



## MINISTRY OF DEFENCE

Directorate of Safety, Environment and Fire Policy  
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Your Reference:

Our Reference: D/D SEF Pol/5/3/22

Date: 29 June 1999

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Dear Mr Bent

END OF TRIAL REPORT – FIRESTOPPER 40002

As you are aware, FireStopper 40002 has been trialed as part of the MOD initiative in researching environmentally friendly yet effective fire-fighting agents as alternatives to halon (BCF) 1301, 2111 etc, including fire-fighting foam compounds that contain fluorine. In the main suitable alternatives in the foam category have proved difficult to identify, as they are not true foams. Furthermore, of the numerous products on the market, advertised as 'green' alternatives have proved to be somewhat ineffective when applied onto real fires.

Non more so than those products which are sold as either encapsulating and/or emulsifying agents for use on hydrocarbons. More often than not these products, when applied to burning hydrocarbon liquids have neither the rapid extinguishing capability as that of AFFF or, sufficient burnback stopping qualities of FP foam. One exception to this is 'FireStopper' which, under trial conditions passed the large-scale (81 metre square bund) test for the MOD Performance Standard. The product, version 40002, achieved extinction within 29 seconds and sustained burnback in excess of 20 minutes as required under this test.

Importantly, regarding ratings for small fire use, the product achieved external EN3/6 accreditation, not to mention having been successfully tested by LPC and rated as a "friendly, non-toxic, non-corrosive biodegradable fire-fighting agent, using Aqueous Biological Film Forming Catalyst technology". FireStopper 40002 under it's EN rating has been credited with a 183B and 27A rating as a combined A/B 9 litre extinguisher, with a 144B and 27A rating in a 6 litre version.

In sum, following intensive trialing of 40002 over the past two years, in addition to holding extant EN accreditation, FireStopper is considered as acceptable for use within the MOD Defence Fire Service in both 9ltr and 6ltr extinguishers. For large fires, trialing carried out under MOD Performance Standards with 40002 passed both extinguishing and burnback requirements. The product's biodegradability regarding fluorine content has been assessed as 50 times better than conventional AFFF foams. This is supported by independent analysis through Kingston on Thames University analytical laboratories. We trust that FireStopper will continue to be researched by you, as its capabilities for other applications are tremendous. From a MOD point of view, further trials are intended in co-operation with William Eagles Systems Ltd as a viable alternative to current AFFF/FP foams and halon gasses used in fire suppression systems.

Yours Sincerely

A handwritten signature in black ink, appearing to read 'M Reed', with a stylized flourish at the end.

M REED  
ACO  
for CFO/MOD FS