

DIN EN 14320-1:2013-04 (E)

Thermal insulating products for building equipment and industrial installations - In-situ formed sprayed rigid polyurethane (PUR) and polyisocyanurate (PIR) foam products - Part 1: Specification for the rigid foam spray 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) Initial Type Testing (ITT) and Factory Production Control (FPC) | | 21 |
| Annex B (normative) Preparation of the test sample | | 23 |
| B.1 | Principle | 23 |
| B.2 | Procedure for thermal conductivity samples | 23 |
| B.3 | Procedure for samples to be used for other test specimens | 23 |
| Annex C (normative) Determination of the aged values of thermal resistance and thermal conductivity | | 24 |
| C.1 | General | 24 |
| C.2 | Sampling and test specimen preparation | 25 |
| C.3 | Determination of the initial value of thermal conductivity | 25 |
| C.4 | Determination of the accelerated aged value of thermal conductivity | 26 |
| C.5 | Fixed increment procedure | 28 |
| C.6 | "Safe values" curve of aged thermal conductivity values versus temperature | 31 |

| | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| Annex D (normative) Determination of the reaction profile and free-rise density | 32 |
| D.1 Introduction | 32 |
| D.2 Principle | 32 |
| D.3 Apparatus | 32 |
| D.4 Procedure | 32 |
| D.5 Free-rise density | 33 |
| Annex E (normative) Determination of substrate adhesion strength perpendicular to faces | 34 |
| E.1 Principle | 34 |
| E.2 Apparatus | 34 |
| E.3 Sample preparation and conditioning | 34 |
| E.4 Preparation of test specimens | 34 |
| E.5 Testing procedure | 34 |
| E.6 Presentation of results | 34 |
| Annex F (normative) Testing for reaction to fire of the products | 35 |
| F.1 Scope | 35 |
| F.2 Product and installation parameters | 35 |
| F.3 Mounting and fixing | 36 |
| F.4 Field of application | 38 |
| Annex G (normative) Testing for reaction to fire of products in standardised assemblies simulating end-use application(s) | 40 |
| G.1 Scope | 40 |
| G.2 Product and installation parameters | 40 |
| G.3 Mounting and fixing | 41 |
| G.4 Field of application | 45 |
| Annex ZA (informative) Clause of this European Standard addressing the provisions of the EU Construction Products Directive | 47 |
| ZA.1 Scope and relevant characteristics | 47 |
| ZA.2 Procedure for attestation of conformity of in-situ formed sprayed rigid polyurethane (PUR) and rigid polyisocyanurate foam(PIR) products | 48 |
| Bibliography | 55 |