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Short form certificate of assessment

Certificate sponsor	Certificate number	Certificate issue date	Certificate expiry date
TBA Textiles Pty Ltd Unit 12, 8 Leighton Place Hornsby NSW 2077 Australia	FAS210258 SFC1.0	17 September 2021	30 September 2026

Description of assessed system

The assessed system/product consist of loadbearing concrete walls and floors protected with TBA Firefly™ Intubatt® when subjected to the hydrocarbon fire curve.

At present, there are no recommended methods of assessment or guidelines for passive fire protection of concrete members in Australian Standards. Therefore, the methodology provided in EN 13381-3:2015 is followed in the referenced report.

Assessed system performance

The element of construction described above was assessed by this laboratory on behalf of the test sponsor in accordance with the stated test standard in Table 1 and achieved the results outlined in Table 2. Complete description of the assessed construction can be found within the referenced regulatory information report.

Table 1 Test standard and assessment report details

Referenced report	Test standard	Referenced report issue date	Referenced report expiry date
FAS210258 RIR1.0	AS 1530.4:2014	17 September 2021	30 September 2026

Reinforced concrete walls and floors protected with 50 mm thick TBA Firefly™ Intubatt® are expected to achieve an FRL of 240/240/240 if exposed to hydrocarbon fire as per appendices B2 and B5 of AS 1530.4:2014 – provided that they have been designed by a professional structural engineer in accordance with AS 3600:2018 considering all design load combinations at ambient temperature. The assessed systems are given in Table 2.

Table 2 Assessed systems and attributed FRL

System	Substrate	FRL
120 mm thick loadbearing concrete floor as tested in FRT210184 R1.0	Concrete floor slab with a single layer of 50 mm thick TBA Firefly™ Intubatt® installed on the exposed side (underside of the concrete slab). All joints between the adjacent sections of the TBA Firefly™ Intubatt® are sealed with TBA firefly™ Intumastic.	240/240/240
Minimum 100 mm thick of concrete floor that has been designed to carry the applied loading at ambient temperatures in accordance with AS 3600:2018	Concrete floor slab with a single layer of 50 mm thick TBA Firefly™ Intubatt® installed to the underside and exposed to fire from below.	240/240/240
Minimum 100 mm thick solid concrete or hollow core concrete wall that has been designed to carry the applied loading at ambient temperatures in accordance with AS 3600:2018	Concrete wall with a single layer of 50 mm thick TBA Firefly™ Intubatt® installed to one side only and exposed to fire from the side protected by the TBA Firefly™ Intubatt®	240/240/240
Minimum 100 mm thick solid concrete or hollow core concrete wall that has been designed to carry the applied loading at ambient temperatures in accordance with AS 3600:2018	Concrete wall with a single layer of 50 mm thick TBA Firefly™ Intubatt® installed to both sides of the wall for two-way exposure	240/240/240

Using the characteristic temperatures obtained from the 120 mm thick concrete slab tested in accordance with AS 1530.4:2014 hydrocarbon fire exposure, the equivalent concrete thicknesses for the applied fire protection thickness is determined and given in Table 3. These results are applicable to concrete slabs and walls with the limitations given in the referenced report.

Table 3 Equivalent concrete thickness (ε) for concrete slab. One layer of 50 mm thick TBA Firefly™ Intubatt® is equivalent to:

Time (minutes)	Equivalent concrete thickness ε (mm)
30	85.5
60	88.8
90	100.1
120	112.7
180	131.0
240	142.5

Conditions / validity

- This certificate is provided for general information only and does not comply with the regulatory requirements for evidence of compliance.
- The RIR (regulatory information report) must be provided for regulatory requirements and evidence of compliance.
- Reference should be made to the relevant assessment report or regulatory information report to determine the applicability of the test result to a proposed installation. Full details of the constructions and justification for the conclusions given, along with the validity statements, are given in the assessment reports.
- The results of the assessment report may be used to assess fire hazard, but it should be recognised that a single test method will not provide a full assessment of fire hazard under all conditions.
- All work and services carried out by Warringtonfire Australia are subject to and conducted in accordance with our standard terms and conditions. These are available on request or at https://www.element.com/terms/terms-and-conditions.

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	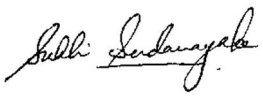	
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