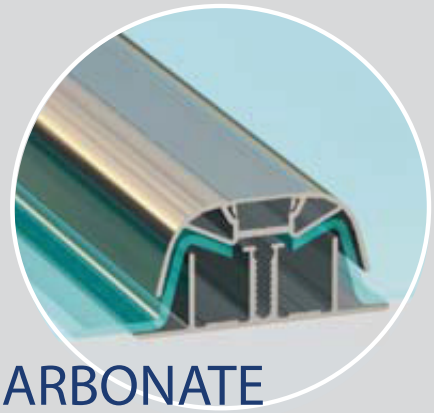
SUNGLAZE™



SOLID POLYCARBONATE STANDING SEAM ARCHITECTURAL SYSTEM

Burnside Plastics
Excellence without Compromise

PALRAM

Creating New Solutions for over 40 Years

www.burnsideplastics.com.au

SUNGLAZE™

Introduction

SUNGLAZE is an architectural glazing system with elegant design and appearance. It offers high versatility, low maintenance and a sustainable design for various architectural challenges. SUNGLAZE incorporates standing-seam profiling and glazing that enable wide spans and high load resistance. It can be specified in various lengths to match various structures, including flat and curved designs.

Main Benefits

- ✔ Glass-like clear appearance
- ✔ Reduce support structure by up to 50%
- ✔ Free thermal expansion
- ✔ Caulking and silicone free
- ✔ Withstanding high loads
- ✔ Easy, fast and safe installation
- ✔ Minimal maintenance
- ✔ 25 year water tight warranty
- ✔ Solarsmart heat reducing technology

Applications

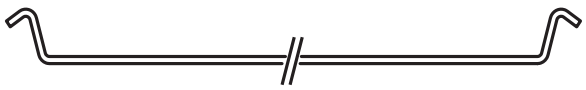
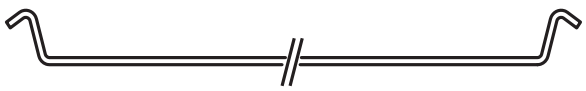
- ✔ Architectural projects
- ✔ Commercial and retail
- ✔ Sport venues roofing
- ✔ Covered walkways
- ✔ Entrances
- ✔ Pool covers

Typical Physical Properties

Property	Method**	Conditions	Units	Value
Density	D-792		g/cm^3	1.2
HDT (Heat Deflection Temperature)	D-648	Load: 1.82Mpa	˚C	135
Vicat softening temperature	D-1525	Load: 1kg	˚C	150
Service temperature - Short term			˚C	-50 to 120
Service temperature - Long term			˚C	-50 to 100
Tensile modulus of elasticity	D-638	1 mm/min	MPa	2,300
Flexural strength	D-790	1 mm/min	MPa	93
Flexural modulus	D-790	1.3 mm/min	MPa	2,600
Notched impact strength Izod	D-256	23˚C	J/m	800
Impact falling weight	ISO 6603/1d	3mm sheet	J	158
Coefficient of linear thermal expansion	D-696		cm/cm ˚C	6.5×10^{-5}
Thermal conductivity	C-177		W/m ˚K	0.21
Specific heat capacity	C-351		kJ/kg ˚K	1.3

**Properties in the table relate to the polycarbonate glazing panels in the SUNGLAZE system.*
***ASTM method except where noted otherwise*

SUNGLAZE™ Panel Dimensions

Type	Thickness	Width	System Cover	Length	Section
4/600	4mm	584mm	600mm	Up to 12m	
4/800	4mm	783mm	800mm	Up to 12m	

**Special widths are available between 600-800mm with guaranteed minimum quantity.*

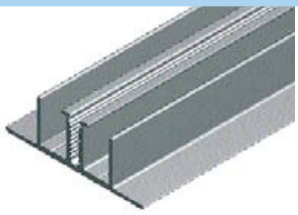
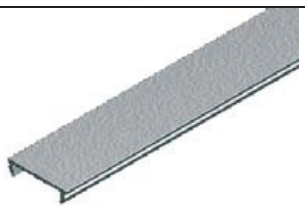
Colours and Solar Properties

Colour	%Light Transmission *ASTM D-1003*	%Haze *ASTM D-1003*	Shading Coefficient *ASTM E-424-71*
Clear	90	<1	1.00
Bronze	20 35 50	<1	0.52 0.64 0.75
Solar Grey	20 35 50	<1	0.51 0.64 0.75
White Opal	28	100	0.35
White Diffuser	80	100	1.00
Solar Control	20	67	0.42
Solar Olympic	20 35 50	<1	0.47 0.60 0.73
Smart Green	70	26	0.69
Smart Grey	60	27	0.66
Smart Blue	50	26	0.65

**Special color matches are available with guaranteed minimum quantity.*

Haze (or Transmission Haze) is the scattering of light by a specimen responsible for the reduction in contrast of objects viewed through it. The percent of transmitted light that is scattered so the light direction deviate's more than a specified angle from the direction of the incident beam. In ASTM D-1003 this angle is 2.5º.

System Components

Component	Part No.	Drawing	Suppliance Data
Base	04		**Length:** Up to 6m **Finish:** Mill/Anodized
Cap	05		**Length:** Up to 6m **Finish:** Mill/Anodized
Cap Plug	06		**Length:** Up to 6m **Finish:** Mill/Anodized
SUNGLAZE 3mm End Closure	07		**Quantity:** 100 Pcs/Box **Finish:** Mill (Natural)
SUNGLAZE 4mm End Closure	08		**Quantity:** 100 Pcs/Box **Finish:** Mill (Natural)
Fixing Screw *Phillips pan-head self-drilling screw 4.8x19mm (3/4")*	09		**Quantity:** 500 Pcs/Box
Locking Screw *Phillips pan-head tapping screw 5.5x19mm (3/4")*	10		**Quantity:** 500 Pcs/Box

Maximum Spans Between Purlins

Panel Thickness/Width	Rafter Centres	Mid Span (mm)	End Span (mm)
4/600	600mm	1300	1000
4/800	800mm	1200	950

Thermal Insulation

On very hot days, the surface temperature of the sheet might reach up to +50°C (+122°F). The "U" value characterizes the degree of thermal transmittance offered by a given glazing material (Higher "U" values are associated with materials that are poor insulators, resulting in a greater loss of heat). The following table compares the "U" values of glass and SUNGLAZE of equivalent thicknesses. (Thicker sheets of a given material will offer greater thermal insulation and be characterized by a lower "U" value and reduced heat loss.). For any given thickness, the "U" value of SUNGLAZE is lower than that of glass. Therefore, the heat loss from the building interior and penetration of heat into a building glazed with SUNGLAZE will be less than for one glazed with glass. This can result in a significant 6.5-9% reduction in energy expenditure both for heating in winter and air-conditioning during the summer. Note that the use of Solar Control panels will reduce penetration of solar energy, which will further assist in reducing the air-conditioning costs during summer time.

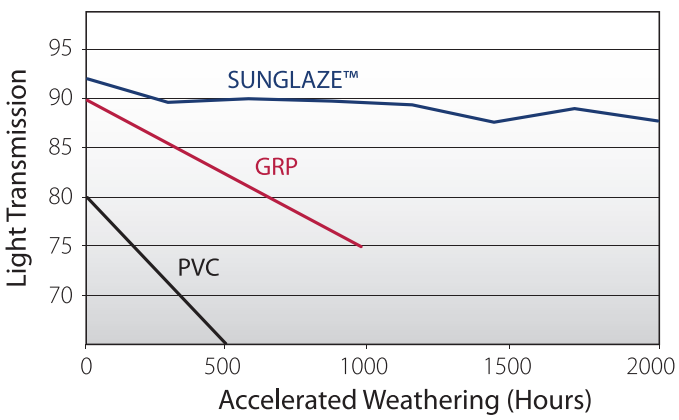
Thickness (mm)	**SUNGLAZE™ U Value** ($W/m^2 \cdot K$)	**Glass U Value** ($W/m^2 \cdot K$)
3	5.43	5.79
4	5.29	5.76

SUNGLAZE™

Resistance to UV Radiation

PALRAM polycarbonate sheets retain their mechanical properties and transparency throughout a long time of service due to Integrated co-extruded UV protection. The protection will not peel off over time. The attached graph presents typical results from SUNGLAZE panels tested under accelerated weathering (QUV exposure simulation) that is equivalent to 20 years of actual field exposure. The light transmission of SUNGLAZE was essentially stable.

Comparison of Light Transmission Loss



Chemical Characteristics

To obtain a wide listing of PALRAM's polycarbonate sheets resistance to chemical agents please visit the corporate website (www.palram.com -> Support -> Downloads -> Technical Literature) or contact Burnside Plastics Australia.

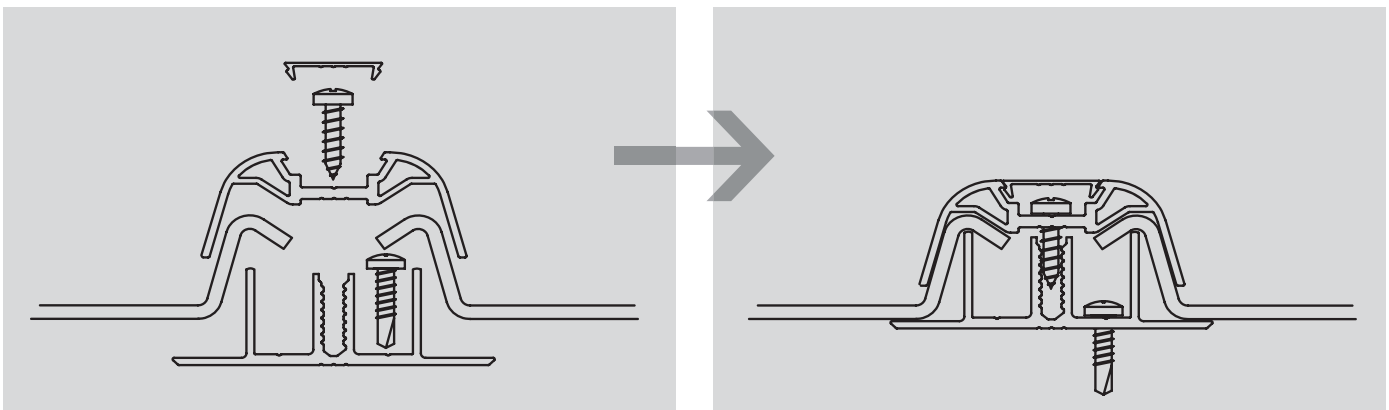
www.burnsideplastics.com.au

Acoustic Insulation

SUNGLAZE panels have considerable sound insulation properties as indicated in the attached table. The ability to absorb sound waves together with its impact resistance, makes SUNGLAZE an ideal choice for cladding.

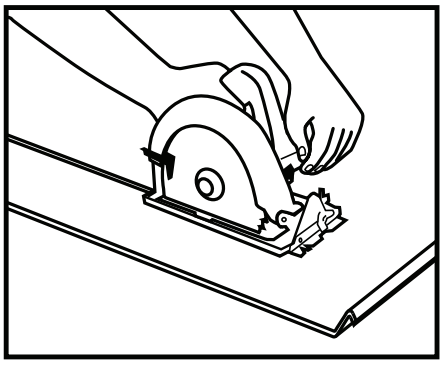
Thickness *(mm)*	**Acoustic Insulation** *DIN 52210-75 RW (db)*
3	23
4	24

Assembly Illustration

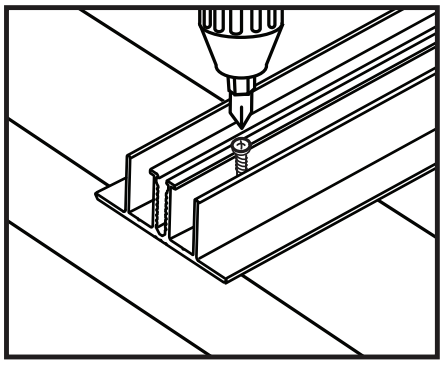


Installation

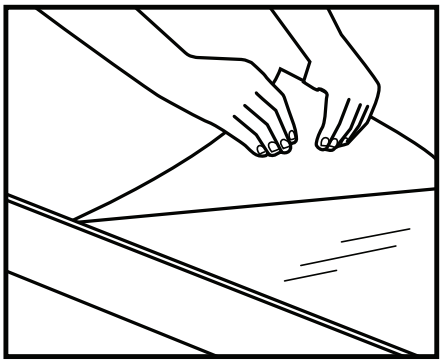
1 Cut to size



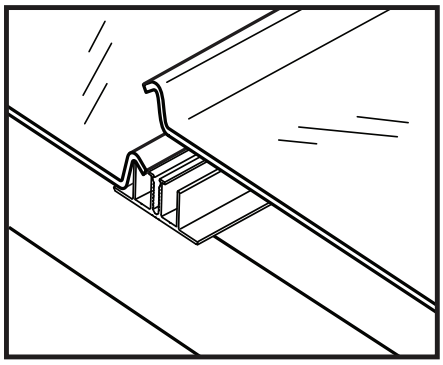
2 Fix base



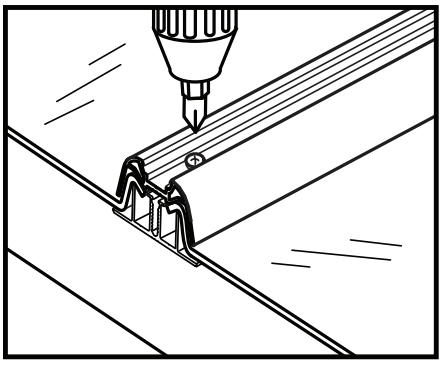
3 Remove inner masking



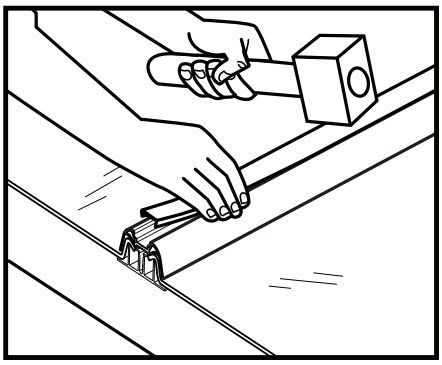
4 Position the Panels



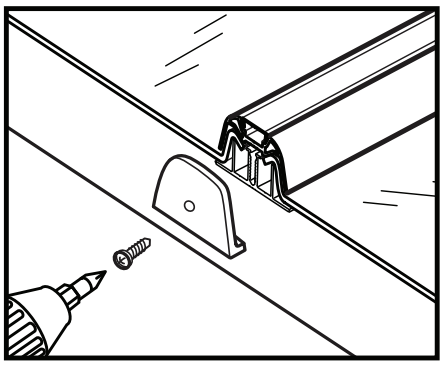
5 Fix Cap



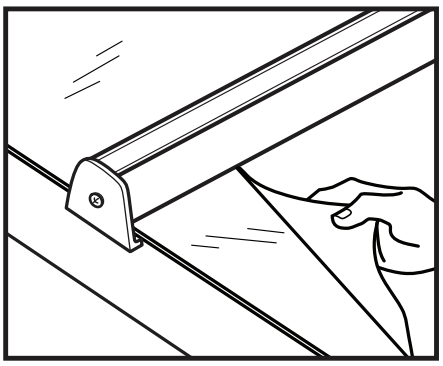
6 Assemble Cap Plug



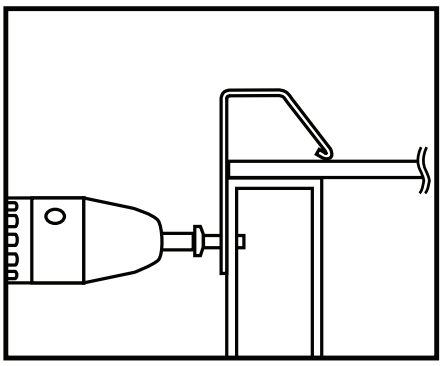
7 Fix End Cap



8 Remove outer masking



9 Install side flashings

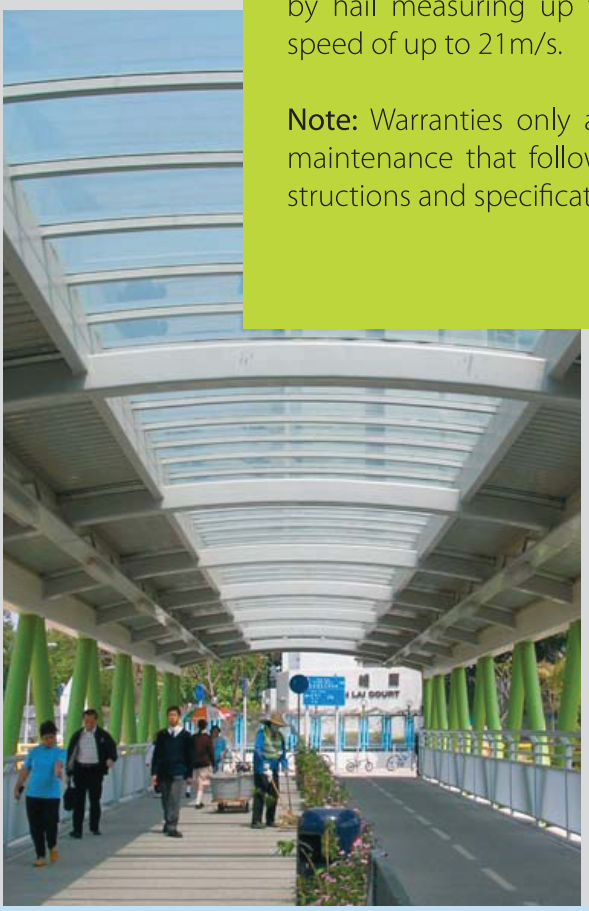


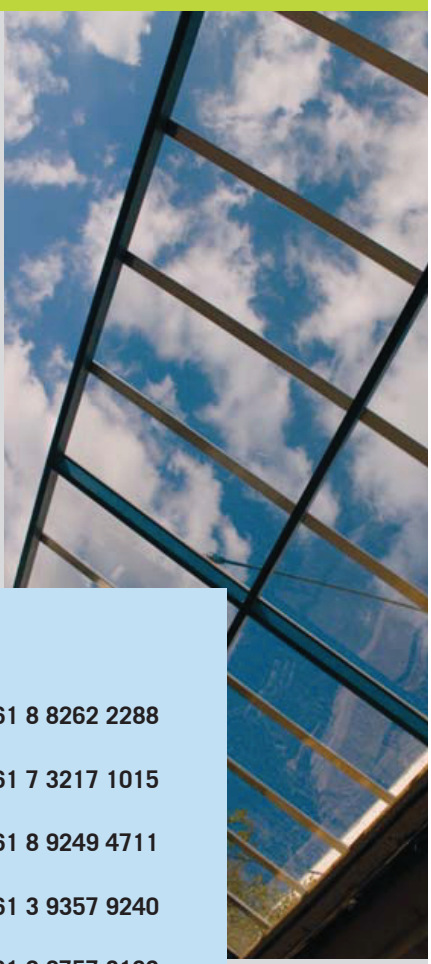
Due to the spanning ability and lightweight nature of Sunglaze, huge savings can be made on both the support structure required and labour. Indicative studies have shown that support structure can be reduced by up to 50% and labour by a massive 60%.

Manufacturer's Lifetime Warranty

SUNGLAZE panels are guaranteed for water leak-proof performance for 25 years. SUNGLAZE panels bear a limited lifetime warranty not to lose more than 6% of light transmission for 10 years and no more than 1% per year thereafter, when measured according to ASTM D1003-77. SUNGLAZE panels are warranted for up to 10 years from the date of purchase not to break or fail as a result of impact by hail measuring up to 20mm in diameter, in speed of up to 21m/s.

Note: Warranties only apply to installations and maintenance that follow PALRAM installation instructions and specifications.





Burnside Plastics Australia Branches

Burnside Plastics SA / NT
517a Cross Keys Rd Cavan SA 5094 • **Ph: +61 8 8262 2288**

Burnside Plastics Qld
27 Sperling St Rocklea Qld 4106 • **Ph: +61 7 3217 1015**

Burnside Plastics WA
60 Boulder Rd Malaga WA 6090 • **Ph: +61 8 9249 4711**

Burnside Plastics Vic / Tas
34b Randor St Campbellfield VIC 3061 • **Ph: +61 3 9357 9240**

Burnside Plastics NSW
196 Newton Rd Wetherhill Park NSW 2164 • **Ph: +61 2 9757 3166**

www.burnsideplastics.com.au

RoHS Compliant Heavy Metal Free