

# ACOUSTA™ LAMINATED GLASS



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Acousta™ is a Grade "A" laminated safety glass that uses a specially developed interlayer which dampens noise more effectively than ordinary glass. This patented system targets sounds in the 1000-3000Hz range which is the most sensitive range for human hearing that allows the most irritating of sounds to come through windows.

### FEATURES & BENEFITS

- > reduces noise more effectively than ordinary glass;
- > targets sounds in most sensitive range of human hearing;
- > Grade "A" laminated safety glass.

### APPLICATIONS

Residential and commercial glazing.

### RANGE

- > Clear 6.5/8.5/10.5/12.5mm thicknesses;
- > Grey and other colours on application.

## DESIGN & GLAZING NOTES

A common misconception is that standard float IGU's are better at noise reduction. This is not always the case. Where IGU's are not specifically required, single Acousta™ laminated glass is better than standard float IGU's. The below table compares the perceived noise reduction against 4mm glass and other products (dB = Decibel). It shows that thin float IGU's are not much better than ordinary single 4mm float. It highlights that single Acousta™ laminated glass can achieve better results, reducing perceived noise levels by half (for 12.5mm Acousta™).

### PERCEIVED NOISE REDUCTION COMPARISONS OF DIFFERENT GLASS TYPES TO 4MM SINGLE GLASS

TYPE	dB REDUCTION $R_w$	PERCEIVED NOISE REDUCTION
4mm float	30	-
5mm float	31	Cannot be heard
4mm float/12mm/4mm float IGU	32	Cannot be heard
5mm float/12mm/5mm float IGU	33	Just audible
6.5mm Acousta™	35	Clearly audible
12.5mm Acousta™	40	Noise reduced by half
6mm/12mm/6.76mm Acousta™ IGU	41	Noise reduced by half

- > under typical field conditions the human ear cannot detect a change of 1-2dB;
- > the ear will not pick up a change of 3dB if there is a time lapse between the two sounds and they are moderate or low intensity;
- > a change of 5-7dB can always be detected;
- > for every 10dB increase/decrease in intensity we perceive the sound as being a doubling/halving of the noise level.

For more information refer to Acoustic Technical Information document.

# NOISE REDUCTION RATINGS $R_w$ (dB)

## GLASS TYPE COMPARISONS



Float mm	$R_w$ (dB)
3, 4	30
5, 6	31
8	34
10	35
12	37
19	39
Duo Plus™ IGU with Float mm	$R_w$ (dB)
4/12/4	32
5/12/5	33
6/12/6	34
Single Laminated PVB mm	$R_w$ (dB)
6.38	32
6.76	33
8.38	34
8.76, 9.52, 10.38	35
11.52, 12.38	36
12.76, 13.52	37
16.76, 17.52	39
20.76	40
Duo Plus™ IGU with Laminated PVB mm	$R_w$ (dB)
6/12/6.38	36
6/12/8.38	40
Single Laminated Acousta™ mm	$R_w$ (dB)
6.5	35
8.5	37
10.5	38
12.5	40
16.76	41
20.76	42

Duo Plus™ IGU with Laminated Acousta™ mm	$R_w$ (dB)
6/12/6.76	41
6/12/8.76	41
6/12/10.76	42
6/12/12.76	43
6/12/13.52	44
8/12/6.5	42
8/12/8.5	44
8/12/12.5	46
8/20/8.5	46
8/20/12.5	47
10/12/6.5	42
10/12/8.5	44
10/12/12.5	46
10/20/10.76	46
Duo Plus™ IGU with 2 Laminated Acousta™ panels mm	$R_w$ (dB)
6.5/12/6.76	42
6.76/12/6.76	43
6.76/18/6.76	44
6.76/12/16.76	47
12.76/20/8.76	49

### NOTES:

- All values shown are glass only. Check with your framing system supplier for total window values.
- The higher the  $R_w$  value the better the acoustic performance.
- As a guide when frames are included, the  $R_w$  values shown will decline. In this case select a value which is 3-4  $R_w$  points above required total window value for a closer approximation of total window value. Consult with your framing supplier for further advice.
- Stock sheets of clear Acousta 6 to 12 use 0.50mm thick QS sound reduction interlayer.
- Custom laminated panels use a 0.76mm thick QS sound reduction interlayer.

### HOW TO SPECIFY

- > select Acousta™ Laminated Safety Glass.
- > select appropriate thickness and process;  
Laminated Annealed, Heat Strengthened or Toughened Laminated in both single and IGU;
- > All glass to be selected and installed in accordance but not exclusively to the following Australian Standards;

**AS 1288** Glass in buildings – Selection and installation

**AS/NZ 2208** Safety glazing materials in buildings

**AS 4666** Insulating glass units

**AS/NZS 4667** Quality requirements for cut-to-size and processed glass

**AS 1170** Wind & Structural Design Actions