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Upgrading Doors to 30 Minutes Fire Resistance with Timbercoat Intumescent Paint

Most modern normal internal doors cannot be upgraded to achieve 30 minutes Fire Resistance. The issues are they often have a hollow core, can be very thin, lightweight and are liable to warping shortly after installation. No door answering such a description can be upgraded and should be replaced with a new Fire Door where one is required. Our recommendation is that both sides of the door are protected and we are unable to supply certification unless sufficient product is purchased and applied to both sides of the door.

While we recommend the installation of custom-built fire doors there can be reasons not to do so. Doors that Timbercoat is capable of upgrading are ones that can afford to lose 2mm to charring.

1. Solid, joint-free doors with compressed core and a reasonable thickness (6 mm +), veneer faces bonded to either side of the core. These can be flush doors or pressed to create a moulded look.

2. Seasoned, old or sturdy doors with 35mm +thick frames and solid panels 10mm + thick.

3. Certain other doors that are not prone to premature collapse.

Note- Well seasoned or old, sturdy doors with panels 8mm thick can be upgraded if addition “sacrificial” ply panels 6mm thick are fitted in the panel recesses and held in place by the door’s beading.

If your doors are in a category which could be upgraded submit your assessment to your Authority, along with this explanatory Technical Note for approval prior to purchase. Thermoguard UK will issue a Fire Certificate for Authority approved projects following completion.

Justification. As doors vary so greatly and the great majority are unsuitable for upgrading it is neither meaningful or realistic to carry out an official NAMAS / UKAS Fire Door Fire Test .
Thermoguard Timbercoat’s uniquely effective formula resulted in the UK’s only successful official UKAS / NAMAS Fire Test Laboratory Fire Resistance Test to 60 minutes on softwood with timber lost to charring restricted to 7-10 mm at 60 minutes (unprotected softwood charring is approximately 50mm).

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The system was also demonstrated by the Megastructures TV documentary "Building from Disaster" restricting charring to 2mm and retaining integrity and insulation throughout a 45 minute maximum severity burn (more severe than BS 476 part 22). This was while identical unprotected panels burnt in parallel were shown to burn through completely within 6 minutes (For a shortened video search "Thermoguard" on www.youtube.com)

Thermoguard Technical Department assess doors as suitable based upon the customers description which features on the Fire Certificate issued, so this information should be checked before ordering.

We require that in a fire the door be capable of losing 2mm plus 2mm additional safety factor to charring without the risk of splitting or cracking of the thinnest areas (usually the panels) or other premature failure, while maintaining insulation.

Application. Apply 4 coats of Thermoguard Timbercoat @ 7 sq m per litre per coat. Then apply 2 coats Thermoguard Flame Retardant paint . (Timbercoat data sheet is available on website)

We recommend Astroflame intumescent strips are fitted around the door edges or in door casings.

Coverage Timbercoat5 Kg 2 doors. Flame Retardant Paint 2.5 lit 6 door sides.

Advice. Fire resistance depends on the chosen coating's performance on the type of material the surface to be protected is made from and that surface's thickness and construction. Fire performance of clear fire coatings and that of coloured fire paints (which are far more effective in increasing fire resistance) and performance on surfaces varies dependent upon the surface. Modern building materials often have little in common with similar named historic forerunners (a particular case in point being lath and plaster) and though not clear from some manufacture's literature, tests on coloured paint fire coatings are not relevant for their clear fire coatings. It is therefore advisable to obtain confirmation of the fire test evidence any manufacturer proposes to support the use of the particular chosen product and pass this to your Authority to consider the relevance of the surface and materials tested to your particular case and the actual test results.