

Protection Factor Higher with Cafco

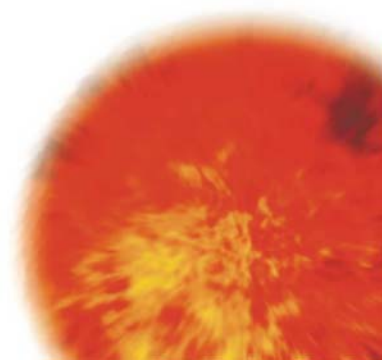
Debate over the performance capabilities of passive fire protection systems (PFP), when subjected to extreme conditions, has been at the forefront of the fire protection industry's agenda ever since the tragic events at the World Trade Centre. Following the collapse of the two buildings, questions have been raised about the adequacy of PFP, as well as the regime under which materials are tested and assessed.



Historically, two separate fire test assessments have evolved. PFP materials for hydrocarbon fires (those experienced in the petrochemical industry) are assessed using methods such as 'Pool' and 'Jet' fire tests. Materials for use in the construction industry are subjected to cellulosic tests. The hydrocarbon and cellulosic fire test curves are quite different. The hydrocarbon curve reaches a temperature of 1100°C after approximately 20 minutes, whilst the cellulosic fire test curve is much less severe and attains around 800°C in the same period.

One of the main questions raised by the 911 disaster was whether cellulosic fire tests are adequate for today's commercial buildings, where more and more plastics are being introduced via furniture, computers and general office equipment. The query spawned others. Would the hydrocarbon fire test curve be more appropriate? And, if this is the case, what is the position with regard to buildings currently in use with fire protection to the cellulosic standard? How well protected are they?

In an effort to resolve the issue, Alfreton based Cafco International recently undertook an extensive program of testing whereby steel columns were treated with various cellulosic PFP systems. Some were treated with materials manufactured by Cafco and some were treated with competitive materials. The steel columns were then subjected to a hydrocarbon fire (as were the twin towers) and the results were quite remarkable. In general, it was found that when subjected to a hydrocarbon type fire, PFP materials applied to cellulosic standards provided around 60 to 66% of the expected fire resistance. Cafco Fendolite MII out-performed all other products tested giving a protection factor of 79%. Cafco Board, installed with the unique Cafclip systems, achieved a figure of 73%. One spray applied cementitious material, however, managed a protection factor of just 49%.



“Clearly, some materials perform better than others and therefore give a greater degree of comfort to designers, builders, insurers and (importantly) the occupants of tall and higher risk buildings”, commented a Cafco spokesman. “Cafco manufactures a range of PFP systems including sprayed vermiculite cements, boards and intumescent coatings. With more than thirty years experience in all aspects of passive fire protection we are well placed to offer project-specific solutions to more fire protection problems”.

Details concerning Cafco products can be found on the Cafco web site at: www.cafcintl.com or can be obtained from Cafco International, Bluebell Close, Clover Nook Industrial Estate, Alfreton, Derbyshire DE55 4RA. Tel: 01773 837900. Fax: 01773 836710. Email: info@cafcintl.com.

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