



## **KEIM Mineral Paints – Technical Digest – Fire Resistance**

There are many types of paint available in the U.K.

The most common types of paint used are petrochemical based, and such are not fire resistant.

Ensuring that materials used on your building are fire resistant is more important than ever, especially for residential buildings above 18m in height, where UK building regulations now require materials that resist the spread of fire over walls.

In April 2011, the Construction Products Regulations (CPR) was introduced to unify fire performance standards across Europe to create a single set of classifications. This resulted in the Euronorm standard EN13501-1 which provides the reaction to fire classification procedure for all construction products.

KEIM interior and exterior paint systems have been tested against the standard EN13501-1, and meet the category A2-s1,d0.

To give customers extra peace of mind, KEIM not only have internal and external paints that are fire resistant, but also have a range of fire resistant render, stone repair and concrete repair systems.



**INCOMBUSTIBLE**





## Fire Resistance – KEIM Mineral Paint Systems

### 1. Fire Resistance Classification for Paint

Fire Resistance of paint systems is classified against the European Standard BS EN 13501-2:2002

**BS EN 13501-1: 2002:** Fire Classification of Construction Products and Building Elements: Part 1: classification using test data from reaction to fire tests.

The classifications are A1, A2, B, C, D, E and F

This classification shows the properties of a product based on 3 criteria.

Spread of flame  
Smoke propagation  
Flaming droplets and particles

### 2. Explanation of the classification

The reaction to fire classification determines how much (if any) a material contributes to the **spread of flame**:

- A1, A2 = Non-Combustible Materials.
- B, C, D = Ranges from very limited to medium contribution to fire.
- E, F = High contribution to fire.

The 's' part relates to total **smoke propagation**, during the first ten minutes of exposure. These determine a 'smoke' index:

- S1 = a little or no smoke
- S2 = quite a lot of smoke
- S3 = substantial smoke

The 'd' part relates to **'flaming droplets and particles'** during the first 10 minutes of exposure. The index is:

- D0 = none
- D1 = some
- D2 = quite a lot





### 3. What does this European classification mean?

Definition	Grade	Smoke Propagation	Flaming Droplets
Non-Combustible Materials	A1	-	
	A2	s1	d0
Combustible materials: Very limited contribution to fire	B	and all variations	
Combustible materials: Limited contribution to fire	C	s1	d0
Combustible materials: Medium contribution to fire	D	and all variations	
Combustible materials: High contribution to fire	E	E-d2	
Combustible materials: Easily flammable	F		

### 4. What classification are KEIM Mineral Paints?

**A2-s1, d0**

### 5. Which exterior KEIM paint systems are classified A2-s1, d0

The following exterior paint systems are classified A2-s1, d0.

Confirmation certificates are available for all of these products.

- KEIM Soldalit
- KEIM Soldalit ME
- KEIM Granital
- KEIM Concretal W
- KEIM Concretal Black
- KEIM Concretal Lasur





## 6. Which interior KEIM paint systems are classified A2-s1, d0

The following interior paint systems are classified A2-s1, d0.

Confirmation certificates are available for all of these products.

KEIM Optil  
KEIM Innostar  
KEIM Ecosil-ME

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## Fire Resistance – KEIM Render Systems

### 7. Fire Resistance Classification for Render

Fire Resistance of paint systems is classified against the European Standard EN 998-1:2010 (BS 13501-1)

The classifications are A1, A2

### 8. What classification are KEIM Render systems?

**A1**

### 9. Which KEIM systems are classified A1

The following systems are classified A1.

Declarations of performance are available for all of these products.

#### **KEIM Render systems**

KEIM Uniputz 1.3 (KEIM Universal Render)  
KEIM Uniputz 0.6 (KEIM Universal Render Fine)  
KEIM Turado  
KEIM Brillantputz  
KEIM NHL Kalkputz Grob (KEIM NHL-Kp 3.0)  
KEIM NHL-Kalkputz-Fein (KEIM NHL-KP 0.6) – classification A2-s1, d0





### **KEIM Concrete Repair Systems.**

KEIM Concrete Repair Mortar (KEIM Concretal-MR 2.0)

### **KEIM Stone Repair Systems.**

KEIM Restauro Grund

KEIM Restauro Top

KEIM Restauro Fuge

For further information regarding fire resistance of KEIM Mineral Paints please contact our sales office - [sales@keimpaints.co.uk](mailto:sales@keimpaints.co.uk) or 01952 231250.

