



28th November 2019

To Whom it may Concern

Protecta FR Collars fitted into a concrete floor (minimum 150mm thick) underlined with close boarded in-situ pine timber plank shuttering (25mm thick) – Fire resistance EI120

Further to recent testing with Protecta FR Collars in a cross laminated timber floor (120mm thick), we feel comfortable that FR Collars can be fitted through 25mm thick close boarded pine shuttering into a concrete floor slab (150mm minimum thickness) and will provide a fire resistance of EI120 to currently approved plastic pipe types, wall thicknesses and pipe uses.

We are proposing that the annular spaces (10 – 30mm wide) are sealed in the top of the concrete floor and timber shuttering / concrete floor using Protecta FR Acrylic Sealant (25mm depth) over stone wool backer (25mm depth/ minimum density 33kg/m3).

The Protecta FR Collars are mechanically fixed through the shuttering and shall penetrate the concrete soffit by a minimum of 40mm depth, using ≥ Ø4 x 65mm long masonry screws or expansion bolts and steel penny washers.

This proposal is supported by more onerous testing carried out in a ‘Cross Laminated Timber (CLT)’ floor (120mm depth), where we utilised the accepted ‘critical pipe approach’ to cover all existing approvals in concrete floors for Protecta FR Collars with plastic pipes.

The results obtained are summarised below:

Test results

	Collar	Aperture	Application (ES means exposed/soffit side, DS means both sides)	Integrity	Insulation	Test report
Critical approach comparison tests FR Collar	110 x 2.7mm PVC U/C	Ø 127mm	ES Collar 110x50mm on DS FR Acrylic 25mm on 25mm SW	121	121	WF19723.O
	160 x 14.6mm PP U/C	Ø 180mm	ES Collar 160x60mm on DS FR Acrylic 25mm on 25mm SW	114	113	WF19723.G
	50 x 2.9mm PP U/C	Ø 67mm	ES Collar 50x30x3.0mm on DS FR Acrylic 25mm on 25mm SW	121	121	WF19723.P

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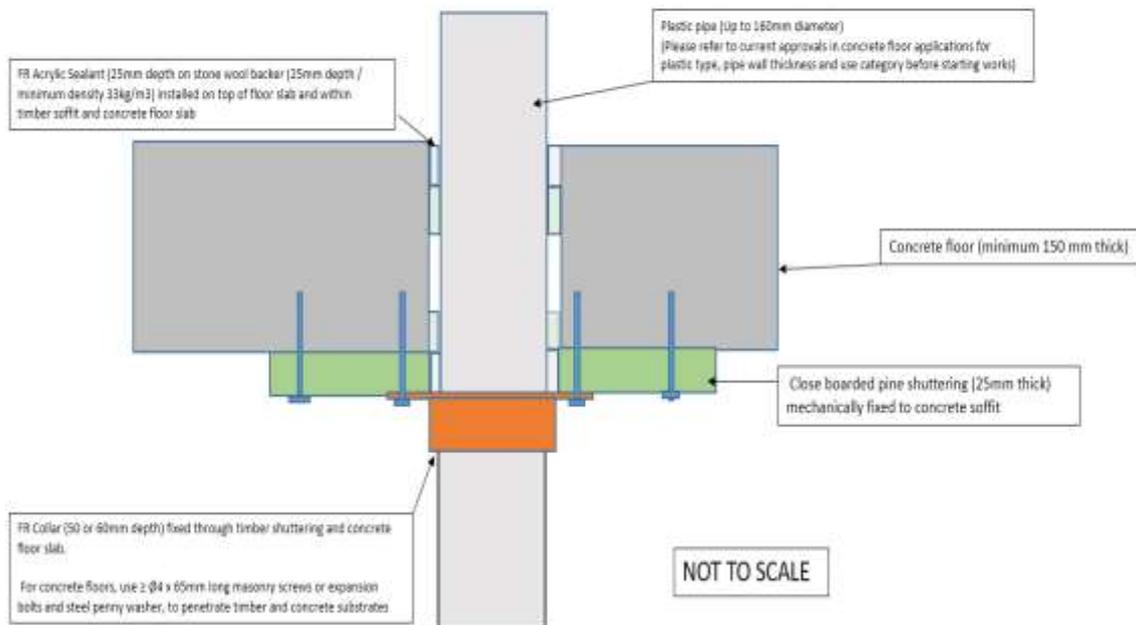
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Proposal for fire stopping to plastic pipes (up to 160mm diameter) with Protecta FR Collar and FR Acrylic Sealant penetrating a concrete floor (minimum 150mm thick) with close boarded in-situ pine shuttering (25mm thick) – maximum Fire resistance EI120



In our opinion, the fire test carried out with the CLT floor is a more onerous case than the one described above and we feel comfortable that Protecta FR Collars will provide a fire resistance of EI 120 with the shown minimum floor build up with plastic pipe (up to 160mm) already approved in concrete floor uses in terms of types, pipe wall thickness and defined pipe usage.

Yours faithfully

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