DIN EN 14319-1:2013-04 (E)

Thermal insulating products for building equipment and industrial installations - In-situ formed dispensed rigid polyurethane (PUR) and polyisocyanurate (PIR) foam products - Part 1: Specification for the rigid foam dispensed system before installation

Contents

Page

Foreword 4

1 Scope 5

2 Normative references 5

3 Terms, definitions, symbols and abbreviations 6
3.1 Terms and definitions 6
3.2 Symbols and abbreviations 8

4 Requirements 9
4.1 General 9
4.2 For all applications 10
4.3 For specific applications 12

5 Test methods 15
5.1 Sampling 15
5.2 Conditioning 15
5.3 Testing 15

6 Designation code 18

7 Evaluation of conformity 18
7.1 General 18
7.2 Initial type testing 19
7.3 Factory production control 19

8 Marking, labelling and technical information 19
8.1 Marking and labelling 19
8.2 Technical information 19

Annex A (normative) Determination of substrate adhesion strength perpendicular to faces 21

A.1 Principle 21
A.2 Apparatus 21
A.3 Test specimen 21
A.4 Test specimen preparation procedure 21
A.5 Test procedure 21
A.6 Report 21

Annex B (normative) Initial type testing (ITT) and Factory production control (FPC) 23

Annex C (normative) Determination of the aged values of thermal resistance and thermal conductivity 25

C.1 General 25
C.2 Sampling and test specimen preparation 26
C.3 Determination of the initial value of thermal conductivity 26

C.4 Determination of the accelerated aged value of thermal conductivity 27
C.5 Fixed increment procedure 29
C.6 "Safe values" curve of aged thermal conductivity values versus temperature 32

Annex D (normative) Determination of the reaction profile and free-rise density 33

D.1 Introduction 33
D.2 Principle 33
D.3 Apparatus 33
D.4 Procedure 33
D.5 Free-rise density 34

Annex E (normative) Test sample preparation method for the specimens for the thermal conductivity test 35

E.1 Principle 35
E.2 Procedure 35

Annex F (normative) Determination of the reference density 36

F.1 Principle 36
F.2 Procedure 36
F.3 Measurement of the reference density 36

Annex G (normative) Test sample preparation method for the test specimens other than for determining thermal conductivity 37

G.1 Principle 37
G.2 Procedure 37

Annex H (normative) Reaction to fire of the product 38

H.1 Scope 38
H.2 Product and installation parameters 38
H.3 Mounting and fixing 39
H.4 Field of application 41

Annex I (normative) Reaction to fire of the products in standardised assemblies simulating end-use applications 43

I.1 Scope 43
I.2 Product and installation parameters 43
I.3 Mounting and fixing 44
I.4 Field of application 47

Annex ZA (informative) Clause of this European Standard addressing the provisions of the EU Construction Products Directive 50

ZA.1 Scope and relevant characteristics 50

ZA.2 Procedure for attestation of conformity of in-situ formed dispensed rigid polyurethane (PUR) and rigid polyisocyanurate foam(PIR) products 52

ZA.3 CE Marking and labelling 55

Bibliography 57