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SPECIAL FIRE RESISTANCE REQUIREMENTS
(How to deal with a burning issue without getting burnt)

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Product standard

The product standard covering fire resisting and smoke control doorsets is:

- **prEN 16034** *–Pedestrian doorsets, industrial, commercial, garage doors and openable windows – Product standard, performance characteristics – Fire resistance and/or smoke control characteristics*

The draft deals with the requirements for fire resistance and/or smoke control performance characteristics which are:

- **Resistance to fire [E / I]**
- **Durability of resistance to fire**
- **Smoke control [Sa / Sm]**
- **Durability of smoke control**

Product standard

- **Ability to release** (only for locked doors in escape routes)
- **Durability of ability to release** (only for locked doors in escape routes)
- **Self-closing [C]** (only for self-closing fire doors)
- **Durability of Self-closing** (only for self-closing fire doors)

The requirements for the other performance characteristics are covered by EN 13241-1 (*Industrial, commercial and garage doors and gates*), and by EN 14351-1 and prEN 14351-2 (*External and respectively internal pedestrian doorsets without resistance to fire and/or smoke leakage characteristics)*

Evaluation of conformity, cascading ITT

Evaluation of conformity

The compliance of fire resisting and/or smoke control doorsets and openable windows with the requirements of prEN 16034 and with the declared values (including classes) shall be demonstrated by:

- **Initial Type Testing by a Notified Body**
- **Factory production control established by the manufacturer and surveilled, assessed and approved by a Notified Body**

Cascading ITT

With the cascading ITT the owner of an ITT (licenser) may permit a manufacturer (licensee) to use his ITT for

Evaluation of conformity, cascading ITT

for his products under the conditions set out in prEN 16034 which in particular state that:

- **The licensee shall have a written agreement with the licenser for the use of the ITT results and the supporting documentation**
- **Only components specified by the licensers and included in the ITT results shall be used by the licensee**
- **The licensee shall not apply for an EXAP report in his own name and based on the licenser's test evidence**

Form for designation and classification of performances

Resistance to fire			
Integrity (E)	npd	E 15, 20, 30, 45, 60, 90, 120, 180, 240	
Integrity and insulation, supplementary procedure, (EI_1)	npd	EI_1 15, 20, 30, 45, 60, 90, 120, 180, 240	
Integrity and insulation, normal procedure (EI_2)	npd	EI_2 15, 20, 30, 45, 60, 90, 120, 180, 240	
Integrity and radiation (EW)	npd	EW 20, 30, 60	
Smoke control	npd	S_a	S_m
Durability of self-closing	npd	C0 (0), C1 (500), C2 (10 000), C3 (50 000), C4 (100 000), C5 (200 000)	

Rules of direct and extended application

The rules of direct and extended application are the rules which define which variations, and in particular which building hardware variations, are possible without further tests, for a fire resisting, smoke control doorsest to prEN 16034.

Rules of direct application

The rules of direct application are defined in EN 1634-1 and EN 1634-3 and are based on the results of fire tests.

Rules of direct and extended application

Rules of extended applications

The rules of extended application are defined in **EN 15269** and are agreed experts opinions based on experience of fire resistance testing and interpolation of test results.

The rules of extended application can be applied **only by notified bodies** and can be used **only for doorsets** which have been **tested against EN 1634-1 or EN 1634-3** and have obtained a fire resistance classification according to EN 13501-2. **The classifications obtained using the EXAP rules shall never be higher than the original classifications** obtained from testing to EN 1634-1 or EN 1634-3.

Iterchangeability of building hardware – Hardware performance sheet (HPS)

Fire resisting and smoke control doorsets complying with prEN 16034 shall have an EC certificate of conformity drawned up by a Notified Body.

To replace an original building hardware item with an alternative item may invalidate the doorset conformity certificate unless a Notified Body certifies that the alternative building hardware item does not reduce the performance of the doorset.

Iterchangeability of building hardware – Hardware performance sheet

To certify that an alternative building hardware item does not reduce the performance of a considered fire resisting or smoke comtrol doorsets a Notified Body can:

- **carry out further tests** and/or
- **apply the rules of direct and extended application**

Hardware Performance Sheet (HPS)

A hardware performance sheet (HPS) complying with **prEN 16035** is a summary of the data, taken from fire test reports, needed for the evaluation of the interchangeability of a building hardware item.

A HPS is part of the technical documentation delivered to a Notified Body by an applicant for an EXAP report.

prEN 16035 provides a list of data giving information on **the building hardware identification**, on the **test evidence used** and on the **doorset performance levels**.

Hardware Performance Sheet (HPS)

A HPS may be completed by:

- **a building hardware manufacturer**
- **by a doorset manufacturer**
- **by a Notified Body**

<u>In any case it is the responsibility of the Notified Body which draws up an EXAP report to check whether the HPS content is correct and up-to-date</u>

prEN 16034 clauses addressing the CPD provisions

Doorsets and openable windows with fire resistance and smoke control characteristics when intended for use in fire/smoke compartmentation shall meet the requirement clauses, listed in Table ZA.1.1, relative to the essential characteristics:

- **Resistance to fire (for fire compartmentation use)**
- **Durability of Resistance to fire (for fire compartmentation use): No known aspects**
- **Smoke control (only for applications where limitation of smoke spread is required)**

- **Durability of Smoke control** (only for applications where limitation of smoke spread is required)): <u>No known aspects</u>
- **Ability to release** (only for locked doors in escape routes)
- **Durability of Ability to release** (only for locked doors in nescape routes)
- **Self-closing** (only for self-closing fire doors)
- **Durability of Self-closing** (only for self-closing fire doors)

System of attestation of conformity

Table ZA.2 states that doorsets and openable windows with fire resistance and smoke control characteristics when intended for use in fire/smoke compartmentation shall have an **Attestation of conformity system 1.**

Table ZA.3.1 defines the **assignement of evaluation of conformity tasks** for doorsets and openable windows with fire resisting and/or smoke control characteristics under system 1

Assignements of evaluation of conformity tasks under System 1

Table ZA.3.1		
Tasks		**Content of the task**
Tasks under the responsibility of the manufacturer	Factory production control (FPC)	Resistance to fire Smoke control Ability to release Self-closing
	Further testing of samples taken at factory according to the prescribed test plan	Durability of ability to release Durability of Self-closing

Assignements of evaluation of conformity tasks under System 1

Tasks under the responsibility of the certification body	Initial type testing	Resistance to fire Smoke control Ability to release Self-closing
	Initial inspection of the factory and FPC	Resistance to fire Smoke control Ability to release Self-closing
	Continous surveillance, assessment and approval of FPC	Resistance to fire Smoke control Ability to release Self-closing

EC Certificate and Declaration of conformity

Fire resisting and smoke control doorsets and openable windows complying with the Annex ZA of prEN 16034 shall have:

- **an EC Certificate of conformity drawn up by a Notified Body**
- **an EC Declaration of conformity drawn up by the manufacturer**

The two documents shall contain the information defined in the Annex ZA.2.2 which, in the case of the certificate, shall include also the name, address and identification number of the certification body and the number of the certificate.

CE marking and labelling

The manufacturer or his authorised representative established within EEA is responsible for the affixing of the CE marking.

The CE marking symbol shall be in accordance with the Directive 93/68/EEC and shall be shown on the doorsets and openable windows or, when not possible, on the accompanying label, the packaging or on the accompanying commercial documents.