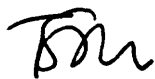



# Test Report



Report No	BG000155
Client	Mighton Products PO Box 1 Saffron Walden Essex CB10 1 NS
Authority & date	Request by Client dated 7 July 1993
Items tested	1 off double hung timber window fitted with Mighton weatherstripping
Specifications	BS 5368 and BS 6375
Results	See Summary of Results on page 2
Prepared by	 T South
Authorized by	 A D Coley
Issue date	27 July 1993
Conditions of issue	This Test Report is issued subject to the conditions stated in the current issue of <i>Test Leaflet 1</i> 'General conditions relating to acceptance of testing'. The results contained herein apply only to the particular sample/s tested and to the specific tests carried out, as detailed in this Test Report. The issuing of this Test Report does not indicate any measure of Approval, Certification, Supervision, Control or Surveillance by BSI of any product. No extract, abridgement or abstraction from a Test Report may be published or used to advertise a product without the written consent of the Director BSI Testing who reserves the absolute right to agree or reject all or any of the details of any items of publicity for which consent may be sought.

**TESTING, EXAMINATION AND ASSESSMENT OF ONE DOUBLE HUNG TIMBER WINDOW FITTED WITH MIGHTON WEATHERSTRIPPING**

**INTRODUCTION**

At the request of Mighton Products the double hung timber window detailed on page 3, was tested and assessed against requirements of BS 6375:Part 1:1989, as indicated on the following pages of this Report. This request was made in a fax from the Client dated 7 July 1993.

This Report only relates to the actual sample which has been tested and assessed.

**SUMMARY OF RESULTS**

- |    |                  |   |
|----|------------------|---|
| 1. | Air permeability | The sample met the requirements of Test Pressure Class 300Pa (Graph B) given in BS 6375:Part 1.     |
| 2. | Watertightness   | The sample met the requirements of Test Pressure Class 200Pa given in BS 6375:Part 1.               |
| 3. | Wind resistance  | No permanent deformation or damage to the sample was recorded at an applied air pressure of 2400Pa. |

DESCRIPTION OF SAMPLE

Sample type –	Double hung vertical slider
Material –	Softwood timber
Finish –	Untreated
Construction –	Mortice and tenon joints
Fixing –	Screwed into a timber sub frame for test purposes
Fittings –	One cam catch
Weathersealing –	Single sealed with Mighton Standard weatherstrip and Mighton Parting bead
Glass –	Single glazed, 4 mm
Glazing system –	External beads and silicone sealant
Sample dimensions –	Length: 457 mm      Height: 905 mm
Date of test –	12 July 1993
Laboratory temperature –	22°C

## PREPARATION AND METHOD OF TEST

The sample was prepared for test as required by BS 5368:Parts 1,2 and 3. The sample was mounted into a plywood surround for installation in the test apparatus. The joint between the sample and the plywood surround was sealed.

1. Air permeability

The air permeability of the sample was determined by the method given in BS 5368:Part 1.

2. Watertightness

The watertightness of the sample was determined by the method given in BS 5368:Part 2 using spraying method number 2.

3. Wind resistance

The wind resistance of the sample was determined by the method given in BS 5368:Part 3.

4. Repeat tests

After testing for resistance to wind loading the tests 1 and 2 were repeated.

## TEST RESULTS

1. Air permeability – The results are recorded in Table 1 on page 5 of this Report and shown graphically on page 6.
2. Watertightness – The results are recorded in Table 2 on page 7 of this Report.
3. Wind resistance – The results are recorded on page 7 of this Report.
4. Repeat tests – The results of the repeat tests are recorded in Tables 3 and 4 on page 8.

AIR PERMEABILITY TEST RESULTS

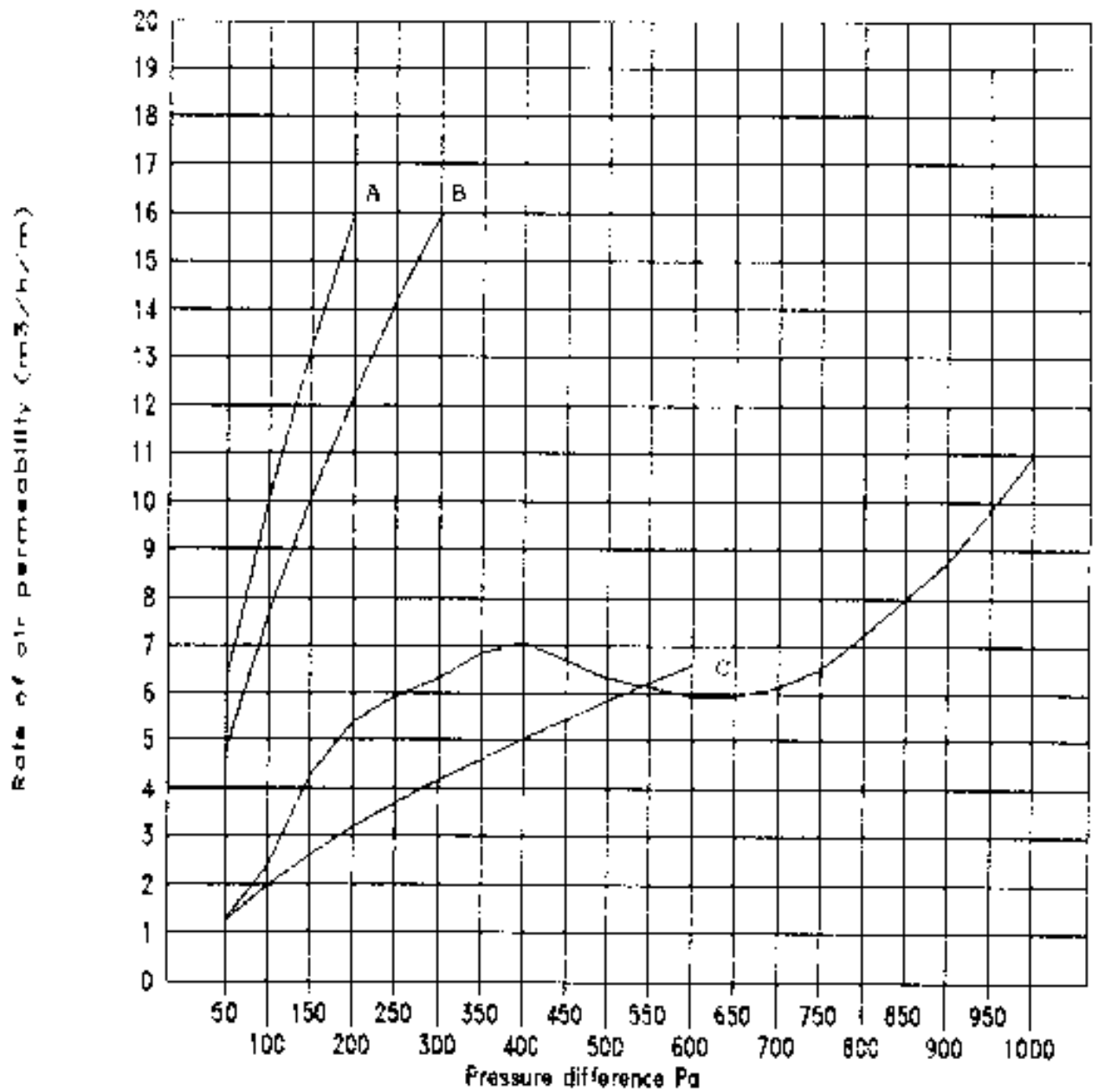
Before wind resistance tests

TABLE 1

Air Pressure (Pa)	Blank Reading (m <sup>3</sup> /h)	Maximum Total Air Flow (m <sup>3</sup> /h)	Maximum Rate Air Leakage (m <sup>3</sup> /h)	Maximum Rate of Air Leakage Relative to Opening Perimeter (m <sup>3</sup> /h/m)
50	1.5	5.0	3.5	1.30
100	2.5	9.0	6.5	2.42
150	3.5	15.0	11.5	4.28
200	4.5	19.0	14.5	5.39
250	6.0	22.0	16.0	5.95
300	7.5	24.5	17.0	6.32
350	8.5	27.0	18.5	6.88
400	10.0	29.0	19.0	7.06
450	12.0	30.0	18.0	6.69
500	14.0	31.0	17.0	6.32
550	15.5	32.0	16.5	6.13
600	17.0	33.0	16.0	5.95
650	18.5	34.5	16.0	5.95
700	19.5	36.0	16.5	6.13
750	20.5	38.0	17.5	6.51
800	21.5	41.0	19.5	7.25
850	22.5	44.0	21.5	7.99
900	24.0	47.5	23.5	8.74
950	25.0	51.5	26.5	9.85
1000	26.5	56.0	29.5	10.97

Opening perimeter = 2.69 m

## GRAPH OF AIR PERMEABILITY



WATERTIGHTNESS TEST RESULTSBefore wind resistance tests

TABLE 2

Pressure (Pa)	Point at which water leakage occurred
300	Leakage occurred when water, from both bottom corners of the opening perimeter, ran over the sill

WIND RESISTANCE TEST RESULTS

No damage or permanent deformation was recorded after wind loading tests on the external face of the unit at an applied pressure of 2400 Pa.

Deflection/Span ratio 1/1160 (maximum allowable 1/125)

No damage or permanent deformation was recorded after wind loading tests on the internal face of the unit at an applied pressure of 2400 Pa.

Deflection/Span ratio 1/1160 (maximum allowable 1/125)

AIR PERMEABILITY TEST RESULTSAfter wind resistance tests

TABLE 3

Test Pressure (Pa)	Maximum rate air infiltration m <sup>3</sup> /h	Maximum rate air infiltration m <sup>3</sup> /h/m length of opening joint
300	17.0	6.32

WATERTIGHTNESS TEST RESULTSAfter wind resistance tests

TABLE 4

Pressure (Pa)	Point at which water leakage occurred
300	Leakage occurred when water, from both bottom corners of the opening perimeter, ran over the sill

The table below is not part of the Test Report and is for your reference only.

Table 1. Exposure categories			
Exposure category (design wind pressure*)	Test pressure classes		
	Air permeability† (see figure 1)	Watertightness‡	Wind resistance
1200 X	Pa Up to 200 (graph A)	Pa 50	Pa 1200
1200	Up to 200 (graph A)	100	1200
1600	Up to 300 (graph B)	200	1600
2000	Up to 300 (graph B)	200	2000
Over 2000 (state design wind pressure)	Up to 300 (graph B)	300	Equal to the actual design wind pressure

\* The design wind pressure is calculated in accordance with the method given in appendix B.

† A test pressure class of 600 Pa (see figure 1, graph C) is applicable when stringent levels of performance are required, for example when exceptionally air tight windows are necessary as in air conditioned buildings. Where there is such a requirement the exposure category should be suffixed with 'special' e.g. 1200 special.

‡ The watertightness test pressure classes given for the different exposure categories cover most situations. Windows of higher performance than stated in the table should be considered where there are local exposure conditions more onerous than those of the surrounding areas (see also note 3 to B.3).