



CI Takiron Co Ltd  
 Mr. Tomohiro Akasaka  
 Shiga Factory 3-3-1 Maruyama  
 Konan-Shi, Shiga-Ken, 520-3185 JP

Our Reference: File R21680, Project 4789023224

Subject: Fire Test Investigation to Evaluate Various Cladding Materials In Accordance with The Standard, UL 10C

Dear Mr. Akasaka,

Project 4789023224, File R21680 was established to evaluate various types of cladding materials for use in swing-type of fire door assemblies. The purpose of this letter is to summarize the fire exposure and hose stream test results of the various types of cladding materials.

The fire exposure and hose stream tests were conducted in accordance with the “Positive Pressure Fire Tests of Door Assemblies”, ANSI/UL 10C, Third Edition, (May 27, 2021). The cladding materials were applied to two different types of door construction as summarized below

| Door Type                        | Cladding Material Designation | Duration of Fire Test, Hr |
|----------------------------------|-------------------------------|---------------------------|
| Steel Composite (Honeycomb Core) | Type 1 Product 2 & Type 2     | 3                         |
| Wood Composite (Mineral Core)    | Type 1 Product 2 & Type 2     | 1-1/2                     |

The cladding materials were installed on the front, back and sides of the door assemblies. After the cladding materials were installed, each door assembly was subjected to a fire exposure and hose stream tests in accordance with the “Positive Pressure Fire Tests of Door Assemblies”, ANSI/UL 10C, Third Edition, (May 27, 2021).

During each fire test, flaming was not observed on the unexposed surface of the door assembly due to the performance of the cladding material. Immediately after the fire test, each door assembly was subjected to a hose stream test. The steel composite door assembly did not develop through openings. The through openings developed on the wood composite door was due to the performance of the door assembly rather than the cladding material.

Based on the test results, Classification and Follow-Up Services will be for the Type 1 Product 2 & Type 2 Cladding Materials for use with steel composite doors having a fire rating up to and including 3 hrs. and for use with wood composite door assemblies having a fire rating up to and including 1-1/2 hr. A report describing the entire investigation is being prepared and will be forwarded to your attention in the near future.

Should you have any questions or comments concerning the above, please feel free to contact the undersigned.

Sincerely,

Reviewed by:

Alec Hauser  
 Staff Engineer  
 Built Environment

Matthew Schumann  
 Staff Engineer  
 Built Environment