DIN EN ISO 10077-2:2012-06 (E)

Thermal performance of windows, doors and shutters - Calculation of thermal transmittance - Part 2: Numerical method for frames (ISO 10077-2:2012)

Contents

Page

Foreword 3

Introduction 4

1 Scope 5

2 Normative references 5

3 Terms, definitions and symbols 5

4 Calculation method 6
4.1 General principle 6
4.2 Validation of the calculation programme 7
4.3 Determination of the thermal transmittance 7

5 Treatment of solid sections and boundaries 7
5.1 Solid materials 7
5.2 Emissivity of surfaces 7
5.3 Boundaries 8
5.4 Roller shutter boxes 8
5.5 Extensions of window frame profiles 10

6 Treatment of cavities 10
6.1 General 10
6.2 Cavities in glazing 10
6.3 Unventilated air cavities in frames and roller shutter boxes 10
6.4 Ventilated air cavities and grooves 14

7 Report 15
7.1 General 15
7.2 Geometrical data 16
7.3 Thermal data 16
7.4 Results 16

Annex A (informative) Thermal conductivity of selected materials 17

Annex B (normative) Surface resistances 19

Annex C (normative) Determination of the thermal transmittance 21

Annex D (normative) Examples for the validation of calculation programmes 25

Annex E (informative) Wood species listed in Annex A 37

Bibliography 40