

WIND-DO SEAL

SECONDARY GLAZING SYSTEMS

The Sound Proofing & Energy Saving
System

For All Existing Windows

Sound Proofing of existing windows

THE FACTS:

Secondary Glazing is an established method in acoustic glazing technology, providing sound relief wherever noise is a problem. Secondary Glazing benefits new build and refurbishment projects, helping to create quieter interiors and reducing the harmful effects of noise pollution in both the workplace and the home. It is especially beneficial as an alternative to replacing windows, particularly where planning constraints apply.

>**Secondary Glazing** can be manufactured with 4mm or 6mm in clear float, toughened, acoustic or 'K' glass to provide considerable noise reduction whatever the situation.

Extract from recent BRE Document:

Noise reduction tests carried out by (BRE) the **Building Research Establishment**with a 100mm 'air gap' between the external window and the new Secondary Glazing have produced results indicating the average noise reduction levels as follows;

The results are presented as single figure ratings, R_w , calculated using the method described in BS 5821:1984, part 1,

The R_w figures below were a combined result of the existing window and the **Secondary Glazing**.

The condition of the existing window will have an effect on the figure achieved.

<i>>Primary window</i>	<i>Secondary Window</i>	<i>R_w</i>
<i>>4mm Glass</i>	<i>None</i>	<i>26</i>
<i>>4mm Glass</i>	<i>6mm glass</i>	<i>39</i>

It is recommended to fit a wooden packer - frame, onto the substrate; suitably sealed between the substrate and the packer frame.

When Secondary Window is affixed onto the 'packer - frame' and not directly onto the walls or substrate this will help prevent potential reverberation of noise from surrounding walls and cavity area of walls onto the Secondary Window and hence into the room: thus adding to its overall success.

An 'air gap' between existing window and Secondary Window of 100 -150mm is optimum but wider gaps of 200mm or more reduce the overall effectiveness of Secondary Glazing for Sound Proofing purposes.

>Having been established for more than 23 years WIND-DO SEAL **Secondary Glazing Systems** have been used extensively by Hoteliers, Guest House proprietors, management companies, local councils, acoustic engineers, developers and 1000's of private dwelling owners nationwide to minimise noise levels transmitted through windows and also minimising energy losses through single pane windows. Up to 75% reduction in noise levels are being experienced by clientele who have used the WIND-DO SEAL SYSTEM.

Secondary Glazing / Energy Savings from WIND-DO SEAL:

BER energy data will confirm that a typical single glazed window will have a 'U' value of 4.2. When the WIND-DO SEAL **Secondary Glazing** is fitted this can be reduced to 2.4 thereby saving huge energy losses and getting rid of those cold zones around the windows.

➤ *Extract From:*

'Dwelling Energy Assessment Procedure' (DEAP)

VERSION 3.2.1

The official Irish method for calculating and rating the energy performance of dwellings.

This document describes DEAP 2012, Version 3.2.1, dated June 2012. This version is applicable to new and existing dwellings.

Building designers, energy rating Assessors and other users should ensure that they are using the latest version of this document and accompanying software.

Updates will be published on the SEAI website www.seai.ie/ber

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DEAP Manual Version 3.2.1

S6.6 Allowance for thermal bridging

The thermal bridging factor, y , is defaulted at 0.15 W/m²K.

S7 Solar gains

Solar gains are calculated as for new dwellings.

S8 Window U-values and g-values

Section 3.2 outlines when values in Table S9 should be used for U-value and solar transmittance derivation.

The survey process provides information on window area, glazing type, age, frame type and orientation.

Table S9 : Window default characteristics

E hard coat $\epsilon_n = .15$ 12mm gap

Further detail on use of Table S9:

Glazing	Low E coating	Frame	Metal thermal break assumed	U-value (W/m ² K) (based on Table 6a)	Solar transmittance (based on Table 6b)	Comment
Single	n/a	Wood/PVC	n/a	4.8	.85	
Single	n/a	Metal	4mm	5.7	.85	
Single with secondary glazing	n/a	Wood/PVC	n/a	2.4	.76	
Single with secondary glazing	n/a	Metal	4mm	2.4	.76	
Double	No	Wood/PVC	n/a	3.1	.76	Air filled 6mm gap
Double	No	Metal	4mm	3.7	.76	Air filled 6mm gap
Double	Yes	Wood/PVC	n/a	2.2	.72	Air filled low E hard coat $\epsilon_n = .15$ 12mm gap
Double	Yes	Metal	4mm	2.7	.72	Air filled low E hard coat $\epsilon_n = .15$ 12mm gap

If the Assessor chooses to use the default window U-value and solar transmittance from Table S9 then the following defaults are assumed:

Installed before 2004: *Glass is uncoated, with 6mm air filled gap. Metal framed window thermal break is 4mm for metal framed windows.*

>WIND-DO SEAL LTD can arrange a demonstration and consultation with you or your potential clientele on the many benefits of **Secondary Glazing**.

For further information please refer to our website or by calling any of the telephone numbers listed.

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'A wholly owned and managed Irish company'

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