup>d</sup> "Metal framing" includes metal framing, with or without thermal break. "Entrance door" includes glazed swinging entrance doors. Other doors which are not entrance doors, including sliding glass doors, are considered "operable."

[Statutory Authority: RCW 19.27A.025, 19.27A.160, and 19.27.074. WSR 16-03-072, § 51-11C-402300, filed 1/19/16, effective 7/1/16. Statutory Authority: RCW 19.27A.020, 19.27A.025 and chapters 19.27 and 34.05 RCW. WSR 13-04-056, § 51-11C-402300, filed 2/1/13, effective 7/1/13.]

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CLIMATE ZONE	5 AND MARINE 4	
<b>U-factor for Class AW windows rated in accordance with AAMA/CSA101/I.S.2/A440, vertical curtain walls and site-built fenestration products<sup>a</sup></b>		
Fixed <sup>b</sup> U-factor	U-0.38	
Operable <sup>c</sup> U-factor	U-0.40	
<b>Entrance doors<sup>d</sup></b>		
U-factor	U-0.60	
<b>U-factor for all other vertical fenestration</b>		
U-factor	U-0.30	
<b>SHGC for all vertical fenestration</b>		
Orientation <sup>e,f</sup>	SEW	N
PF < 0.2	0.38	0.51
0.2 ≤ PF < 0.5	0.46	0.56
PF ≥ 0.5	0.61	0.61
<b>Skylights</b>		
U-factor	U-0.50	
SHGC	0.35	

<sup>a</sup> U-factor and SHGC shall be rated in accordance with NFRC 100.

<sup>b</sup> "Fixed" includes curtain wall, storefront, picture windows, and other fixed windows.

<sup>c</sup> "Operable" includes openable fenestration products other than "entrance doors."

<sup>d</sup> "Entrance door" includes glazed swinging entrance doors. Other doors which are not entrance doors, including sliding glass doors, are considered "operable."

<sup>e</sup> "N" indicates vertical fenestration oriented within 30 degrees of true north. "SEW" indicates orientations other than "N."

<sup>f</sup> Fenestration that is entirely within the conditioned space or is between conditioned and other enclosed space is exempt from solar heat gain coefficient requirements and not included in the SHGC calculation.

[Statutory Authority: RCW 19.27A.020, 19.27A.025, 19.27A.160 and chapter 19.27 RCW. WSR 19-24-040, § 51-11C-402300, filed 11/26/19, effective 7/1/20. Statutory Authority: RCW 19.27A.025, 19.27A.160, and 19.27.074. WSR 16-03-072, § 51-11C-402300, filed 1/19/16, effective 7/1/16. Statutory Authority: RCW 19.27A.020, 19.27A.025 and chapters 19.27 and 34.05 RCW. WSR 13-04-056, § 51-11C-402300, filed 2/1/13, effective 7/1/13.]