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Issue Date: September 24, 2025

Letter Report No: 106322008TOR-001

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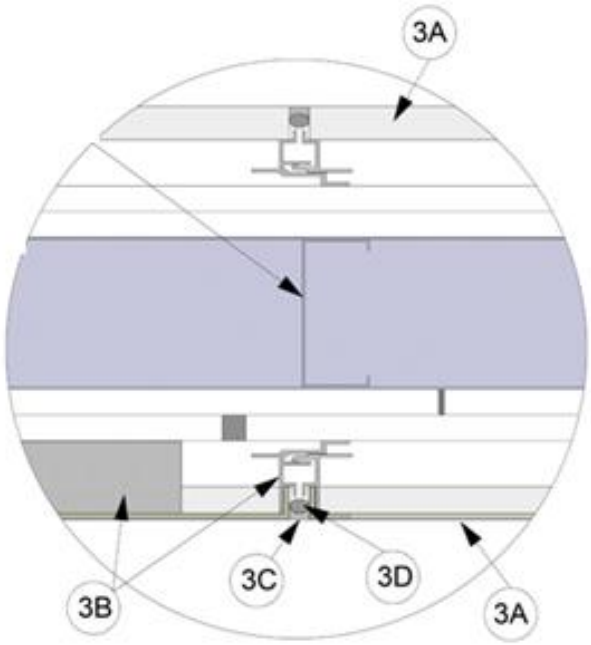
Subject: Fire Resistance of Alfrex ACM Panel with Alternate Extrusion System

Dear Mr. Sheikh,

Intertek Testing Services has conducted this evaluation to determine if the previously tested wall assembly consisting of the 4mm Alfrex ACM panel will maintain compliance per ASTM E119-2012a with an alternate extrusion system (Quickpanel System). The evaluation further examines whether the system demonstrates compliance with the most recent edition of ASTM E119-20 and with CAN/ULC S101-14.

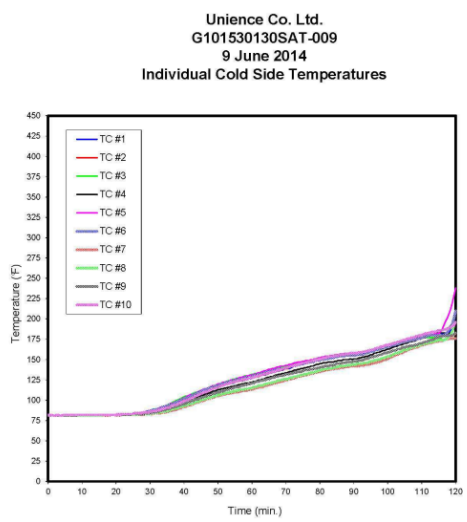
Alfrex Inc.'s 4 mm ACM panel is currently certified with Intertek per various fire standards, including ASTM E119-2012a (see Spec ID 36858). The assembly consisting of the ACM had obtained a two-hour rating per ASTM E119 and the wall construction included the following components (See Design Listing UCL/MCMWP 120-01 for further details):

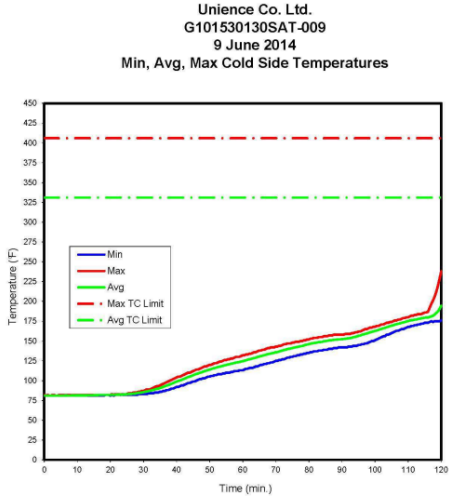
1. 2-1/2 in. 25 GA steel studs spaced 24 in. oc.
2. Two layers of Type X gypsum on each side of the studs.
3. Alfrex 4 mm ACM panel installed onto the gypsum as follows:



3A. ACM
3B. Aluminum extrusions
3C. Backer rod
3D. Sealant

The temperature data obtained during the test on the unexposed surface were as follows:





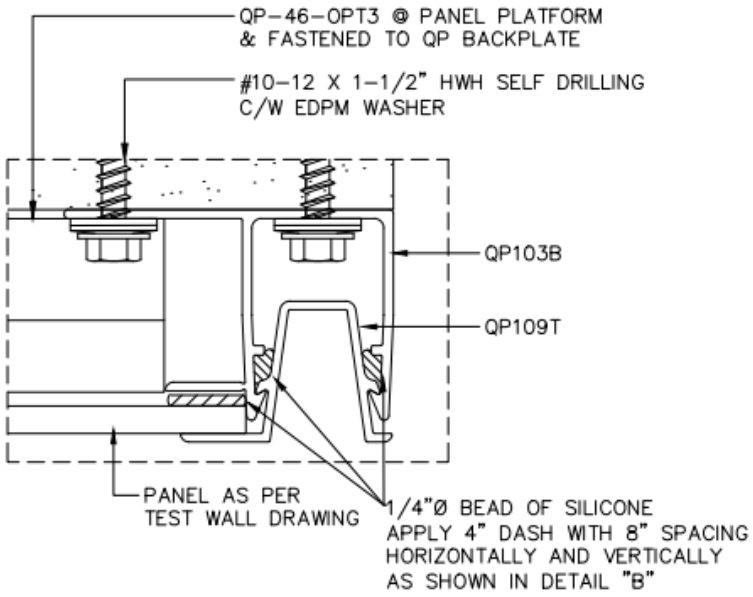
The average temperature rise on the unexposed surface of the tested Façade Panel System never exceeded 250 °F above its initial temperature 81 °F, staying well below on average at 195 °F in comparison to the maximum average thermocouple limit of 331 °F. Additionally, no single thermocouple had a temperature rise above the maximum allowable temperature 325 °F above its initial temperature.

The following observations were noted during the test:

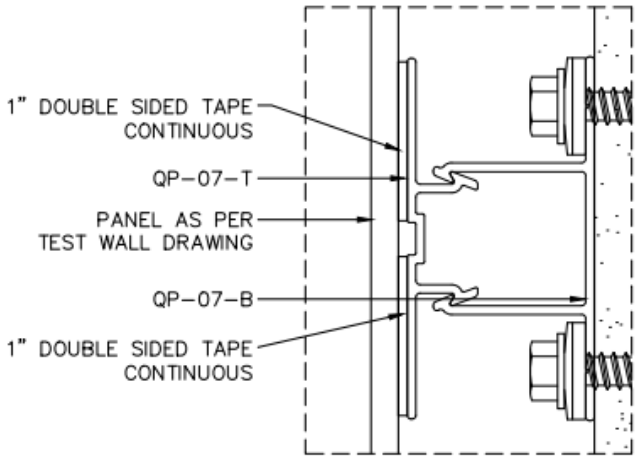
Time (Min: Sec)	Observation
0:00	The Test was started at 8:45 am
2:55	Panels began ripping on exposed surface
4:00	Heavy flaming in furnace due to ignition of ACM Panels on exposed surface
26:00	Joints on face layer of gypsum began to open
40:00	The face layer of the gypsum joint open to approximately ½ inch wide
60:00	An opening had developed on joint on the exposed surface
65:00	The face layer was beginning to fall
80:00	There was an opening on the base layer on exposed side approximately a ½ inch wide
92:00	The base layer beginning to fall exposing base layer of unexposed surface.
120:00	The test was terminated

Based on the previous systems performance, the joints began to open around the 26-minute mark after which the face layers and base layers of the exposed surface consequently began to fall.

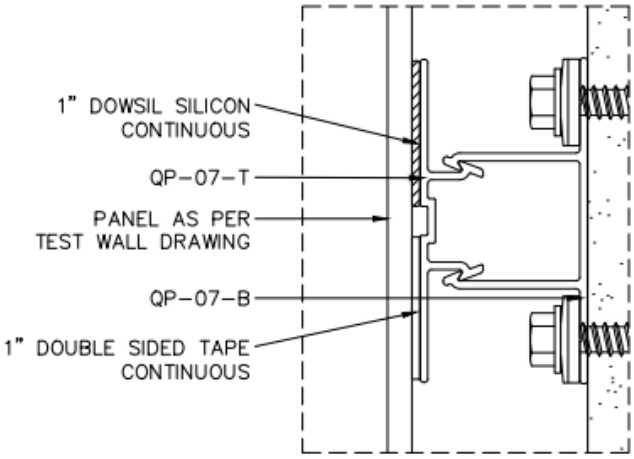
Considering the data presented above and given that the system achieved the two-hour rating with a substantial margin, Intertek has evaluated the system with all components remaining unchanged, aside from the ACM extrusion system. The drawing below shows the extrusion details of the new proposed extrusion system, the Quickpanel system:



A QI FAB & SILICONE
Scale: NTS



B QP-07 OPT1 HORIZONTAL STIFFENER
Scale: NTS



C QP-07-OPT2 HORIZONTAL STIFFENER
Scale: NTS

The aluminum rout-and-return extrusion systems used in both the original test assembly and the Quickpanel system are comparable in design and function, particularly with respect to the air cavity acting as a thermal break and the primary attachment components. The only notable difference is the absence of a backer rod in the Quickpanel system. In the original

assembly, the backer rod primarily served as a backing material to support sealant curing and to enhance water penetration resistance; it did not provide a measurable contribution to fire resistance. Based on system performance characteristics, it is anticipated that joint openings in the Quickpanel system would occur at a similar timeframe to those observed in the original test assembly (approximately 26 minutes into the ASTM E119 exposure). The fire-resistance performance of both systems is largely governed by the two layers of Type X gypsum sheathing installed on either side of the framing, which provide the primary barrier to heat transfer and structural degradation. Accordingly, it is Intertek's opinion that the substitution of the original extrusion system with the Quickpanel system does not adversely impact the demonstrated two-hour fire-resistance rating achieved in accordance with ASTM E119.

The current and latest edition of ASTM E119-20 has been reviewed against the previously tested ASTM E119-12a and their technical content. ASTM E119-20 introduces refinements in specimen conditioning, furnace control recording, and thermocouple data collection that strengthen testing practice without altering the fundamental methodology of the standard. It expands definitions for the cotton pad and hose stream tests to reduce laboratory variability and improve repeatability of results. These procedural updates affect execution and documentation practices, but do not change the fire-resistance rating outcomes for non-loadbearing assemblies. Based on Intertek's evaluation, prior testing to ASTM E119-12a remains technically valid and demonstrates compliance with ASTM E119-20 requirements.

Similarly, the current and latest edition of CAN/ULC S101-14 Rev 3 "Standard Methods of Fire Endurance Tests of Building Construction and Materials" (2021) has been reviewed against the previously tested ASTM E119-12a and their technical content. CAN/ULC S101-14 Rev. 3 maintains the same unexposed surface temperature rise criteria—a maximum average increase of 325 °F (163 °C) across thermocouples and a maximum increase of 500 °F (278 °C) at any single thermocouple. It introduces prescriptive requirements for pad materials, dimensions, density, and conductivity. These stricter specifications can influence thermal response and ensure greater consistency across laboratories compared to the felt pads permitted by ASTM E119-12a. Historical test data (Report 101530130SAT-009_Rev.2, June 27, 2014) demonstrated compliance well below the CAN/ULC acceptance threshold limits, however. Based on Intertek's evaluation, the fire-resistance performance for non-loadbearing assemblies tested under ASTM E119-12a remains technically valid under CAN/ULC S101-14 Rev. 3 requirements.

To conclude:

1. The Alfrex ACM Panels as tested in Intertek Test Report 101530130SAT-009_Rev.2, dated June 27, 2014, will achieve the same results as the Quickpanel extrusion system.
2. The Alfrex ACM Panels as approved in Intertek Design Listing ULC/MCMWP 120-01 will maintain its fire resistance rating with the Quickpanel extrusion system.
3. The new standard edition ASTM E119-20 remains technically equivalent to the tested ASTM E119-12a.
4. The latest CAN/ULC S101-14 Rev 3 is technically equivalent to the tested ASTM E119-12a.

Alfrex has provided Boca Engineering to extend their data for use in this entire evaluation of the QuickPanel system as per email dated September 24, 2025.

If you have any questions regarding this letter report, please do not hesitate to contact the undersigned.

Sincerely,

INTERTEK TESTING SERVICES NA, LTD.

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