

# Innovation Beyond Double Glazing



FIREGUARD 40™ SERIES

# Innovation driven by passion



Innovation is what makes Miglas High Performance Windows unique and passion drives their development.

A passion to embrace energy efficiency led Miglas to establish a separate enterprise within their already successful company to develop sustainable double glazed windows and doors. That was over 20 years ago now and established Miglas as industry leaders, it presented an opportunity to introduce new technology, an opportunity to be innovative.

Miglas;

- the first to capture the advantage of ALI-CLAD composite timber-aluminium framing
- the first to integrate and use performance hardware designed exclusively for double glazing efficiency
- the first to dedicate their business to windows and doors made to manage our Australian environmental challenges.

Today through the release of Fireguard 40™ Miglas products continue to evolve and maintain market leadership.

The "Miglas difference" is ever present as is their ability to rise to any architectural challenge demanded by project requirements.

# On Guard



**NEW**  
MIGLAS FIREGUARD 40™

**FIRST**  
FULLY TESTED UNSCREENED  
BUSHFIRE RESISTANCE WINDOW

**FIRST**  
WINDOW USING VIRIDIAN  
PYROGUARD 40™ GLAZING

## MIGLAS FIREGUARD 40™

- The first window and door product in Australia to be fully tested to AS 1530.8.1 to comply with the requirements of AS 3959: 2009 by a NATA accredited laboratory\*
- The first window and door system available in Australia to provide a complete bushfire resistance solution for up to and including, BAL-40
- No need for external screens or special up-stands
- Available in a range of sizes up to 2400mm x 2600mm per IGU - 6m<sup>2</sup>
- 100% developed, designed and manufactured in Australia
- Timber-aluminium composite frames protect from ignition and provide thermal insulation and stability
- Incorporates the new Viridian PyroGuard 40™ Insulating Glass Unit (IGU) from Australia's only glass manufacturer
- Miglas FireGuard 40™ Bushfire resistant double glazed windows work twice as hard – guaranteeing protection plus maximum energy performance
- Wide product range including awning windows, casement windows, fixed windows, hinged doors and sliding doors
- Allows for natural light, ventilation and unobstructed views
- Helps provide a safe environment without compromising on design and efficiency
- Available Australia wide

\*As at the 5th Oct 2009, Exova Warringtonfire Aus Pty Ltd Dandenong Victoria, are the only laboratory accredited by NATA (National Association of Testing Authorities) to test AS 1530.8.1

# Innovation delivers Unique Design

With years of experience supplying double glazed joinery to Australian alpine regions Miglas had a deep understanding of both energy and climate issues.

It became obvious that sustainable energy efficiency went far beyond double glazing. Research into the failings of both timber and aluminium windows showed that remarkably where each of these proven materials had its weakness the other had its strength.

When combined they provided the ultimate window design for Australian conditions; named ALI-CLAD.

Extensive research on bushfire resistance confirmed that the sustainable material selection proved equally advantageous in developing FireGuard 40™.



## MODERN STYLISH EXTERIOR

### ALUMINIUM FOR DURABILITY & STABILITY

- contemporary architectural extrusions
- freedom of colour choice to suit exterior finishes
- free yourself of painting
- full facade capability

### HIGH PERFORMANCE INSULATING DOUBLE GLAZING UNITS

- optimum energy efficiency ratings
- Viridian Pyroguard 40™ glazing

### SUPERIOR SEALING SYSTEM

- concealed double sash seals
- latest TPE and silicone seal technology

### BEATING THE ELEMENTS

- low maintenance
- best performance ratings
- all Australian conditions

### INSTALLATION/FLASHING

- clip in nailing fin attachment
- project specific brackets

Miglas FireGuard 40™ is an enduring design concept. All parameters will stand the test of time as will the FireGuard 40™ tested against bushfire attacks and other challenges of climate change.

**It became evident that the use of double glazing not only provided high thermal efficiency but also a double barrier against bushfire and ember attacks.**

**In partnership with glass manufacturer Viridian; Miglas have introduced a double glazing solution that provides bushfire resistance without compromising the outstanding energy performance.**

The “**Miglas difference**” is not only in the composition of the window and door profiles but carries through to the modular construction, giving great freedom in how you design and combine your windows and doors – add value to your home while you enjoy comfort and protection.

## ELEGANT WARM INTERIOR

### TIMBER FOR STRENGTH & BEAUTY

- natural thermal insulation
- sustainable Australian hardwood
- suitable for all internal finishes

### INTERIOR DECOR

- independent from exterior colours
- colour/finish to suit each room in your home
- difficult to paint areas eliminated

### INTERNALLY GLAZED

- easy glass breakage replacement
- exclusive nail free timber beading

### PREMIUM HARDWARE RANGE

- secure multi-point locking
- fully concealed sash operator
- large sash capability, wide openings

### BUILT IN INSECT SCREENS

- easy to remove, no gaps
- choice of colours
- approved mesh types





# Fulfil your vision

## Styles, Sizes and Performance



### WINDOW STYLES

#### Fixed Windows

Largest sizes without performance loss  
BAL-40 tested to 6m<sup>2</sup>

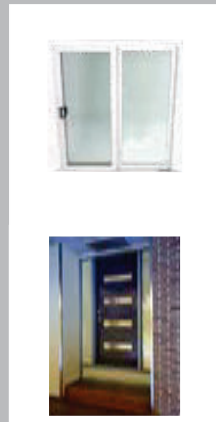
#### Casement Windows

provide the best ventilation option with 90 degree pivot opening  
approved for large openings

#### Awning Windows

provide adequate ventilation in cooler climates and some  
weather protection even when open

Both sash type windows look identical internally and externally and provide a modern contemporary style. They can be fitted with either manual or automated operator options. Multi-point locking hardware combined with ALI-CLAD framing provide large sash capability.



### DOOR STYLES

#### Sliding Doors

Exclusive continuous sealing system, optional self closing insect screen door with concealed operator, stainless steel track with exclusive heavy duty rollers are designed to provide smooth operation, long life and exceptional performance. BAL-40 tested to 2440mm x 2600mm. No needs for additional bottom rails or external screens.

#### Single Hinged • French Double • Centre Hinged

All hinged doors are fully factory assembled into their door frame, security hinged, fitted with up to 7-point locking and optional handles and plates.

### HIGHEST AUSTRALIAN STANDARD RATING

The exceptional strength of the composite profiles and matched hardware systems are crucial to the product performance. In a fire it is not just important that the window withstands ember attack and heat exposure, but also the strong winds that usually occur in a bushfire situation.

The Australian standard starts at N1 ratings for shielded suburban housing, designed for wind loadings at 75kph and for water leakage. To provide optimum protection FireGuard 40™ is tested to withstand wind speeds of 200kph and reaches the maximum ratings of N6/C4 for housing and 3000pa for residential developments.

*How good is the Fireguard 40™ when there is gale force winds and heavy rain as standard?*

The answer is very good. Three times the required minimum. The system passed water penetration testing at simulated speeds of 160kph (1200pa) for windows and 120kph for sliding doors.

## Don't compromise energy efficient comfort for bushfire safety

With Building Codes now defining minimum standards for energy consumption, windows are rated for their thermal efficiency in addition to compliance with relevant Australian Standards. The FireGuard 40™ Series offers exceptional ratings across a range of measurements, ensuring highest performance in the most demanding Australian conditions. The upcoming change to mandatory 6 star efficiency of homes, means that bushfire resistance windows will need to fulfill both energy efficiency and bushfire safety requirements.

### NatHERS House Energy Rating - THERMAL PERFORMANCE

Thermal rating is dominated by the glazing performance. FireGuard 40™ double glazing reduces energy use by more than 70% when compared with single glazed aluminium windows, providing scope to manage both heat gain and heat loss situations.

- Insulated double glazing units (IGU's) provide their best thermal insulation with air gaps between 12-16mm (12mm air gap is 15% more efficient than 6mm) Providing a 24mm IGU allows optimal performance. Pyroguard 40 (U Value = 1.61, SHGC = 0.42). Pyroguard 40 complies with all safety glass requirements.

- Air Leakage dilutes the thermal efficiency rating (usually stated as U Value). A poorly sealed door or sash can leak more energy than it loses through the glass. FireGuard 40™ hardware maintains a constant closing force on the seals ensuring air leakage is negligible and stays that way over time.

- Composite framing derives its thermal efficiency from the naturally insulating quality of timber, yet it provides a highly durable, long life exterior.

### AS 3959: 2009 – BUSHFIRE PERFORMANCE

AS 3959: 2009, Construction of Buildings in Bushfire Prone Areas, was updated earlier this year in response to the devastating bushfires in Victoria. Implemented by Victoria and ACT governments immediately, the standard has been accepted by the Australian Building Codes Board (ABCB) and will be referenced in the Building Code of Australia (BCA) 2010, at which time all other states will be subject to the standard. The new standard expresses a site's danger risk by its Bushfire Attack Level (BAL), which is determined by a five step science-based method as set out in the standard.

(BAL)	RISK
BAL-LOW	Very Low
BAL-12.5	Low
BAL-19	Moderate
BAL-29	High
BAL-40	Very High
BAL-FZ	Extreme

**Miglas FireGuard 40™ provides a tested barrier against fire attacks and allows you to build a home in bushfire prone areas up to BAL-40. There is no need to use external screens, fire rated shutters, huge doors rails or upstands to comply with Building code requirements.**



## MIGLAS DOUBLE-GLAZED ALI-CLAD TIMBER WINDOWS...

..with a powder coated aluminium exterior that never needs painting!  
Eco-friendly comfort in all components – combining energy efficiency  
and low maintenance for truly high performance.

Stay up to date with the latest information and product news visit our homepage [www.bushfirewindows.com.au](http://www.bushfirewindows.com.au)

CALL Miglas today on  
(03) 9728 3999

Visit our showroom at:  
57-59 Canterbury Road/Montrose/VIC (Mel ref 51 K8)/3765 Australia/[www.miglas.com.au](http://www.miglas.com.au)

*This Brochure features an extensive range of Miglas products that are generally available at the time of print. Miglas's passion for constant innovation and improvements means that designs, dimensions, and options may alter without notice.*