TREFOREST GLASS

Acoustic Performance Results

200mm Glass to Glass	Primary Window – 4mm Float Glass				Primary Window – 6mm Float Glass			
Secondary Glazing	SS2	HHU	BVS	HTBVS	SS2	HHU	BVS	HTBVS
4mm Toughened	49	50	49	47	51*	51	51	48
6mm Toughened	50*	51*	51*	47*	51*	52*	52*	48*
6.4mm Acoustic Laminate	51	52	53	48	52*	53*	54*	50
8.8mm Acoustic Laminate	N/A	52*	N/A	48*	N/A	53*	N/A	49
10.8mm Acoustic Laminate	N/A	53*	N/A	N/A	N/A	54	N/A	N/A
4/12/6.4mm SEALED UNIT	N/A	53*	N/A	N/A	N/A	53	N/A	N/A

150mm Glass to Glass	Primary Window – 4mm Float Glass				Primary Window – 6mm Float Glass			
Secondary Glazing	SS2	HHU	BVS	HTBVS	SS2	HHU	BVS	HTBVS
4mm Toughened	48*	48*	47*	46*	51*	50*	50*	47*
6mm Toughened	49*	49*	48*	46*	51*	50*	50*	47*
6.4mm Acoustic Laminate	50*	50*	49*	47*	52	51*	52*	48*
8.8mm Acoustic Laminate	N/A	50*	N/A	47*	N/A	51*	N/A	48*
10.8mm Acoustic Laminate	N/A	51*	N/A	N/A	N/A	52*	N/A	N/A
4/12/6.4mm SEALED UNIT	N/A	51*	N/A	N/A	N/A	52*	N/A	N/A

KEY : **SS2** – 2 Pane Horizontal Slider, **HHU** – Side Hung Unit, **BVS** – Balanced Vertical Slider, **HTBVS** – Heritage Tilt-In Balanced Vertical Slider

Secondary Glazing windows have been tested at Chiltern Dynamics in accordance with BS EN ISO 10140-2: 'Laboratory measurement of airborne sound insulation of building elements'. The table shows results for secondary windows set at a 200mm and 150mm cavity with 4mm or 6mm float glass in the primary window. Chiltern's Dynamics lab is UKAS Accredited No. 1762

** Sound reduction figures predicted by Chiltern Dynamics using the basis of actual laboratory test results. Sound Reduction (Rw) measured in dB*

U-Value Table

Comparison data for typical primary window configurations							
PRIMARY WINDOW FRAME TYPE	GLAZING - Single, Double, Secondary or Triple Glazed					CAVITY FILLING	U VALUE W/m²K
	glass	cavity	glass	cavity	glass		
Metal	4mm float						5.7
Wood	4mm float						4.8
Metal	4mm float	12mm	4mm float			Air	3.8
Wood/PVCu	4mm float	12mm	4mm float			Air	2.9
Metal 12mm - thermal break	4mm Low E	12mm	4mm float			Air	2.6
Wood/PVCu	4mm Low E	12mm	4mm float			Air	2.3
Metal 20mm - thermal break	4mm Low E	12mm	4mm float			Argon gas	2.3
Wood/PVCu	4mm float	12mm	4mm float	12mm	4mm float	Air	2.2
Building Regulations Doc L1a - from 1st October 2010 - the minimum requirement for new-build residential property is 2.0 W/m²K							
Wood/PVCu	4mm Low E	12mm	4mm float			Argon gas	2.0
Wood/PVCu	4mm float	12mm	4mm float	12mm	4mm float	Argon gas	2.0
Metal 20mm thermal break	4mm Low E	12mm	4mm float	12mm	4mm float	Air	1.9
Secondary Glazing Test							
Wood	**4mm float - single glazed - 85mm cavity - 4mm Low E single glazed secondary *****						**1.8**
Wood/PVCu	4mm Low E	12mm	4mm float	12mm	4mm float	Air	1.8
Metal 20mm thermal break	4mm Low E	12mm	4mm float	12mm	4mm float	Argon gas	1.7
Historic Scotland Test							
Wood	**4mm float - single glazed - 75mm cavity - 4mm Low E single glazed secondary *****						**1.7**
Building Regulations Doc L1b - from 1st October 2010 the minimum requirement for residential replacement windows is 1.6 W/m²K							
Wood/PVCu	4mm Low E	12mm	4mm float	12mm	4mm float	Argon gas	1.6
Wood/PVCu	4mm Low E	12mm	4mm float	(warm edge spacer)		Argon gas	1.6
Secondary Glazing							
Wood	4mm float - single glazed - 85mm cavity - 6mm Low E single glazed secondary						1.5