

Triple-IGU Features/Benefits Comparison (1¼-inch total IGU thickness)

Building on decades of proven technology and performance, **Sungate® 400** passive low-e glass is engineered to meet Canadian ENERGY STAR® requirements, as well as the increasingly rigorous demands for energy-efficient windows in northern U.S. climates.

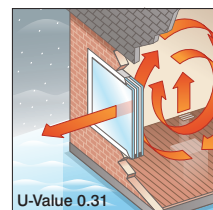
By providing excellent nighttime U-values, **Sungate 400** glass helps homes trap furnace heat in the winter more effectively than comparable insulating glass units fabricated with clear glass. **Sungate 400** glass also cultivates a feeling of warmth and comfort by transmitting high levels of daylight. In the spring and summer, **Sungate 400** glass continues to promote lower energy costs by diminishing demand for air-conditioning and artificial lighting.

Warmer in Winter

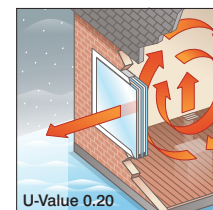
The winter nighttime U-Value (insulating value) of a triple-glazed insulating unit with **Sungate 400** glass on the third (3) and fifth (5) surfaces is up to **48%** better than the same unit made with clear insulating glass.

- Lower U-values mean higher performance
- Reduces furnace heat loss
- Helps reduce heating energy costs

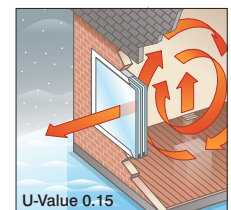
Standard Clear Insulating Glass



Sungate 400 (3) Insulating Glass



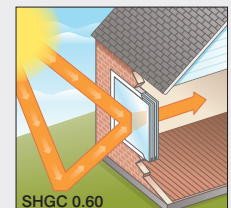
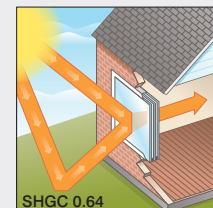
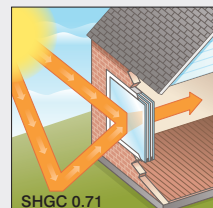
Sungate 400 (3)/(5) Insulating Glass



Warmer During Winter Daylight

The total solar energy transmitted through **Sungate 400 (3)/(5)** glass is only **15%** less than that transmitted through a clear triple-glazed insulating unit.

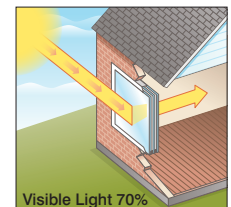
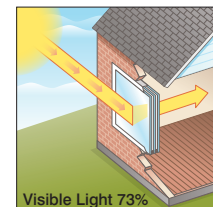
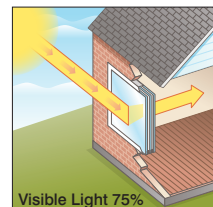
- Higher SHGC numbers mean more solar heat gain
- Helps keep interiors warmer
- Helps reduce heating energy costs



Transmits Visible Light/Appearance

Insulating units with **Sungate 400 (3)/(5)** glass transmit about **93%** as much visible light as a clear triple-glazed insulating unit.

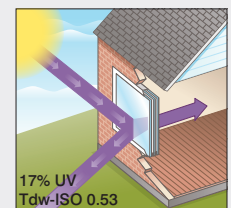
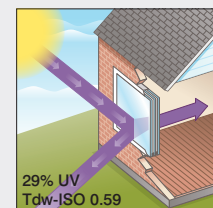
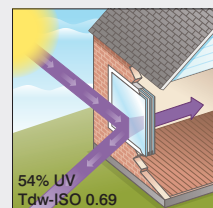
- Interior light from the sun not reduced dramatically versus clear glass
- Provides exterior appearance similar to clear glass



Fading Factors

While **Sungate 400 (3)/(5)** glass blocks **69%** of damaging UV energy, it also blocks other contributors to fading – in all, **23%** better than a clear triple-glazed insulating unit.

- Helps protect interior furnishings, fabrics and carpets from fading



Note: Tdw-ISO represents potential fading damage caused by both UV and visible light. It is considered by the U.S. Department of Energy and the International Standards Organization (ISO) to be a more accurate barometer of fade resistance than UV transmittance alone. All comparisons are center of glass based on an insulating unit containing 1¼" (overall dimension) insulating units with three 3/32" (2.5mm) glass lites and two ½" (12mm) air-filled spaces for the triple-glazed Sungate® 400 insulating glass units. Actual glass performance may differ due to glass thickness, gas fill and glass to frame ratio.

Solar Heat Gain Coefficient (SHGC) measures how well a window blocks (or shades) the heat from sunlight. SHGC is the fraction of solar radiation transmitted through a window, as well as the amount that is absorbed by the glass and reradiated to the interior. Figures may vary due to manufacturing tolerances. All tabulated data are based on the National Fenestration Rating Council (NFRC) methodology, using the Lawrence Berkeley National Laboratory's Window 7.4 software.



Vitro customers use our products to manufacture Energy Star compliant windows, doors and skylights.

