



Pilkington **Optilam™** Phon.  
The solution for unwanted noise.



## Pilkington Optilam™ Phon

New Pilkington **Optilam™** Phon is the ideal choice of glass in situations where there is excess noise from road, rail or air traffic, or other sources such as factories or nightclubs.

Using a PVB (polyvinyl butyral) interlayer, Pilkington **Optilam™** Phon is a high quality acoustic laminated glass that offers excellent noise reduction.

### Benefits

- New PVB interlayer for enhanced sound insulation performance
- A thinner and lighter glass for the equivalent acoustic performance
- Offers an alternative to secondary glazing
- Minimum Class B performance to BS6206:1981 for impact safety, even at 6.8mm thickness
- Available in 6.8mm to 16.8mm thicknesses in jumbo, lehr end and cut sizes
- Easy to process, and can be used in insulating glass unit form
- Can be incorporated with Pilkington **K Glass™** in an insulating glass unit to help meet the requirements of Approved Document L (England & Wales) and Part J (Scotland)
- The quality, reliability and support you would expect from the Pilkington nationwide network

## Sound Reduction Index

$R_w$  is the weighted sound reduction, in decibels, which incorporates a correction for the ear's response.

$C$  and  $C_{tr}$  are the spectrum adaptation terms, which are the values added to  $R_w$  to take account of the characteristics of particular sound spectra. Typical noise sources for each spectrum adaptation terms are given below.

### Relevant spectrum adaption term C

Type of noise source:

Living activities (talking, music, radio, TV)  
Children playing  
Jet aircraft, short distance away  
Factories emitting mainly medium and high frequency noise

### Relevant spectrum adaption term $C_{tr}$

Type of noise source:

Urban road traffic  
Aircraft, propeller driven  
Jet aircraft, long distance away  
Disco music  
Factories emitting mainly low and medium frequency noise

Note: A more comprehensive table can be found in EN ISO 717-1.





# Technical Information

Jumbo Sizes	3210 x 6000mm
Lehr End Sizes (L.E.S)	3210 x 2500mm
Thicknesses Available (all sizes):	6.8, 8.8, 10.8 and 12.8mm
Cut Sizes Available:	6.8, 8.8, 10.8, 12.8 and 16.8mm

**Table 1 – Performance Data**

Pilkington <b>Optilam™</b> Phon (mm)	Sound Reduction $R_w$ (C, $C_{tr}$ ) (dB)	Light			Solar Heat				U value (W/m <sup>2</sup> K)	
		Transmittance	Reflectance (ext)	Reflectance (int)	Direct Transmittance	Reflectance	Absorptance	Total Transmittance	Air-filled	Argon-filled
<b>Pilkington Optilam™ Phon (Single Glazing)</b>										
6.8	35 (-1; -3)	89	8	8	73	7	20	79	N/A	N/A
8.8	37 (-1; -4)	88	8	8	69	7	24	76	N/A	N/A
10.8	38 (-1; -2)	87	8	8	67	7	26	74	N/A	N/A
12.8	39 (0; -2)	86	8	8	65	6	29	72	N/A	N/A
16.8	40 (0; -2)	85	8	8	60	6	34	69	N/A	N/A
<b>Pilkington Insulight™ Phon incorporating Pilkington K Glass™</b>										
6/16/6.8*	38 (-2; -6)	74	17	15	53	14	33	68	1.7	1.5
6.8/16/6.8*	39 (-2; -6)	73	17	15	52	13	35	65	1.7	1.5
8.8/16/6*	39 (-2; -6)	73	16	15	50	12	38	62	1.7	1.5
10.8/16/6*	41 (-2; -6)	72	16	15	48	12	40	60	1.7	1.5
12.8/16/6*	41 (-1; -5)	72	16	15	47	11	42	58	1.7	1.5
16.8/16/16.8*	48 (-2; -6)	67	16	14	37	10	53	53	1.6	1.5

Sound insulation data measured in accordance with BS EN ISO 140-3 and indices derived in accordance with BS EN ISO 717-1.

$R_w$ , C and  $C_{tr}$  are in accordance with BS EN ISO 717-1.

Light and solar optical properties (in %) determined in accordance with BS EN 410.

U value determined in accordance with BS EN 673. For argon-gas filled units, U values based on 90% argon / 10% air.

\*Where the inner pane incorporates Pilkington **K Glass™**.

**Table 2 – Sound Insulation Data**

Thirdoctaveband Centre Frequency (Hz)	Sound Insulation (dB) for Glass Thickness (mm)																					
	Pilkington <b>Optilam™</b> Phon (Single Glazing)										Pilkington <b>Insulight™</b> Phon incorporating Pilkington <b>K Glass™</b>											
	6.8		8.8		10.8		12.8		16.8		6/16/6.8*		6.8/16/6.8*		8.8/16/6*		10.8/16/6*		12.8/16/6*		16.8/16/16.8*	
100	20		23		29		30		28		22		22		25		26		27		25	
125	21	21	22	24	27	28	28	30	30	29	24	23	24	23	23	24	24	25	25	26	34	29
160	23		26		28		31		32		24		24		24		25		26		34	
200	24		26		29		31		34		21		23		22		24		26		38	
250	27	26	29	28	32	31	33	32	34	34	25	24	27	26	27	25	30	28	30	29	41	40
315	28		32		33		34		36		29		29		31		32		33		42	
400	30		34		35		36		36		32		33		34		36		36		45	
500	31	31	34	34	35	36	36	37	37	37	34	34	35	35	37	36	39	38	38	38	45	45
630	33		36		37		38		37		38		38		40		41		41		46	
800	34		37		38		39		38		41		41		43		44		44		46	
1000	35	35	38	38	39	38	39	39	38	39	43	42	44	43	45	44	46	45	45	45	46	47
1250	36		38		39		39		40		43		46		45		45		45		48	
1600	37		38		38		39		43		44		47		45		44		45		51	
2000	38	37	37	37	38	39	42	41	46	46	42	43	48	48	42	43	43	44	44	45	55	54
2500	37		37		41		45		50		43		50		43		46		46		61	
3150	36		40		44		48		52		49		52		49		52		52		65	
4000	38	38	44	43	48	47	51	51	57	55	54	52	58	55	56	53	58	56	60	56	71	68
$R_w$ (C, $C_{tr}$ )	35 (-1, -3)		37 (-1, -4)		38 (-1, -2)		39 (0, -2)		40 (0, -2)		38 (-2, -6)		39 (-2, -6)		39 (-2, -6)		41 (-2, -6)		41 (-1, -5)		48 (-2, -6)	

Sound insulation data measured in accordance with BS EN ISO 140-3.

In addition to the full thirdoctaveband sound insulation spectrum, corresponding octaveband equivalent values are given in the adjacent columns.

\*Where the inner pane incorporates Pilkington **K Glass™**.

This publication gives a general description of the product and materials. It is the responsibility of the users of this document to ensure that the proposed application of the product is appropriate and that such application complies with all relevant local and national legislation, standards, codes of practice and other requirements. To the extent allowed by law, Pilkington United Kingdom Limited hereby disclaims all liability arising from any error or omission from this publication and all the consequences of relying on it. Pilkington **Optilam**<sup>™</sup> Phon and Pilkington **K Glass**<sup>™</sup> are trademarks of the Pilkington Group.



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