A CHANGE IN BUILDING REGULATIONS

The recent changes that have been implanted with the building regulations. We have moved on from the classic A-rated or B- rated unit and are focusing on the U-value or G-value of the overall unit.

U-Value

U-value, also known as thermal transmittance, is a measure of how much heat energy is lost or gained by a window (or a structure). In other words, a U-value is used to measure how well or how badly a component transmits heat from the inside to the outside. The units are measured in W/m2K. As lower the U-value as more desirable, this means that less heat escapes outside.

G-Value

G-value (or The Solar Factor) is a coefficient used by window manufacturers to measure a window's ability to transmit solar energy. It is the percentage of solar energy transmitted directly or indirectly through the glass to the interior and measures the ability of the glass to reduce heat input. The lower the solar factor, the higher solar protection and, therefore, the higher the performance of the solar control glass.

Light Transmittance

Light Transmittance is a measure of the amount of light that passes through a transparent material. The total light transmittance through a material is equal to the total incident light less the light is absorbed and reflected. Transmission of light, where light waves pass through a material without absorption, is affected by thickness, any type of material. The lower the value is, the more light the glass absorbs.

PERFORMANCE VALUES
DOUBLE GLAZED UNIT

The recent changes that have been implanted with the building regulations. We have moved on from the classic A-rated or B- rated unit and are focusing on the U-value or G-value of the overall unit.

U- Value	The number used to weight acoustic insulation coefficient.
G-Value	The Solar Factor is a coefficient used by window manufacturers to measure a window's ability to transmit solar energy. It is the percentage of solar energy transmitted directly or indirectly through the glass to the interior and measures the ability of the glass to reduce heat input.
Light Transmittance	Corrective coefficient for sound sources containing few low frequencies, for example, high speed road traffic, high speed rail traffic and children playing.

Configuration*	Combination	Ug- Value	Solar Factor G	Light % LT
4/16/4	Clear / Ecopane	1.2 W/m2K	0.71	82
4/16/4	Clear / Ecoplus	1.0 W/m2K	0.48	66
4/16/4	Low Iron / Ecopane	1.2 W/m2K	0.74	83
4/16/4	Low Iron / Ecoplus	1.0 W/m2K	0.50	67
4/20/4	Clear / Ecopane	1.2 W/m2K	0.71	82
4/20/4	Clear / Ecoplus	1.1 W/m2K	0.48	66
4/20/4	Low Iron / Ecopane	1.2 W/m2K	0.74	83
4/20/4	Low Iron / Ecoplus	1.1 W/m2K	0.50	67
6.8/16/4	Clear Laminated / Ecopane	1.2 W/m2K	0.66	82
6.8/16/4	Clear Laminated / Ecoplus	1.0 W/m2K	0.45	65
6.8/16/4	Clear Laminated / Ecopane	1.2 W/m2K	0.66	82
6.8/16/4	Clear Laminated / Ecoplus	1.0 W/m2K	0.45	65

PERFORMANCE VALUES
TRIPLE GLAZED UNIT

Glass Spec	Combination	Ug-Value	Solar Factor G	Light % LT
4/12/4/12/4	Clear/ Ecopane T/ Ecopane	0.8 W/m2K	0.61	75
4/12/4/12/4	Clear/ Ecoplus T/ Ecoplus	0.7 W/m2K	0.36	50
4/12/4/12/4	Low Iron/ Ecopane T/ Ecopane	0.8 W/m2K	0.64	76
4/12/4/12/4	Low Iron/ Ecoplus T/ Ecoplus	0.7 W/m2K	0.37	51
4/14/4/14/4	Clear/ Ecopane T/ Ecopane	0.7 W/m2K	0.61	75
4/14/4/14/4	Clear/ Ecoplus T/ Ecoplus	0.6 W/m2K	0.36	50
4/14/4/14/4	Low Iron/ Ecopane T/ Ecopane	0.7 W/m2K	0.64	76
4/14/4/14/4	Low Iron/ Ecoplus T/ Ecoplus	0.6 W/m2K	0.37	51
4/16/4/16/4	Clear/ Ecopane T/ Ecopane	0.6 W/m2K	0.61	75
4/16/4/16/4	Clear/ Ecoplus T/ Ecoplus	0.5 W/m2K	0.36	50
4/16/4/16/4	Low Iron/ Ecopane T/ Ecopane	0.6 W/m2K	0.64	76
4/16/4/16/4	Low Iron/ Ecoplus T/ Ecoplus	0.5 W/m2K	0.37	51
6.8/10/4/12/4	Clear Laminated /Ecopane T/ 4mm Ecopane	0.8 W/m2K	0.57	74
6.8/10/4/12/4	Clear Laminated /Ecoplus T/ Ecoplus	0.7 W/m2K	0.34	50
6.8/12/4/14/4	Clear Laminated /Ecopane T/ 4mm Ecopane	0.7 W/m2K	0.57	74
6.8/12/4/14/4	Clear Laminated/ Ecoplus T/ Ecoplus	0.6 W/m2K	0.34	50
6.8/14/4/16/4	Clear Laminated/ Ecopane T/ 4mm Ecopane	0.6 W/m2K	0.57	74
6.8/14/4/16/4	Clear Laminated/ Ecoplus T/ Ecoplus	0.6 W/m2K	0.34	50

ACOUSTIC DATA SUMMARY

Acoustic laminated glass is designed to reflect and absorb the sound waves and limit sound frequencies moving between the panes for glass, significantly reducing noise intrusion. The chart below presents the standard values of the weighted acoustic insulation.

R^{w}	The number used to weight acoustic insulation coefficient.
C^{tr}	Corrective coefficient sound sources containing a large number of low frequencies, for example urban road traffic.
C	Corrective coefficient for sound sources containing few low frequencies, for example, high speed road traffic, high speed rail traffic and children playing.

* The glass spec indicates thickness only; any product can be used in this thickness except where "ac" (acoustic lam) is denoted.

Glass Spec*	RW	C	Ctr
4mm / 20mm / 4mm	32	-1	-4
6mm / 18mm / 4mm	35	-1	-4
6mm / 16mm / 6mm	35	-2	-4
6.4mm / 18mm / 4mm	37	-2	-5
6.8mm / 18mm / 4mm	37	-2	-5
6.8mm (ac) / 18mm / 4mm	39	-2	-6
6.8mm (ac) / 16mm / 6mm	39	-1	-6
8.8mm (ac) / 16mm / 4mm	40	-2	-6
8.8mm (ac) / 14mm / 6mm	41	-2	-6