

**Report in Accordance with  
BS EN ISO 10077-1:2017**

**Thermal Performance of  
Windows, Doors & Shutters**

**Calculation of Thermal Transmittance  
Part 1: Simplified Method**

**CONFIDENTIAL**

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Project: Aluminium Korniche Bi-Fold Doorset  
w/ Revised Glazing Unit

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## 1 Introduction

This document details the thermal performance calculation of the doorset configuration as detailed below.

The results in this report relate only to the specimen tested and as drawings and specification received.

The frame profile results detailed below are provided by computer simulation using LBL software program THERM 5.2 and validated against proofs in Annex I (I1 to I10) of BS EN ISO 10077-2:2017. The frame profile results detailed below are provided from methods contained in BS EN ISO 10077-1:2017 and in accordance with thermal transmittance requirements detailed in BS EN 14351-1:2006 +A1:2010. Cavities are calculated in accordance with BS EN ISO 10077-2 section 6.4.3 Treatment of cavities using the single equivalent thermal conductivity method.

## 2 Summary of Results

### 2.1 Frame thermal transmittance (in accordance with BS EN ISO 10077-1: 2017)

Frame Profile	Frame Thermal Transmittance ( $U_f$ )
Left Jamb	3.0 W/m <sup>2</sup> K
Right Jamb	2.8 W/m <sup>2</sup> K
Head	2.9 W/m <sup>2</sup> K
Threshold	2.9 W/m <sup>2</sup> K
Meeting Stile	2.3 W/m <sup>2</sup> K

### 2.2 Linear thermal transmittance (in accordance with BS EN ISO 10077-1: 2017)

Frame Profile	Linear Thermal Transmittance ( $\psi$ )
Left Jamb	0.032 W/m.K
Right Jamb	0.029 W/m.K
Head	0.028 W/m.K
Threshold	0.028 W/m.K
Meeting Stile	0.074 W/m.K

### 2.3 Centre pane U-Value of glazing calculated in accordance with BS EN 673: 2011

Glazing unit	Centre pane U-value ( $U_g$ )
Nominal dimensions 6.8-18-4 90% argon 10% air filled, normal emissivity 0.01 (6.8mm Pilkington Optilam Clear, 18mm Thermoseal Thermobar, 4mm Pilkington S1+)	1.1 W/m <sup>2</sup> K

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## 2.4 U-Value

The thermal performance of the doorset ( $U_d$ ) in accordance with EN ISO 10077-1:2017 is:

**1.6 W/m<sup>2</sup>K**

All profile calculations based on BS EN ISO 10077-2:2017

## 3 Authorisation

	<b>Issued by:</b>
<b>Signature:</b>	
<b>Name:</b>	Andrew Threadgold
<b>Title:</b>	Test Engineer

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