

DIN EN 13501-4:2007-04 (E)

Fire classification of construction products and building elements - Part 4: Classification using data from fire resistance tests on components of smoke control systems

Contents		Page
Foreword		4
Introduction		5
1	Scope	6
2	Normative references	6
3	Terms and definitions	7
4	Fire scenarios	8
4.1	General	8
4.2	The standard temperature/time curve (post flash-over fire)	8
4.3	The slow heating curve (smouldering fire)	9
4.4	Constant temperature attack	9
4.5	Specific thermal actions	9
4.5.1	Smoke control ducts	9
4.5.2	Smoke control dampers	9
4.5.3	Smoke barriers	9
4.5.4	Powered smoke and heat exhaust ventilators	10
4.5.5	Natural smoke and heat exhaust ventilators	10
5	Resistance to fire performance characteristics	10
5.1	General	10
5.2	Performance characteristics	10
5.2.1	E - Integrity	10
5.2.2	I - Insulation	11
5.2.3	S - Smoke leakage	11
5.2.4	D - Stability duration under constant temperature	12
5.2.5	DH - Stability duration under the standard time-temperature curve	12
5.2.6	F - Functionality of powered smoke and heat ventilators	12
5.2.7	B - Functionality of natural smoke and heat ventilators	12
6	Declaration of performance	12
6.1	Classification periods	12
6.2	Designatory letters	12
6.3	Declaration of performance	13
6.4	Declaration of classes in product standards	13
6.5	Number of tests required for classification	13
7	Classification procedure for fire resistance	13
7.1	General	13
7.1.1	Procedure	13
7.1.2	General rules for deducing the number of fire resistance tests	14
7.2	Classification of smoke control ducts	14
7.2.1	General	14
7.2.2	Test methods	15
7.2.3	Tests to be carried out	15
7.2.4	Performance criteria	16

7.2.5	Classes	16
7.3	Classification of smoke control dampers	17
7.3.1	General	17
7.3.2	Test method	17
7.3.3	Tests to be carried out	17
7.3.4	Performance criteria	18
7.3.5	Classes	20
7.4	Classification of smoke barriers	21
7.4.1	General	21
7.4.2	Test method	21
7.4.3	Tests to be carried out	21
7.4.4	Performance criteria	21
7.4.5	Classes	22
7.5	Classification of powered smoke and heat exhaust ventilators	22
7.5.1	Test method	22
7.5.2	Tests to be carried out	22
7.5.3	Performance criteria	22
7.5.4	Classes	22
7.6	Classification of natural smoke and heat exhaust ventilators	23
7.6.1	Test method	23
7.6.2	Tests to be carried out	23
7.6.3	Performance criteria	23
7.6.4	Classes	23
Annex A (normative) Classification report		24
A.1	General	24
A.2	Content and format	24