

EcoTherm®

Insulated Glass Units
for Energy Savings
and Comfort

ECOTHERM® INSULATED GLASS UNITS

Defining
Spaces.



G.JAMES

FEATURES

- Excellent Thermal Performance
- Improves Occupant Comfort
- Noise Control
- Energy Efficiency



EcoTherm®

The ultimate window solutions start with EcoTherm®

The increasing emphasis on energy savings demands higher performing glass be used in all residential and commercial buildings. G.James EcoTherm® range of insulated glass units provide options to meet any aesthetic and thermal performance requirements.

An insulated glass unit consists of two or more panes of glass separated by an aluminium spacer and hermetically sealed. The entrapped air remains at atmospheric pressure while the desiccant located within the spacer prevents condensation from forming inside the unit.

EcoTherm® units improve occupant comfort by reducing the flow of heat from inside to the outside and vice versa, depending on the season. This is achieved by the airspace between the glass panes diffusing the transfer of heat and creating insulation properties almost twice that of a single pane of glass.

PROCESS

Insulated glass units are produced on a vertical production line where cut-to-size glass is thoroughly washed and dried prior to being inspected to ensure the glass is clean and free from defects.

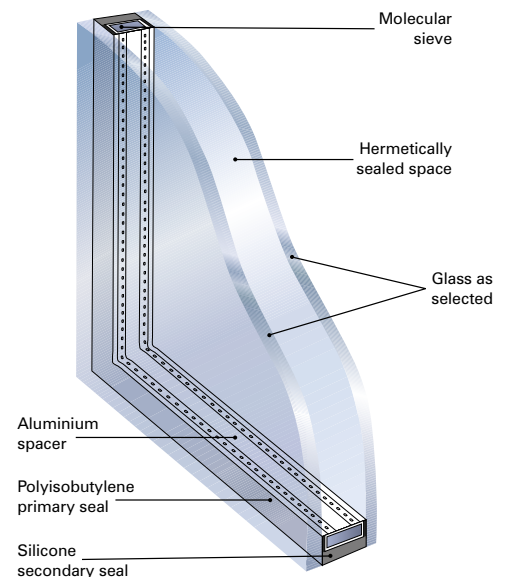
A hollow length of aluminium spacer bar is made to size by bending it at the corners into a rectangular shape and joined along one edge. The spacer is then filled with a desiccant (molecular sieve) to prevent condensation occurring within the sealed unit.

Polyisobutylene (PIB) is then applied to both sides of the aluminium spacer providing the primary seal and is an excellent moisture and vapour barrier.

The spacer is then positioned on one of the lites of glass before the second lite is inspected and paired up automatically on the production line. The paired unit is then pressed to ensure a good seal is achieved between glass and spacer before a secondary seal of silicone is applied to the void around the perimeter of the unit. This secondary seal provides a structural bond to hold the unit together as well as assisting in reducing the ingress of moisture and vapour.

PERFORMANCE OPTIONS

Low-E coatings work by reflecting long wave infrared heat back to the source. Heat always flows towards cold, a Low-E coating reduces this transfer of heat (loss or gain) in winter or summer. The transfer of heat is measured in U Value (W/m^2C) with the lower the number, the better the performance. Some Low-E coatings also reflect a significant amount of short wave infrared energy which results in a lower solar heat gain coefficient (SHGC).



For improved thermal or acoustic performance normal air within the unit can be replaced with a gas such as Argon. This gas is inserted into the unit automatically online or manually offline.

Incorporating laminated glass into a EcoTherm® unit will reduce ultraviolet (UV) transmittance by greater than 99%.

G.James are members of the Insulated Glass Manufacturers Affiliation (IGMA) and are committed to producing high quality insulated glass units for the Australian market.



RANGE

EcoTherm

EcoTherm® insulated glass units incorporate a clear, tinted Low-E or a reflective Low-E coating. The addition of a Low-E coating significantly improves the thermal performance of the unit when compared to that offered in an uncoated unit.

Features

- Superior life dual seal unit - Polyisobutylene (PIB) primary seal and silicone secondary seal
- Improved acoustic performance
- Units incorporate a range of on-line Low-E glass with including the Solect laminate range, clear or tinted components
- Improved thermal performance
 - Lower SHGC
 - Lower U Value
- Provides better occupant comfort
- Improved energy efficiency
- Suitable for both commercial and residential applications

ADVANTAGES

- Superior performance and Shorter supply time
- Available in a range of tones* Clear, Grey, Light Grey, Green, Bronze, Blue, Dark Green

EcoTherm DLE52 and Solar ban

EcoTherm® DLE52 and Solar ban insulated glass units incorporate a post-temperable Low-E coating into the unit. These coatings are the highest performing Low-E coatings available and provide significant improvement to the thermal performance of the unit compared to that offered in the EcoTherm® range.

Features

- Superior life dual seal unit - Polyisobutylene (PIB) primary seal and silicone secondary seal
- Improved acoustic performance
- Units incorporate DLE52 or Solar ban range of off-line high performance Low-E glass with clear or tinted components
- Superior thermal performance
 - Lower SHGC
 - Lower U Value
- Provides superior occupant comfort
- Maximum energy efficiency
- Suitable for both commercial and residential applications

APPLICATIONS

- Windows and Doors (Residential & commercial), Façades and Shopfronts



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