



**Technical Bulletin  
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**Low E Glass Products**

The American Institute of Architects lists two major categories of Low E glass in their Standard Specification: Passive Solar Low E Glass and Solar Control Low E Glass. All Low E products will fall into one of these two categories.

**Passive Solar Low E Glass**

These products are defined as having a U-Factor of 0.40 or less, and a Solar Heat Gain Coefficient greater than 0.40. **These products are intended for cold climates where heating is the major concern.** The following are Passive Solar Low E Glass products:

Cardinal Lo E 178  
Guardian LE – 63  
Pilkington Energy Advantage Low E  
Pilkington Solar E  
PPG Sungate 100  
PPG Sungate 500

**Solar Control Low E Glass**

These products are defined as having a U-Factor of 0.40 or less, and a Solar Heat Gain Coefficient of 0.40 or less. **These products are intended for hot climates where air conditioning is the major concern.** The following are Solar Control Low E Glass products:

AFG Ti-AC 36  
Cardinal Lo E<sup>2</sup> 171 or 172  
Guardian SN – 68  
PPG Solarban 60  
PPG Solarban 70  
PPG Solarban z50

**Edge Deletion**



The “active” ingredient in most Solar Control coatings is silver. The coating needs to be protected from moisture so the silver won’t oxidize and turn black. Since moisture can attack the silver at the edge of the glass, the coating must be stripped off the edge of the glass with an abrasive wheel. This allows the IG sealant to protect the coating from moisture and prevent failure. This “edge deletion” will be visible at the sealant line; if the unit is properly glazed, it will not show past the glazing stops.

### **Spacer Sight Line**

All Solar Control coatings must be dual sealed to minimize the possibility of coating failure. Residential window designs that don’t meet IGMA requirements for glazing pocket depth may not hide the spacer bar. Exposure of the secondary sealant will cause accelerated seal failure that is not covered by the product warranty.

### **Color of the Coating**

Most Low E coatings look like clear glass; however, none of them match clear glass, nor do they match each other. One coating cannot be substituted for any other when making replacement units. Vitro America regularly stocks Pilkington Energy Advantage Low E, PPG Sungate 500, PPG Solarban 60, PPG Solarban 70, Guardian PP2 and AFG Ti-36. All of these products have slightly different colors. However, Vitro America does not know of any way to identify a Low E coating by its appearance. The building owner must keep good records so the correct replacements can be ordered.

### **Reflectivity**

Some products that are listed as “Low E” by their manufacturer have very high levels of visible light reflection. Any glass product that has a visible light reflectance (VLR) that exceeds 16% is likely to be classified as “reflective” glass by the consumer. The building owner and the architect should view samples of these highly reflective products before they are glazed in the building.

### **Grids**

Grids are not recommended with any vacuum coated Low E glass. Movement of the glass during transportation and by the effects of wind and atmospheric pressure after installation may cause the grids to scratch or abrade the coating. Vitro America will not be responsible for complaints about appearance when grids are used with vacuum coatings.



Vitro America personnel are available to discuss technical issues concerning the proper use of our glass products. Please call our Order Department for help. If needed, your call may be transferred to the Technical Services Department for more detailed information.

