

Architectural Powder Coatings Guidance Note 3

Fire Propagation and Flame Spread in Powder Coatings



British Standards

British Standard 476 refers to fire tests on building materials and structures. The parts of this standard that are of most relevance to powder coatings are;

Part 6 - Fire Propagation

The result of this test is a fire propagation index. It is a measure of the contribution to fire growth made by an essentially flat surface. The results of the test are specific to the test specimen i.e. the product on that particular substrate in the form in which it was tested. Therefore it cannot be used as a method for assessing the product in all situations.

Part 7 - Surface Spread of Flame

This is a method of measuring flame spread along the surface of a specimen. Again the results of the test are specific to the test specimen i.e. the product on that particular substrate in the form in which it was tested. Therefore it can not be used as a method for assessing the product in all situations.

As defined in the UK Building Regulations 2000 - Fire Safety Approved Document B, the highest product performance classification for wall or ceiling linings is Class 0. This is achieved if a material;

(a) Achieves a class 1 rating in BS476 Part 7.

and

(b) Achieves a fire propagation index of not more than 12 and sub-index of not more than 6 in BS476 Part 6.

A number of Interpon products have been tested to BS476 Parts 6 and 7 and have met the criteria for Class 0 building regulation approval.

Further Information:

Fire Tests on Building Materials and Structures BS476 - British Standard Institute

Building Regulations Approved Document B2 Fire Safety, Internal Fire Spread (Linings) - DETR

US Standards

ASTM E1321 Ignition and Flame Spread Testing

Flame Spread Test

Flame front position

50mm
100mm

Arrival time at sample

155-215s
200-262s

Flame front velocity: 0.34-0.45mm/s

Ignition Test

Surface ignition temperature 495°C

Tests conducted by VTEC Laboratories inc.

European Standard

Fire testing and reports issued by external independent accredited laboratories certify that our range of Polyester product in several colours, are classified in agreement with the European Norm EN 13501-1 as:

Interpon Polyester A2_L-s1, d0

Interpon Polyester A2_L-s1, d0

This result means:

A2_L Non combustible - No contribution to fire (Flammable under 20s)

s1 Expression for the Smoke Emission in: walls, ceilings and floors

d0 Expression for release of droplets / particles in: walls, ceilings and floors

The results are considered increasingly unfavourable from A1 to E for the principal index, as well as for the release of smoke (s1, s2 o s3) and flaming droplets/ particles (d0, d1 o d2)

AkzoNobel Powder Coatings
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