

# ARCONIC ARCHITECTURAL PRODUCTS TEST REPORT

#### **SCOPE OF WORK**

NFPA 285-2023, FIRE TEST FOR EVALUATION OF FIRE PROPAGATION CHARACTERISTICS WALL ASSEMBLY CONTAINING 4 MM REYNOBOND FR WITH CORE 12

#### REPORT NUMBER

G105260808SAT-001 R1

## TEST DATE(S)

12/28/22

ISSUE DATE

[REVISED DATE]

01/06/23

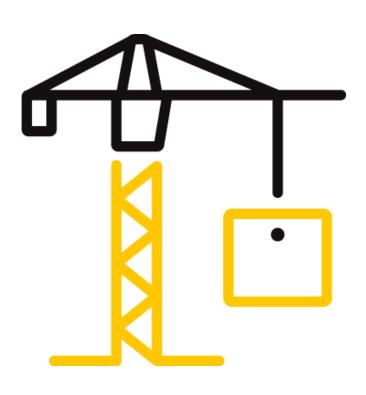
01/18/23

## **PAGES**

52

#### **DOCUMENT CONTROL NUMBER**

GFT-OP-10c (09/29/20) © 2017 INTERTEK





Telephone: 210-635-8100 Facsimile: 210-635-8101 www.intertek.com/building

#### TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS

Report No.: G105260808SAT-001 R1

Date: 01/06/23

#### **REPORT ISSUED TO**

#### ARCONIC ARCHITECTURAL PRODUCTS

50 Industrial Drive Eastman, GA 31023

#### **SECTION 1**

#### **SCOPE**

Intertek Testing Services NA, Inc. dba Intertek Building & Construction (B&C) was contracted by Arconic Architectural Products, 50 Industrial Drive, Eastman, GA 31023 to perform testing in accordance with NFPA 285, Standard Fire Test Methods for Evaluation of Fire Propagation Characteristics of Exterior Non-Load-Bearing wall assemblies, dated September 2022, on their 4mm Reynobond FR panels with Core 12. Results obtained are tested values and were secured by using the designated test method(s). Testing was conducted at Intertek Testing Services NA, Inc. test facility in Elmendorf, TX.

Unless differently required, Intertek reports apply the "Simple Acceptance" rule also called "Shared Risk approach," of ILAC-G8:09/2019, Guidelines on Decision Rules and Statements of Conformity.

Intertek B&C will service this report for the entire test record retention period. The test record retention period ends four years after the test date. Test records, such as detailed drawings, datasheets, representative samples of test specimens (where required by Certification or Accreditation bodies), or other pertinent project documentation, will be retained for the entire test record retention period.

#### **SECTION 2**

## **SUMMARY OF TEST RESULTS**

The assembly described and tested in this report **successfully met** the Conditions of Acceptance of NFPA 285. Construction of the full assembly is summarized in Section 7 of this test report.

For INTERTEK B&C:

COMPLETED BY: Emmanuel Ogoe
Project Engineer – Fire
Resistance

SIGNATURE:

DATE: 01/04/23

REVIEWED BY: Abel de Hoyos
Senior Project Manager –
Fire Resistance

SIGNATURE: 01/06/23

This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample(s) tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.

Version: 29 September 2020 Page 2 of 52 GFT-OP-10c



Telephone: 210-635-8100 Facsimile: 210-635-8101 www.intertek.com/building

#### TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS

Report No.: G105260808SAT-001 R1

Date: 01/06/23

#### **SECTION 3**

## **TEST METHOD(S)**

The specimen was evaluated in accordance with the following:

**NFPA 285-23**, Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Wall Assemblies Containing Combustible Components

#### **SECTION 4**

## **MATERIAL SOURCE/INSTALLATION**

Test samples were provided by the client. The specimens were selected by Intertek B&C personnel. The specimens were witnessed during production and tagged prior to shipment on 11/04/22, (Reference Intertek B&C Test Specimen Selection Report No. P4071.01, dated 11/04/22).

The test samples were received by the test facility on 12/27/22 in good condition and were assigned Intertek Sample ID No. SAT2212270830-001.

#### **SECTION 5**

#### **EQUIPMENT**

| ASSET #   | DESCRIPTION           | MODEL             | CAL DUE DATE |
|-----------|-----------------------|-------------------|--------------|
| 99LE006   | Data Acquisition Unit | Yokogawa          | 04/14/23     |
| 10361068  | Thermo/Hygrometer     | Omega             | 08/29/23     |
| 170199534 | Stopwatch             | Fisher Scientific | 03/23/23     |

#### **SECTION 6**

#### **LIST OF OFFICIAL OBSERVERS**

| NAME            | COMPANY      |  |
|-----------------|--------------|--|
| Amanda Woodard  | Arconic      |  |
| Trey Jones      | Arconic      |  |
| Adriana Machuca | Intertek B&C |  |
| Colby Friant    | Intertek B&C |  |
| Andres Olmos    | Intertek B&C |  |
| Jonathan Werner | Intertek B&C |  |
| Emmanuel Ogoe   | Intertek B&C |  |



Telephone: 210-635-8100 Facsimile: 210-635-8101 www.intertek.com/building

#### TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS

Report No.: G105260808SAT-001 R1

Date: 01/06/23

#### **SECTION 7**

#### **TEST PROCEDURE**

The wall assembly was instrumented with thermocouples (TCs) in accordance with figures 6.1(a) and 6.1(b), Detail H of NFPA 285 test method. 18-gauge Type K TCs were used in the burn room and 24-gauge Type K was used on exterior façade and combustible core space. The window burner was positioned in the center of the opening and 4 in. off the exterior face of the wall assembly. Testing was performed on 01/10/2019 in accordance with NFPA 285 test method. Ambient conditions were 69°F and 74.2% relative humidity. Video recording, digital photographs, visual observations, and data collection were performed prior, during, and after testing was completed. Temperature data was recorded every 15 seconds. The test was performed at 10:54 AM with the burners on for 30 minutes. All observations are recorded in the table located in Section 8.

The apparatus is considered to be under calibrated conditions when the time average temperatures and the time average heat flux readings obtained for a calibration wall match the requirements of Table 8.1.6 of NFPA 285. Calibration was performed with propane gas as the fuel source and the window burner placed 4 inches from the exterior surface of the assembly and vertically centred on the window opening. Table 6.1 of this section shows the average burner flow and heat flux. Table 6.2 shows the time average temperatures obtained during the calibration test. Table 6.3 shows a list of the calibrated equipment used for test.

Table 6.1 Average Burner Output Information

| TIME INTERVAL (MIN:SEC) | ROOM BURNER<br>(SCFM) | WINDOW BURNER (SCFM) | 2 FT FLUX<br>(W/cm²) | 3 FT FLUX (W/cm²) | 4 FT FLUX (W/cm²) |
|-------------------------|-----------------------|----------------------|----------------------|-------------------|-------------------|
| 0:00-5:00               | 16.5                  | 0.0                  | 1.0                  | 1.3               | 0.8               |
| 5:00-10:00              | 16.5                  | 5.6                  | 1.5                  | 2.1               | 1.4               |
| 10:00-15:00             | 16.5                  | 6.3                  | 1.9                  | 2.7               | 1.6               |
| 15:00-20:00             | 17.2                  | 7.2                  | 2.8                  | 3.5               | 2.0               |
| 20:00-25:00             | 17.1                  | 7.9                  | 3.2                  | 3.7               | 2.2               |
| 25:00-30:00             | 17.7                  | 8.2                  | 4.1                  | 4.5               | 2.6               |

**Table 6.2 Average Time Temperature Values for Calibration** 

|                         | ·                 | THER           | MOCOU       | IPLE LO     | CATIONS     | ,           |             |             |
|-------------------------|-------------------|----------------|-------------|-------------|-------------|-------------|-------------|-------------|
| TIME INTERVAL (MIN:SEC) | BURN ROOM<br>(°F) | INT. WALL (°F) | 1FT<br>(°F) | 2FT<br>(°F) | 3FT<br>(°F) | 4FT<br>(°F) | 5FT<br>(°F) | 6FT<br>(°F) |
| 0:00-5:00               | 1212              | 1118           | 593         | 796         | 708         | 610         | 525         | 485         |
| 5:00-10:00              | 1381              | 1278           | 837         | 961         | 1001        | 945         | 847         | 773         |



Telephone: 210-635-8100 Facsimile: 210-635-8101 www.intertek.com/building

#### TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS

Report No.: G105260808SAT-001 R1

Date: 01/06/23

| Av  | erage Time Ten | nperature Val | ues for | Calibrat | ion (con | tinued) |      |      |  |
|---|----------------|---------------|---------|----------|----------|---------|------|------|--|
| 10:00-15:00 1417 1320 940 1010 1044 990 879 |                |               |         |          |          |         |      |      |  |
| 15:00-20:00                                 | 1525           | 1434          | 1059    | 1078     | 1152     | 1140    | 1016 | 924  |  |
| 20:00-25:00                                 | 1583           | 1488          | 1150    | 1171     | 1241     | 1160    | 1000 | 897  |  |
| 25:00-30:00                                 | 1630           | 1581          | 1168    | 1224     | 1293     | 1283    | 1122 | 1022 |  |

#### **SECTION 8**

#### **TEST SPECIMEN DESCRIPTION**

#### **Interior Cladding**

The interior surface of the wall assembly was clad with 4 ft  $\times$  10 ft  $\times$  5/8 in. thick American Gypsum TYPE X gypsum board meeting the requirements of ASTM C1396. The gypsum board was fastened to the wall framing with #6 x 1-1/4 in. long, bugle head, self-drilling screws with a nominal spacing of 8 in. around the board perimeter and 12 in. in the field. Drywall orientation on the burn floor consisted of four pieces of gypsum board fastened to the core wall, with the run edge running parallel with the framing and the cut edge perpendicular to the framing. Drywall orientation on the second floor consisted of vertically oriented boards with the run edge running parallel with the framing and the cut edge perpendicular to the framing. Drywall orientation for the areas above the top support angle and below the bottom support angle consisted of boards that were oriented with the run edge perpendicular with the framing. The joints and fastener heads received a Level 2 finish using USG Sheetrock® Brand paper joint tape and USG Sheetrock® Brand joint compound.

#### Framing

The core wall consisted of 18 ft. long, 6 in. deep, 18 GA galvanized steel studs spaced 16 in. oc fastened to 14 ft. long, 6 in. deep, 18 GA galvanized steel track as shown in Section 14. The studs were connected to the track with one  $\#6 \times 1/2$  in. long self-drilling, pan head fastener per stud flange. Johns Manville MinWool® Safing pieces with a nominal density of 4.0 pcf were installed per the manufacturer's installation instructions to fit into each stud cavity placed at the second story floor line. The safing length dimensions were no less than the apparatus floor slab thickness of 8 in.

#### **Exterior Sheathing**

 $4 \, \text{ft} \times 10 \, \text{ft} \times 1/2 \, \text{in.}$  thick DensGlass Gold exterior gypsum sheathing was placed horizontally across the full exterior surface of the assembly. The gypsum sheathing was fastened to the wall framing with #6 x 1-1/4 in. long, bugle head, self-drilling screws with a nominal spacing of 8 in. around the board perimeter and 12 in. in the field.

#### **Weather Resistant Barrier**

VaproShield® WrapShield SA® water resistive self-adhesive air barrier was applied directly to the exterior of the Exterior Sheathing, with a minimum 4 in. overlap at all seams.

Version: 29 September 2020 Page 5 of 52 GFT-OP-10c



Telephone: 210-635-8100 Facsimile: 210-635-8101 www.intertek.com/building

#### TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS

Report No.: G105260808SAT-001 R1

Date: 01/06/23

#### **Z-Girts**

3" x 2" x 3" 16 GA, galvanized steel, Z-girts were installed Horizontally from the base of the floor to the top edge of the base wall using #12 14x1-1/4 hex-head self-drilling screws, spaced at nominally 16 in. oc.

#### **Exterior Insulation**

2-inch Rockwool CAVITYROCK <sup>®</sup> Insulation at 4.3 +/- 10% pcf was then applied in the cavities between girts at a friction fit.

#### **Exterior Panels**

Arconic 4mm Reynobond ACM panels with FR with Core 12 were then installed onto the wall by means of the Z-girts and additional 16GA, 3 in. wide steel strapping, spaced 16 in. oc, and attached using #12 x 3/4 in. long hex-head self-drilling screws. 4mm pre-painted spline pieces were used to cover the joint. Horizontal joints extended along the full width of the wall. The vertical joint extended upward the full height of the wall from the top of the window opening and was centered along the window opening's center line. Both horizontal and vertical joints were in compliance with NFPA 285-2023 joint requirements.

#### **Window Detail**

A 78 in.  $\times$  30 in. window opening was framed out in the center of the wall, 40 in. from the lab frame, 30 in. above the first story floor, using 18 GA, 6 in. deep track. The opening was then flashed using .040 in. aluminum flashing attached with 3/4 in. hex head, self-drilling fasteners. Aluminum L-flashing was applied on the exterior sheathing around the window frame with one side flush with the interior sheathing. Flashing overlapped from the outside 2-1/4 inches.

#### **SECTION 9**

#### **TEST OBSERVATIONS**

| TIME<br>(Min:Sec) | OBSERVATIONS                                      |
|-------------------|---|
| 00:00             | Ignition of room burner. Test started @ 9:00 A.M. |
| 00:50             | Flashing warping                                  |
| 01:13             | Flame tips exiting window                         |
| 03:50             | Flashing on fire                                  |
| 10:52             | Panels above window warped                        |
| 16:40             | Center panel joint opening up                     |
| 19:12             | Panel skin melting off                            |
| 21:00             | Pieces of core falling out                        |
| 22:00             | Panels opened up in center                        |

<sup>\*</sup>See Section 14 for assembly description drawings:



Telephone: 210-635-8100 Facsimile: 210-635-8101 www.intertek.com/building

# **TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS**

Report No.: G105260808SAT-001 R1

Date: 01/06/23

| TEST OBSE | RVATIONS (Continued)     |
|-----------|--------------------------|
| 24:00     | Flame height at 5.5 feet |
| 24:20     | Mineral wool exposed     |
| 28:55     | Flame height at 7 ft     |
| 30:00     | Test ended               |

## **SECOND FLOOR OBSERVATIONS**

| TIME      | OBSERVATIONS  |
|-----------|---|
| (Min:Sec) |   |
| 00:00     | Test started @ 9:00 A.M.  |
| 00:45     | Very light smoke from middle angle  |
| 03:30     | Smoke increases slightly  |
| 05:00     | Window burner ignited   |
| 06:00     | Light moke from top of room   |
| 10:00     | 2 <sup>nd</sup> floor room visibility at 95%                                  |
| 15:00     | No significant changes  |
| 19:40     | Popping from sample heard   |
| 22:00     | 2 <sup>nd</sup> floor room visibility at 90%                                  |
| 26:00     | 2 <sup>nd</sup> floor room visibility at 85%. Light popping again from sample |
| 28:00     | Smoke denser and blacker from angle   |
| 30:00     | End of test   |

## **SECTION 10**

## **TEST RESULTS**

| TEST REQUIREMENTS                        | TEST RESULTS                           | PASS/FAIL |
|--|--|-----------|
| Flames did not reach 10 ft. above the    | Flames did not reach 10 ft. above the  | PASS      |
| window opening header.                   | window opening header.                 |           |
| Flames did not reach a lateral           | Flames did not reach a lateral         | PASS      |
| distance of 5 ft. from the vertical      | distance of 5 ft. from the vertical    |           |
| centerline.                              | centerline.                            |           |
| Flames did not propagate beyond          | Flames did not propagate beyond the    | PASS      |
| the limits of the first story test room. | limits of the first story test room.   |           |
| No visible flaming in the second story   | No visible flaming in the second story | PASS      |
| test room                                | test room.                             |           |
| TC's 11 and 14-17                        | TC's 11 and 14-17 did not exceed their | PASS      |
| (1000°F limit)                           | 1000°F limit.                          |           |
| TC's 18-19, 28, and 31-40                | TC's 18-19, 28, and 31-40 did not      | PASS      |
| (1000°F limit)                           | exceed their 750°F limit.              |           |



Telephone: 210-635-8100 Facsimile: 210-635-8101 www.intertek.com/building

## **TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS**

Report No.: G105260808SAT-001 R1

Date: 01/06/23

| TEST RESULTS Continued           |   |      |
|----------------------------------|---|------|
| TC's 49-54 (500°F above ambient) | TC's 49-54 did not exceed 500°F above their ambient temperatures. | PASS |

# **SECTION 11**

## **CONCLUSION**

The Arconic wall system containing 4mm Reynobond FR panels with Core 12panels **met** the conditions of acceptance outlined in **NFPA 285-23**, STANDARD FIRE TEST METHOD FOR EVALUATION OF FIRE PROPAGATION CHARACTERISTICS OF EXTERIOR WALL ASSEMBLIES CONTAINING COMBUSTIBLE COMPONENTS, dated November 2018.

Version: 29 September 2020 Page 8 of 52 GFT-OP-10c



Telephone: 210-635-8100 Facsimile: 210-635-8101 www.intertek.com/building

# **TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS**

Report No.: G105260808SAT-001 R1

Date: 01/06/23

## **SECTION 12**

#### **PHOTOGRAPHS**



Photo No. 1 Base Wall



Photo No. 2 Mineral wool



Telephone: 210-635-8100 Facsimile: 210-635-8101 www.intertek.com/building

## **TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS**

Report No.: G105260808SAT-001 R1

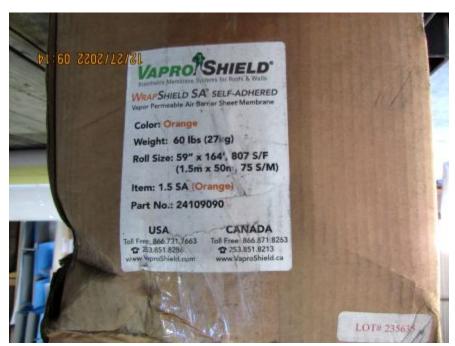


Photo No. 3 Vapor barrier



Photo No. 4
Samples received



Telephone: 210-635-8100 Facsimile: 210-635-8101 www.intertek.com/building

# **TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS**

Report No.: G105260808SAT-001 R1



Photo No. 5 Window flashing



Photo No. 6
Sampling markings



Telephone: 210-635-8100 Facsimile: 210-635-8101 www.intertek.com/building

# **TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS**

Report No.: G105260808SAT-001 R1



Photo No. 7
Installing vapor barrier



Photo No. 8
Installing zee girts and mineral wool



Telephone: 210-635-8100 Facsimile: 210-635-8101 www.intertek.com/building

# **TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS**

Report No.: G105260808SAT-001 R1



Photo No. 9
Mineral wool installed



Photo No. 10
Installing panels with support steel strapping



Telephone: 210-635-8100 Facsimile: 210-635-8101 www.intertek.com/building

# **TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS**

Report No.: G105260808SAT-001 R1

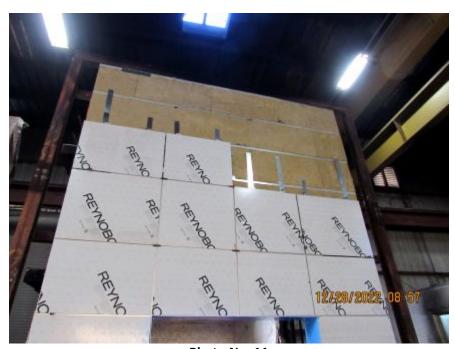


Photo No. 11
Panel installation continued



Photo No. 12 Wall assembly completed



Telephone: 210-635-8100 Facsimile: 210-635-8101 www.intertek.com/building

# **TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS**

Report No.: G105260808SAT-001 R1

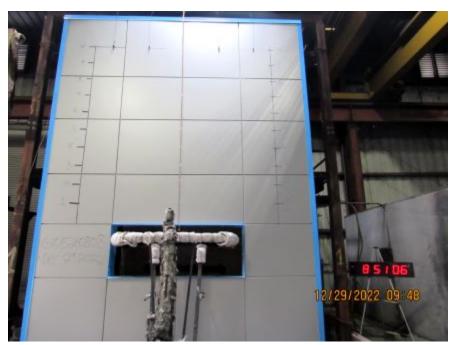


Photo No. 13 Test Setup



Photo No. 14 Start of Test



Telephone: 210-635-8100 Facsimile: 210-635-8101 www.intertek.com/building

# TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS

Report No.: G105260808SAT-001 R1



Photo No. 15 Flames exiting window opening



Photo No. 16
Window burner ignited



Telephone: 210-635-8100 Facsimile: 210-635-8101 www.intertek.com/building

# **TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS**

Report No.: G105260808SAT-001 R1



Photo No. 17
Panels above opening beginning to open up



Photo No. 18 Flame height increased



Telephone: 210-635-8100 Facsimile: 210-635-8101 www.intertek.com/building

# **TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS**

Report No.: G105260808SAT-001 R1



Photo No. 19 Flaming on sample at 5.5 feet



Photo No. 20 End of test – residual flaming



Telephone: 210-635-8100 Facsimile: 210-635-8101 www.intertek.com/building

# **TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS**

Report No.: G105260808SAT-001 R1



Photo No. 21 Front of wall post-test



Photo No. 22 2<sup>nd</sup> story back of wall post-test



Telephone: 210-635-8100 Facsimile: 210-635-8101 www.intertek.com/building

# **TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS**

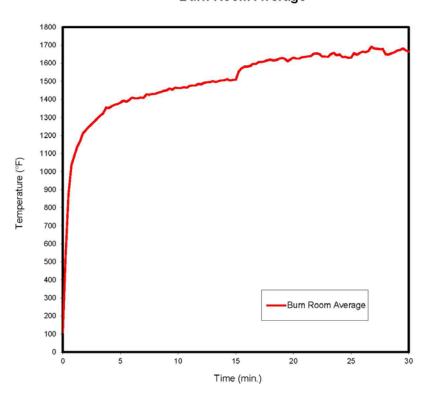
Report No.: G105260808SAT-001 R1

Date: 01/06/23

**SECTION 13** 

**GRAPHS** 

Arconic Project No. G105260808SAT-001 December 29, 2022 Burn Room Average



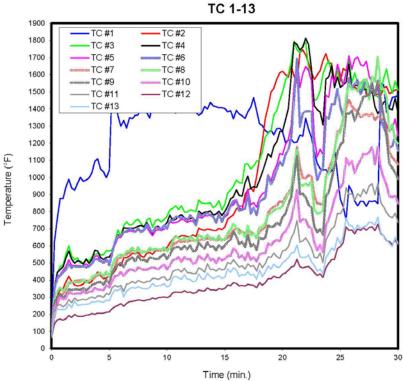


Telephone: 210-635-8100 Facsimile: 210-635-8101 www.intertek.com/building

# **TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS**

Report No.: G105260808SAT-001 R1

Arconic
Project No. G105260808SAT-001
December 29, 2022
Vertical Face





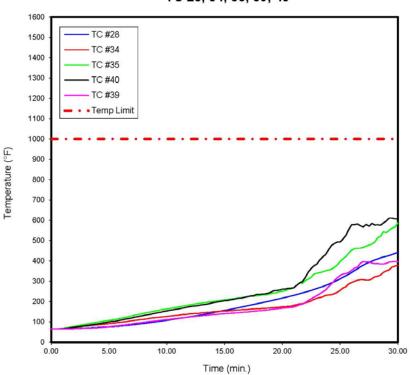
Telephone: 210-635-8100 Facsimile: 210-635-8101 www.intertek.com/building

# **TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS**

Report No.: G105260808SAT-001 R1

Date: 01/06/23

# Arconic Project No. G105260808SAT-001 December 29, 2022 10-ft Air Cavity TC 28, 34, 35, 39, 40



[AdHI1]



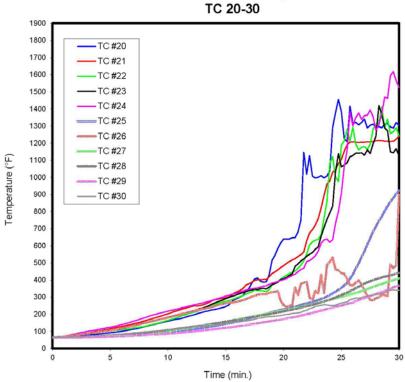
Telephone: 210-635-8100 Facsimile: 210-635-8101 www.intertek.com/building

# **TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS**

Report No.: G105260808SAT-001 R1

Date: 01/06/23

# Arconic Project No. G105260808SAT-001 December 29, 2022 Vertical Air Cavity



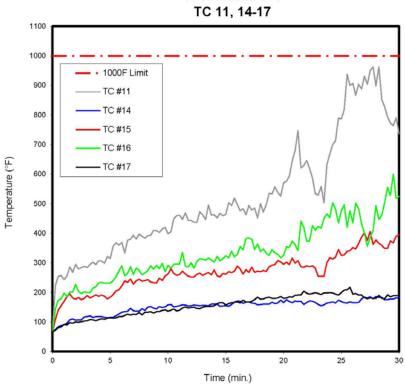


Telephone: 210-635-8100 Facsimile: 210-635-8101 www.intertek.com/building

# **TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS**

Report No.: G105260808SAT-001 R1

Arconic
Project No. G105260808SAT-001
December 29, 2022
10-ft Front Face



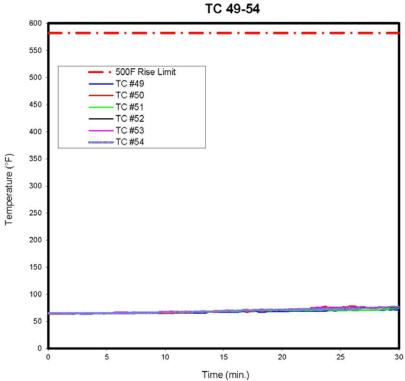


Telephone: 210-635-8100 Facsimile: 210-635-8101 www.intertek.com/building

# **TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS**

Report No.: G105260808SAT-001 R1

Arconic
Project No. G105260808SAT-001
December 29, 2022
2nd Floor, 1-in from wall



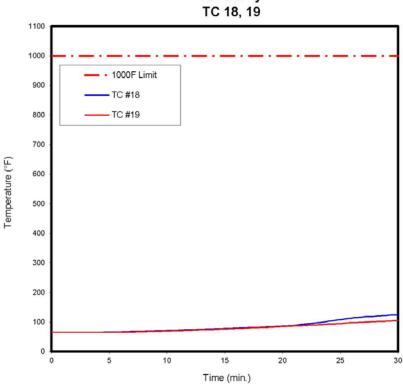


Telephone: 210-635-8100 Facsimile: 210-635-8101 www.intertek.com/building

# **TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS**

Report No.: G105260808SAT-001 R1

Arconic
Project No. G105260808SAT-001
December 29, 2022
Air Cavity
TC 18, 19



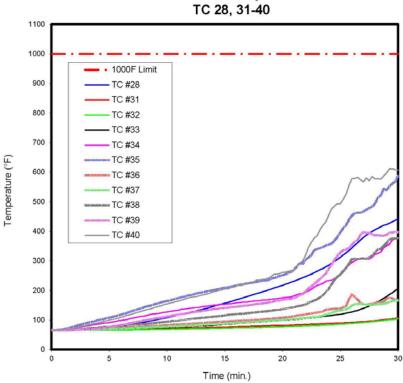


Telephone: 210-635-8100 Facsimile: 210-635-8101 www.intertek.com/building

# TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS

Report No.: G105260808SAT-001 R1

Arconic
Project No. G105260808SAT-001
December 29, 2022
Air Cavity





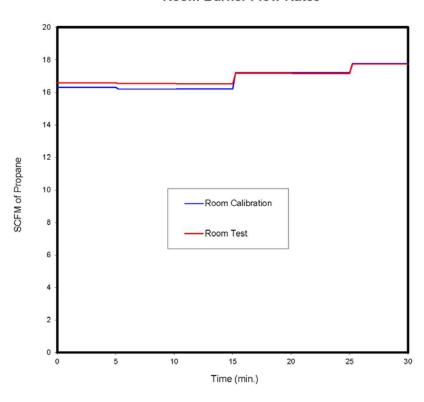
Telephone: 210-635-8100 Facsimile: 210-635-8101 www.intertek.com/building

# **TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS**

Report No.: G105260808SAT-001 R1

Date: 01/06/23

# Arconic Project No. G105260808SAT-001 December 29, 2022 Room Burner Flow Rates





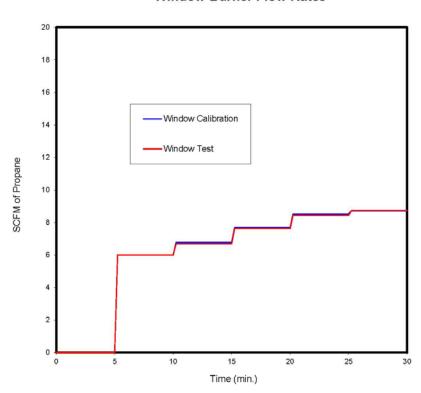
Telephone: 210-635-8100 Facsimile: 210-635-8101 www.intertek.com/building

# **TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS**

Report No.: G105260808SAT-001 R1

Date: 01/06/23

# Arconic Project No. G105260808SAT-001 December 29, 2022 Window Burner Flow Rates





Telephone: 210-635-8100 Facsimile: 210-635-8101 www.intertek.com/building

# **TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS**

Report No.: G105260808SAT-001 R1

Date: 01/06/23

#### **SECTION 14**

#### **TABULAR DATA**

|              | Burn         |              |            |            |            |            |            |            |            |            |            | Pass/<br>Fail |            |            | Pass<br>Fa |
|--------------|--------------|--------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------|------------|------------|------------|
| Time         |              | TC #1        | TC #2      | TC #3      | TC #4      | TC #5      | TC #6      | TC #7      | TC #8      | TC #9      | TC #10     |               | TC #12     | TC #13     |            |
| (min)        | (°F)         | (°F)         | (°F)       | (°F)       | (°F)       | (°F)       | (°F)       | (°F)       | (°F)       | (°F)       | (°F)       | (°F)          | (°F)       | (°F)       | (°F        |
| 0.00         | 109          | 72           | 73         | 80         | 80         | 79         | 78         | 68         | 74         | 74         | 73         | 74            | 69         | 72         | 6          |
| 0.25         | 547          | 623          | 193        | 334        | 354        | 349        | 345        | 190        | 289        | 267        | 237        | 224           | 143        | 199        | 7          |
| 0.50         | 877          | 756          | 309        | 438        | 444        | 420        | 409        | 261        | 333        | 299        | 274        | 254           | 167        | 229        | 8          |
| 0.75         | 1037         | 877          | 343        | 480        | 462        | 432        | 427        | 303        | 355        | 318        | 298        | 257           | 172        | 228        | 8          |
| 1.00         | 1088         | 876          | 350        | 488        | 477        | 456        | 445        | 319        | 336        | 298        | 287        | 243           | 166        | 227        | 9          |
| 1.25         | 1138         | 944          | 390        | 552        | 530        | 480        | 463        | 348        | 355        | 310        | 291        | 256           | 174        | 231        | 9          |
| 1.50         | 1169         | 988          | 421        | 599        | 570        | 517        | 493        | 379        | 388        | 347        | 330        | 286           | 193        | 260        | 10         |
| 1.75         | 1212         | 938          | 392        | 542        | 521        | 485        | 471        | 387        | 388        | 341        | 321        | 268           | 181        | 240        | 11         |
| 2.00         | 1229         | 924          | 371        | 518        | 498        | 486        | 481        | 394        | 388        | 345        | 319        | 295           | 199        | 277        | 10         |
| 2.25         | 1248         | 964          | 366        | 530        | 513        | 484        | 477        | 397        | 386        | 345        | 323        | 279           | 189        | 253        | 10         |
| 2.50         | 1262         | 1000         | 368        | 498        | 509        | 484        | 477        | 399        | 388        | 343        | 320        | 284           | 188        | 254        | 10         |
| 2.75         | 1279         | 977          | 377        | 501        | 492        | 483        | 481        | 397        | 404        | 353        | 335        | 288           | 189        | 258        | 11         |
| 3.00         | 1294         | 984          | 399        | 524        | 522        | 494        | 474        | 394        | 384        | 340        | 322        | 284           | 195        | 258        | 11         |
| 3.25         | 1311         | 997          | 381        | 509        | 498        | 482        | 481        | 397        | 395        | 352        | 332        | 295           | 196        | 261        | 12         |
| 3.50         | 1322         | 1027         | 392        | 538        | 521        | 498        | 497        | 405        | 417        | 371        | 334        | 302           | 204        | 273        | 11         |
| 3.75         | 1354         | 1094         | 423        | 549        | 575        | 539        | 521        | 415        | 429        | 379        | 353        | 294           | 200        | 271        | 11         |
| 4.00         | 1352         | 1108         | 446        | 555        | 570        | 543        | 523        | 427        | 435        | 386        | 345        | 307           | 207        | 278        | 11         |
| 4.25         | 1362         | 1049         | 426        | 548        | 532<br>520 | 514        | 510        | 439        | 442        | 389        | 343        | 306           | 206        | 273<br>270 | 11         |
| 4.50         | 1371<br>1374 |              | 408        | 548        |            | 507        | 500        | 429        | 419        | 372        | 341        | 299           | 207        |            | 11         |
| 4.75         |              | 999<br>1040  | 412        | 573        | 533        | 523        | 521        | 436        | 450        | 403        | 369        | 321           | 212        | 283        | 11         |
| 5.00         | 1382         |              | 425        | 570        | 535        | 503        | 486        | 426        | 416        | 379        | 355        | 315           | 214        | 278        | 11         |
| 5.25         | 1393         | 1564         | 434        | 577        | 562        | 556        | 559        | 446        | 481        | 441        | 394        | 356           | 233        | 317        | 11         |
| 5.50<br>5.75 | 1387<br>1396 | 1477<br>1362 | 453<br>490 | 628<br>693 | 613<br>666 | 608<br>648 | 624<br>659 | 480        | 525<br>542 | 471<br>488 | 424<br>426 | 368<br>360    | 244        | 343<br>337 | 12         |
| 6.00         |              | 1299         | 483        | 660        | 653        | 649        | 657        | 526<br>532 |            | 501        |            | 369           | 252<br>262 |            |            |
| 6.00         | 1410<br>1406 | 1332         | 529        |            | 706        | 677        |            |            | 548<br>539 |            | 447<br>424 |               |            | 354<br>302 | 13<br>13   |
| 6.50         | 1406         | 1288         | 531        | 718<br>740 | 700        | 681        | 681<br>684 | 546<br>550 | 568        | 476<br>511 | 445        | 334<br>376    | 247<br>264 | 336        | 13         |
| 6.75         | 1411         | 1348         | 541        | 740        | 702        | 687        | 698        | 562        | 572        | 522        | 462        | 380           | 274        | 348        | 14         |
| 7.00         | 1411         | 1343         | 556        | 724        | 702        | 684        | 694        | 576        | 588        | 533        | 462        | 393           | 276        | 357        | 13         |
| 7.00         | 1408         | 1362         | 552        | 746        | 702        | 682        | 683        | 568        | 557        | 510        | 452        | 381           | 279        | 352        | 13         |
| 7.50         | 1426         | 1365         | 562        | 755        | 714        | 693        | 701        | 580        | 591        | 543        | 473        | 397           | 284        | 361        | 13         |
| 7.75         | 1429         | 1415         | 541        | 732        | 719        | 689        | 680        | 570        | 557        | 516        | 466        | 390           | 282        | 354        | 14         |
| 8.00         | 1429         | 1397         | 533        | 703        | 719        | 691        | 691        | 565        | 567        | 519        | 460        | 383           | 278        | 349        | 13         |
| 8.00         | 1430         | 1377         | 557        | 751        | 736        | 710        | 725        | 566        | 564        | 507        | 460        | 392           | 284        | 349        | 15         |
| 8.50         | 1441         | 1347         | 560        | 761        | 706        | 681        | 698        | 575        | 587        | 532        | 469        | 393           | 286        | 357        | 15         |
| 8.75         | 1441         | 1427         | 550        | 709        | 669        | 659        | 679        | 572        | 577        | 528        | 473        | 410           | 296        | 380        | 14         |
| 9.00         | 1450         | 1427         | 571        | 747        | 709        | 688        | 707        | 573        | 581        | 523        | 470        | 409           | 289        | 364        | 14         |
| 9.25         | 1459         | 1446         | 573        | 754        | 714        | 695        | 705        | 578        | 579        | 524        | 463        | 403           | 298        | 367        | 15         |
| 9.50         | 1454         | 1452         | 571        | 740        | 695        | 689        | 697        | 575        | 576        | 540        | 478        | 414           | 300        | 368        | 14         |
| 9.75         | 1465         | 1409         | 581        | 753        | 714        | 698        | 720        | 573        | 590        | 551        | 490        | 420           | 302        | 379        | 15         |
| 10.00        | 1462         | 1444         | 589        | 772        | 737        | 705        | 700        | 577        | 568        | 523        | 462        | 398           | 298        | 359        | 15         |
| 10.00        | 1462         | 1455         | 618        | 810        | 779        | 742        | 746        | 582        | 587        | 548        | 485        | 405           | 305        | 369        | 15         |
| 10.23        | 1468         | 1387         | 638        | 819        | 748        | 733        | 749        | 605        | 627        | 582        | 517        | 450           | 326        | 414        | 15         |
| 10.75        | 1464         | 1376         | 657        | 833        | 754        | 737        | 771        | 617        | 658        | 592        | 520        | 459           | 330        | 422        | 15         |
| 11.00        | 1475         | 1412         | 650        | 813        | 773        | 743        | 768        | 626        | 644        | 594        | 534        | 461           | 329        | 413        | 15         |
| 11.25        | 1477         | 1412         | 660        | 833        | 781        | 755        | 764        | 623        | 634        | 579        | 507        | 447           | 328        | 404        | 15         |
| 11.50        | 1477         | 1450         | 659        | 798        | 766        | 751        | 764        | 625        | 647        | 600        | 535        | 469           | 337        | 430        | 15         |
| 11.75        | 1485         | 1440         | 654        | 796        | 754        | 737        | 749        | 624        | 628        | 580        | 521        | 444           | 329        | 405        | 15         |
| 12.00        | 1483         | 1381         | 653        | 811        | 758        | 746        | 777        | 631        | 654        | 603        | 523        | 443           | 330        | 403        | 15         |
| 12.25        | 1483         | 1402         | 664        | 806        | 765        | 748        | 759        | 632        | 639        | 568        | 496        | 443           | 323        | 390        | 15         |
| 12.23        | 1432         | 1379         | 654        | 801        | 737        | 721        | 720        | 627        | 625        | 572        | 501        | 437           | 327        | 394        | 15         |



Telephone: 210-635-8100 Facsimile: 210-635-8101 www.intertek.com/building

# **TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS**

Report No.: G105260808SAT-001 R1

Date: 01/06/23

|                |              |              |              |              |             |            |            |            |            |            |            | Pass/      |            |            | Pas  |
|----------------|--------------|--------------|--------------|--------------|-------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------|
| Time           | Burn         | TC #4        | TC #2        | TC #2        | TC #4       | TC #5      | TC #6      | TC #7      | TC #0      | TC #0      | TC #10     | Fail       | TC #42     | TC #13     | Fa   |
| (min)          | (°F)         | (°F)         | (°F)         | (°F)         | (°F)        | (°F)       | (°F)       | (°F)       | (°F)       | (°F)       | (°F)       | (°F)       | (°F)       | (°F)       | (°)  |
| ()             | ( - )        | ( - )        | ( - )        | ( - )        | ( . ,       | ( - /      | ( . ,      | ( . ,      | ( - )      | ( - )      | ( - ,      | ( - ,      | ( - ,      | ()         |      |
| 12.75          | 1496         | 1363         | 703          | 867          | 803         | 769        | 791        | 633        | 664        | 618        | 541        | 472        | 342        | 436        | 15   |
| 13.00          | 1501         | 1374         | 694          | 849          | 787         | 761        | 774        | 636        | 651        | 599        | 528        | 462        | 337        | 407        | 15   |
| 13.25          | 1496         | 1414         | 691          | 848          | 796         | 775        | 785        | 637        | 642        | 584        | 516        | 446        | 336        | 405        | 15   |
| 13.50          | 1501         | 1399         | 698          | 847          | 798         | 776        | 791        | 644        | 664        | 621        | 549        | 495        | 354        | 440        | 15   |
| 13.75          | 1505         | 1438         | 695          | 851          | 804         | 779        | 780        | 636        | 643        | 594        | 516        | 461        | 343        | 420        | 16   |
| 14.00          | 1506         | 1418         | 690          | 822          | 779         | 766        | 772        | 640        | 646        | 597        | 523        | 463        | 343        | 409        | 16   |
| 14.25          | 1512         | 1413         | 689          | 838          | 786         | 743        | 735        | 630        | 630        | 574        | 499        | 452        | 339        | 416        | 16   |
| 14.50          | 1504         | 1406         | 701          | 863          | 802         | 771        | 789        | 636        | 660        | 605        | 530        | 468        | 350        | 425        | 15   |
| 14.75          | 1508         | 1407         | 695          | 810          | 777         | 752        | 740        | 633        | 632        | 584        | 515        | 459        | 346        | 410        | 15   |
| 15.00          | 1509         | 1402         | 709          | 841          | 800         | 769        | 779        | 635        | 642        | 602        | 523        | 464        | 351        | 416        | 15   |
| 15.25          | 1553         | 1383         | 755          | 909          | 830         | 782        | 793        | 649        | 672        | 623        | 541        | 503        | 371        | 465        | 15   |
| 15.50          | 1573         | 1390         | 770          | 925          | 875         | 830        | 836        | 668        | 694        | 637        | 541        | 494        | 367        | 445        | 15   |
| 15.75          | 1581         | 1342         | 781          | 947          | 886         | 840        | 860        | 690        | 727        | 683        | 584        | 519        | 384        | 472        | 10   |
| 16.00          | 1581         | 1391         | 816          | 984          | 927         | 865        | 868        | 703        | 710        | 655        | 571        | 497        | 380        | 460        | 17   |
| 16.25          | 1585         | 1370         | 824          | 969          | 894         | 831        | 805        | 695        | 670        | 610        | 531        | 476        | 366        | 422        | 17   |
| 16.50          | 1596         | 1360         | 806          | 966          | 890         | 832        | 813        | 679        | 684        | 624        | 544        | 483        | 369        | 432        | 10   |
| 16.75          | 1597<br>1607 | 1344         | 901<br>926   | 1079         | 968<br>1007 | 864<br>930 | 817<br>898 | 676<br>683 | 652<br>716 | 592<br>664 | 517<br>561 | 463<br>494 | 365<br>375 | 428<br>449 | 16   |
| 17.00          |              |              |              | 1077         |             |            |            |            |            |            |            |            |            |            |      |
| 17.25          | 1608         | 1410         | 935          | 1049         | 934         | 840        | 789        | 680        | 662        | 596        | 518        | 478        | 371        | 428        | 10   |
| 17.50          | 1611         | 1465         | 918          | 1066         | 947         | 851        | 823        | 671        | 671        | 611        | 532        | 485        | 369        | 434        | 10   |
| 17.75          | 1617         | 1391         | 1003         | 1094         | 941         | 826        | 780        | 647        | 643        | 577        | 509        | 452        | 355        | 405        | 1:   |
| 18.00          | 1620         | 1313         | 1110         | 1101         | 984         | 880        | 859        | 681        | 709        | 648        | 549        | 500        | 385        | 458        | 15   |
| 18.25          | 1615<br>1618 | 1303<br>1273 | 1207<br>1343 | 1146<br>1235 | 1030        | 904<br>914 | 870<br>880 | 697<br>711 | 707<br>731 | 639<br>647 | 556<br>557 | 472<br>497 | 370<br>384 | 419<br>447 | 16   |
| 18.50<br>18.75 | 1624         | 1260         | 1412         | 1259         | 1137        | 1016       | 1011       | 793        | 783        | 719        | 613        | 535        | 408        | 482        | 10   |
| 19.00          | 1629         | 1275         | 1497         | 1270         | 1119        | 979        | 960        | 815        | 790        | 710        | 604        | 533        | 407        | 464        | 16   |
| 19.00          | 1625         | 1249         | 1521         | 1364         | 1183        | 1035       | 993        | 829        | 806        | 714        | 624        | 557        | 423        | 493        | 16   |
| 19.25          | 1611         | 1285         | 1574         | 1389         | 1207        | 1072       | 1043       | 835        | 818        | 734        | 635        | 538        | 414        | 493        | 16   |
| 19.75          | 1622         | 1287         | 1611         | 1449         | 1266        | 1139       | 1091       | 860        | 820        | 721        | 627        | 526        | 414        | 475        | 1    |
| 20.00          | 1631         | 1266         | 1620         | 1497         | 1271        | 1139       | 1070       | 854        | 831        | 769        | 669        | 570        | 435        | 501        | 1    |
| 20.00          | 1625         | 1200         | 1600         | 1567         | 1335        | 1191       | 1133       | 885        | 870        | 787        | 684        | 576        | 441        | 514        | 1    |
| 20.23          | 1625         | 1219         | 1584         | 1602         | 1401        | 1220       | 1162       | 909        | 901        | 840        | 714        | 593        | 457        | 530        | 1    |
| 20.75          | 1633         | 1213         | 1651         | 1673         | 1594        | 1304       | 1234       | 935        | 927        | 887        | 755        | 645        | 476        | 557        | 1    |
| 21.00          | 1635         | 1203         | 1591         | 1795         | 1790        | 1528       | 1457       | 1036       | 1070       | 1004       | 835        | 679        | 482        | 560        | 1    |
| 21.00          | 1639         | 1203         | 1552         | 1746         | 1776        | 1696       | 1690       | 1177       | 1160       | 1124       | 926        | 747        | 521        | 604        | 1    |
| 21.50          | 1640         | 1248         | 1730         | 1729         | 1743        | 1525       | 1297       | 1064       | 955        | 901        | 740        | 621        | 477        | 537        | 1    |
| 21.75          | 1653         | 1240         | 1745         | 1768         | 1761        | 1604       | 1373       | 996        | 952        | 905        | 755        | 629        | 471        | 531        | 1    |
| 22.00          | 1655         | 1345         | 1715         | 1788         | 1812        | 1647       | 1386       | 995        | 963        | 883        | 753        | 646        | 476        | 533        | 1    |
| 22.25          | 1651         | 1282         | 1671         | 1641         | 1776        | 1624       | 1386       | 1013       | 953        | 841        | 712        | 620        | 480        | 545        | 1    |
| 22.50          | 1637         | 1233         | 1614         | 1560         | 1635        | 1564       | 1385       | 1006       | 977        | 821        | 702        | 587        | 464        | 508        | 1    |
| 22.75          | 1637         | 1150         | 1572         | 1446         | 1418        | 1235       | 1095       | 893        | 812        | 714        | 618        | 534        | 444        | 485        | 1    |
| 23.00          | 1636         | 1082         | 1598         | 1461         | 1395        | 1121       | 984        | 847        | 787        | 679        | 574        | 529        | 427        | 452        | 13   |
| 23.25          | 1651         | 1051         | 1624         | 1507         | 1382        | 1164       | 1027       | 846        | 793        | 697        | 606        | 558        | 436        | 463        | 1:   |
| 23.50          | 1657         | 1043         | 1683         | 1604         | 1307        | 1134       | 1058       | 836        | 804        | 664        | 563        | 503        | 415        | 437        | 1:   |
| 23.75          | 1644         | 1045         | 1722         | 1653         | 1573        | 1479       | 1354       | 998        | 1006       | 890        | 718        | 632        | 472        | 530        | 1    |
| 24.00          | 1649         | 1045         | 1668         | 1681         | 1587        | 1468       | 1342       | 1051       | 1006       | 913        | 758        | 667        | 499        | 556        | 1    |
| 24.00          | 1634         | 1039         | 1664         | 1612         | 1652        | 1593       | 1427       | 1089       | 1063       | 989        | 808        | 700        | 519        | 587        | 1    |
| 24.23          | 1636         | 1175         | 1558         | 1532         | 1524        | 1551       | 1427       | 1154       | 1157       | 1065       | 875        | 713        | 521        | 575        | 1    |
| 24.75          | 1629         | 1018         | 1661         | 1634         | 1586        | 1661       | 1515       | 1266       | 1249       | 1145       | 921        | 789        | 583        | 648        | 1    |
| 25.00          | 1632         | 872          | 1561         | 1527         | 1525        | 1602       | 1412       | 1280       | 1265       | 1190       | 939        | 787        | 596        | 610        | 1    |
|                | 1032         | 0,2          | 1001         | 1021         | 1323        | 1002       | 1412       | 1200       | 1200       | 1130       | 333        | 101        | 200        | 010        | - 11 |



Telephone: 210-635-8100 Facsimile: 210-635-8101 www.intertek.com/building

# **TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS**

Report No.: G105260808SAT-001 R1

Date: 01/06/23

|                     | Burn |      |      |       |      |       |       |       |       |      |        | Pass/<br>Fail |        |      | Pass<br>Fai |
|---------------------|------|------|------|-------|------|-------|-------|-------|-------|------|--------|---------------|--------|------|-------------|
| Time                | Room |      |      | TC #3 |      | TC #5 | TC #6 | TC #7 | TC #8 |      | TC #10 | TC #11        | TC #12 |      | TC #14      |
| (min)               | (°F) | (°F) | (°F) | (°F)  | (°F) | (°F)  | (°F)  | (°F)  | (°F)  | (°F) | (°F)   | (°F)          | (°F)   | (°F) | (°F         |
| 25.50               | 1647 | 751  | 1624 | 1611  | 1556 | 1611  | 1440  | 1406  | 1465  | 1374 | 1112   | 938           | 710    | 764  | 16          |
| 25.75               | 1657 | 951  | 1701 | 1693  | 1663 | 1709  | 1579  | 1453  | 1544  | 1371 | 1073   | 900           | 690    | 720  | 16          |
| 26.00               | 1665 | 919  | 1511 | 1552  | 1514 | 1632  | 1514  | 1415  | 1513  | 1390 | 1093   | 906           | 692    | 717  | 16          |
| 26.25               | 1661 | 860  | 1529 | 1610  | 1538 | 1692  | 1547  | 1397  | 1516  | 1331 | 1025   | 867           | 670    | 687  | 16          |
| 26.50               | 1668 | 834  | 1512 | 1548  | 1538 | 1702  | 1566  | 1384  | 1502  | 1382 | 1070   | 904           | 699    | 722  | 16          |
| 26.75               | 1691 | 860  | 1548 | 1504  | 1493 | 1659  | 1487  | 1351  | 1552  | 1425 | 1101   | 888           | 690    | 700  | 17          |
| 27.00               | 1682 | 859  | 1559 | 1553  | 1513 | 1651  | 1521  | 1362  | 1567  | 1471 | 1137   | 931           | 707    | 711  | 18          |
| 27.25               | 1680 | 831  | 1485 | 1505  | 1514 | 1677  | 1571  | 1370  | 1569  | 1474 | 1134   | 904           | 691    | 716  | 18          |
| 27.50               | 1678 | 861  | 1504 | 1484  | 1474 | 1591  | 1518  | 1359  | 1456  | 1484 | 1147   | 950           | 707    | 739  | 18          |
| 27.75               | 1679 | 858  | 1539 | 1562  | 1506 | 1553  | 1510  | 1373  | 1590  | 1547 | 1177   | 963           | 711    | 734  | 17          |
| 28.00               | 1650 | 862  | 1482 | 1482  | 1413 | 1477  | 1478  | 1335  | 1560  | 1478 | 1076   | 898           | 689    | 720  | 18          |
| 28.25               | 1648 | 847  | 1486 | 1469  | 1372 | 1540  | 1552  | 1358  | 1704  | 1566 | 1180   | 963           | 726    | 768  | 18          |
| 28.50               | 1655 | 1548 | 1481 | 1493  | 1408 | 1407  | 1334  | 1343  | 1516  | 1446 | 1052   | 852           | 672    | 678  | 18          |
| 28.75               | 1660 | 1540 | 1519 | 1577  | 1437 | 1352  | 1296  | 1334  | 1517  | 1362 | 998    | 828           | 659    | 660  | 17          |
| 29.00               | 1671 | 1380 | 1531 | 1633  | 1449 | 1307  | 1248  | 1275  | 1467  | 1236 | 955    | 793           | 630    | 636  | 17          |
| 29.25               | 1674 | 1412 | 1489 | 1546  | 1400 | 1271  | 1175  | 1146  | 1267  | 1081 | 889    | 773           | 625    | 615  | 17          |
| 29.50               | 1681 | 1467 | 1498 | 1492  | 1395 | 1284  | 1183  | 1117  | 1311  | 1055 | 885    | 764           | 606    | 596  | 17          |
| 29.75               | 1671 | 1470 | 1510 | 1561  | 1463 | 1342  | 1238  | 1097  | 1215  | 1027 | 893    | 790           | 634    | 649  | 18          |
| 30.00               | 1664 | 1479 | 1513 | 1508  | 1372 | 1243  | 1156  | 1076  | 1198  | 990  | 847    | 736           | 607    | 614  | 18          |
| x Temp<br>x Allowed |      | 1564 | 1745 | 1795  | 1812 | 1709  | 1690  | 1453  | 1704  | 1566 | 1180   | 963<br>1000   | 726    | 768  | 18<br>100   |



Telephone: 210-635-8100 Facsimile: 210-635-8101 www.intertek.com/building

# **TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS**

Report No.: G105260808SAT-001 R1

Date: 01/06/23

|              | Pass/      | Pass/      | Pass/      | Pass/    | Pass/    |          |          |          |          |          |          |          |          | Pass     |
|--------------|------------|------------|------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
|              | Fail       | Fail       | Fail       | Fail     | Fail     |          |          |          |          |          |          |          |          | Fai      |
|              | TC #15     | TC #16     | TC #17     |          | TC #19   |          |          | TC #22   |          |          | TC #25   |          | TC #27   | TC #28   |
| (min)        | (°F)       | (°F)       | (°F)       | (°F)     | (°F)     | (°F)     | (°F)     | (°F)     | (°F)     | (°F)     | (°F)     | (°F)     | (°F)     | (°F      |
| 0.00         | 67         | 69         | 66         | 65       | 65       | 64       | 66       | 66       | 66       | 65       | 65       | 65       | 65       | 65       |
| 0.25         | 109        | 145        | 72         | 65       | 65       | 64       | 67       | 66       | 66       | 65       | 65       | 65       | 65       | 65       |
| 0.50         | 140        | 173        | 81         | 65       | 65       | 64       | 66       | 66       | 65       | 65       | 65       | 66       | 65       | 65       |
| 0.75         | 155        | 178        | 83         | 65       | 65       | 65       | 67       | 66       | 66       | 67       | 65       | 67       | 65       | 65       |
| 1.00         | 170        | 197        | 92         | 65       | 65       | 66       | 68       | 68       | 67       | 71       | 65       | 69       | 65       | 65       |
| 1.25         | 185        | 186        | 90         | 65       | 65       | 67       | 71       | 69       | 69       | 75       | 65       | 71       | 65       | 65       |
| 1.50         | 195        | 201        | 98         | 65       | 65       | 69       | 73       | 71       | 71       | 78       | 65       | 75       | 65       | 65       |
| 1.75         | 181        | 201        | 96         | 65       | 65       | 70       | 74       | 73       | 74       | 83       | 65       | 77       | 65       | 66       |
| 2.00         | 177        | 227<br>203 | 100        | 65       | 65       | 72       | 76       | 75       | 77       | 85<br>90 | 65<br>66 | 78       | 65<br>66 | 66       |
| 2.25         | 183        |            | 99         | 65       | 65       | 73       | 79       | 78       | 80       |          |          | 80       |          | 67       |
| 2.50         | 175        | 196        | 101<br>103 | 65<br>65 | 65       | 73<br>75 | 82<br>86 | 80       | 82<br>84 | 93<br>96 | 66       | 82<br>84 | 66       | 68       |
| 2.75<br>3.00 | 180<br>189 | 202<br>199 | 103        | 65       | 65<br>65 | 77       | 89       | 83<br>85 | 86       | 99       | 66<br>67 | 86       | 66<br>67 | 69<br>70 |
| 3.25         | 181        | 199        | 104        | 65       | 65       | 78       | 92       | 89       | 87       | 103      | 68       | 89       | 68       | 7        |
| 3.50         | 186        | 214        | 107        | 65       | 65       | 80       | 95       | 91       | 90       | 105      | 68       | 91       | 68       | 7        |
| 3.75         | 192        | 219        | 107        | 65       | 65       | 82       | 99       | 94       | 93       | 103      | 69       | 93       | 69       | 72       |
| 4.00         | 187        | 232        | 108        | 65       | 65       | 84       | 102      | 96       | 94       | 112      | 69       | 96       | 70       | 7:       |
| 4.25         | 191        | 234        | 111        | 65       | 65       | 86       | 105      | 99       | 97       | 115      | 70       | 99       | 70       | 7.       |
| 4.50         | 187        | 231        | 109        | 65       | 65       | 88       | 109      | 101      | 100      | 118      | 70       | 101      | 71       | 7:       |
| 4.75         | 178        | 231        | 113        | 66       | 65       | 90       | 112      | 103      | 104      | 122      | 71       | 104      | 72       | 71       |
| 5.00         | 184        | 231        | 114        | 66       | 65       | 92       | 116      | 103      | 107      | 124      | 71       | 104      | 73       | 7        |
| 5.25         | 193        | 240        | 113        | 66       | 65       | 94       | 119      | 105      | 108      | 128      | 72       | 109      | 73       | 7        |
| 5.50         | 205        | 253        | 114        | 66       | 65       | 96       | 122      | 107      | 110      | 131      | 73       | 112      | 74       | 78       |
| 5.75         | 209        | 272        | 118        | 66       | 65       | 98       | 126      | 108      | 112      | 136      | 73       | 115      | 75       | 75       |
| 6.00         | 222        | 290        | 118        | 66       | 66       | 100      | 129      | 109      | 116      | 140      | 74       | 118      | 76       | 8        |
| 6.25         | 239        | 256        | 122        | 67       | 66       | 103      | 133      | 112      | 120      | 144      | 75       | 122      | 77       | 8        |
| 6.50         | 234        | 264        | 126        | 67       | 66       | 106      | 136      | 113      | 124      | 149      | 75       | 125      | 79       | 8        |
| 6.75         | 245        | 287        | 123        | 67       | 66       | 110      | 140      | 116      | 128      | 154      | 76       | 130      | 80       | 8        |
| 7.00         | 228        | 260        | 126        | 68       | 66       | 113      | 144      | 120      | 135      | 159      | 77       | 133      | 81       | 8        |
| 7.25         | 239        | 282        | 125        | 68       | 66       | 116      | 148      | 122      | 138      | 164      | 78       | 137      | 83       | 8        |
| 7.50         | 244        | 275        | 132        | 68       | 67       | 120      | 152      | 124      | 143      | 169      | 79       | 141      | 84       | 85       |
| 7.75         | 238        | 259        | 124        | 68       | 67       | 124      | 157      | 127      | 146      | 176      | 80       | 146      | 85       | 9        |
| 8.00         | 240        | 266        | 133        | 68       | 67       | 128      | 162      | 130      | 152      | 180      | 81       | 150      | 87       | 9:       |
| 8.25         | 243        | 274        | 133        | 69       | 67       | 132      | 167      | 134      | 154      | 186      | 82       | 153      | 89       | 9        |
| 8.50         | 235        | 290        | 135        | 69       | 68       | 136      | 172      | 138      | 156      | 192      | 84       | 157      | 90       | 91       |
| 8.75         | 233        | 278        | 130        | 69       | 68       | 140      | 177      | 142      | 161      | 197      | 85       | 162      | 92       | 9        |
| 9.00         | 232        | 292        | 135        | 70       | 68       | 144      | 182      | 146      | 164      | 201      | 86       | 165      | 94       | 10       |
| 9.25         | 248        | 280        | 135        | 70       | 68       | 148      | 187      | 150      | 171      | 206      | 88       | 169      | 96       | 10       |
| 9.50         | 240        | 298        | 139        | 70       | 68       | 152      | 192      | 155      | 174      | 210      | 90       | 174      | 98       | 10       |
| 9.75         | 256        | 270        | 141        | 70       | 69       | 156      | 198      | 160      | 180      | 214      | 92       | 177      | 100      | 10       |
| 10.00        | 262        | 292        | 136        | 71       | 69       | 160      | 203      | 165      | 182      | 219      | 93       | 182      | 102      | 10       |
| 10.25        | 280        | 281        | 140        | 71       | 69       | 164      | 209      | 170      | 187      | 222      | 95       | 186      | 104      | 11       |
| 10.50        | 264        | 295        | 144        | 71       | 70       | 168      | 215      | 175      | 191      | 226      | 97       | 190      | 107      | 113      |
| 10.75        | 258        | 296        | 137        | 71       | 70       | 171      | 220      | 180      | 194      | 230      | 99       | 194      | 109      | 115      |
| 11.00        | 260        | 296        | 140        | 72       | 70       | 174      | 226      | 186      | 199      | 234      | 101      | 199      | 111      | 11       |
| 11.25        | 272        | 335        | 147        | 72       | 70       | 178      | 231      | 193      | 204      | 239      | 103      | 204      | 114      | 11       |
| 11.50        | 262        | 289        | 151        | 73       | 71       | 183      | 235      | 197      | 207      | 242      | 105      | 207      | 116      | 12       |
| 11.75        | 255        | 286        | 147        | 73       | 71       | 188      | 241      | 203      | 213      | 247      | 107      | 212      | 119      | 12       |
| 12.00        | 252        | 300        | 149        | 73       | 71       | 193      | 245      | 209      | 217      | 250      | 110      | 216      | 122      | 12       |
| 12.25        | 252        | 282        | 150        | 74       | 72       | 197      | 249      | 212      | 222      | 255      | 112      | 220      | 125      | 128      |
| 12.20        |            |            |            |          |          |          |          |          |          |          |          |          |          |          |



Telephone: 210-635-8100 Facsimile: 210-635-8101 www.intertek.com/building

# TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS

Report No.: G105260808SAT-001 R1

Date: 01/06/23

| Time   To #15   To #16   To #17   To #18   To #19   To #29   To #21   To #23   To #23   To #23   To #24   To #25   To #26   To  |       | Pass/ | Pass/ | Pass/  | Pass/ | Pass/ |        |        |        |        |        |        |        |        | Pass |
|--|-------|-------|-------|--------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|------|
|  | Time  |       |       |        |       |       | TC #20 | TC #24 | TC #22 | TC #22 | TC #24 | TC #25 | TC #26 | TC #27 | Fai  |
|  |       |       |       |        |       |       |        |        |        |        |        |        |        |        | (°F  |
| 13.50   263   309   152   756   73   217   261   235   243   271   123   234   136   1   | 12.75 | 265   | 314   | 145    | 75    | 73    | 208    | 251    | 223    | 233    | 263    | 117    | 227    | 131    | 133  |
| 13.50   267  | 13.00 | 257   | 313   | 150    | 75    | 73    | 212    | 255    | 227    | 236    | 266    | 120    | 231    | 133    | 135  |
| 13.75   259   310   153   76   74   225   277   251   258   280   128   242   142   14.00   276   302   155   76   74   227   284   258   265   265   285   131   247   145   14.25   256   322   162   77   75   231   288   263   272   291   134   253   148   14.25   14.50   252   307   165   77   75   235   291   268   278   295   377   257   151   14.75   264   314   165   77   76   245   295   276   292   306   144   261   154   151   15.00   261   324   157   78   76   245   295   276   292   306   144   261   154   151   15.50   267   339   165   78   77   77   268   325   291   304   316   150   268   163   15.55   273   339   165   78   77   278   331   235   331   235   331   342   349   345   355 | 13.25 | 263   | 309   | 152    | 75    | 73    | 217    | 261    | 235    | 243    | 271    | 123    | 234    | 136    | 138  |
| 14.00  | 13.50 | 267   | 316   | 152    | 76    | 74    | 220    | 268    | 243    | 249    | 275    | 125    | 237    | 139    | 140  |
| 14.25   256   322   162   77   75   231   288   263   272   291   134   253   148   14.50   252   307   165   77   75   235   291   268   278   295   272   284   301   141   261   154   15.00   261   324   157   78   76   240   293   272   284   301   141   261   154   15.00   261   324   157   78   76   245   295   276   292   306   144   264   157   15.55   270   317   162   78   76   245   295   276   292   306   144   264   157   15.55   276   339   165   78   77   273   311   285   304   316   150   268   163   15.55   272   320   166   79   77   286   325   291   309   321   154   271   167   15.50   267   339   168   79   77   286   325   291   309   321   154   271   167   15.50   262   344   174   80   78   310   352   398   316   325   158   274   170   15   16.50   262   344   174   80   78   310   352   309   321   154   271   167   15   16.55   279   355   164   80   78   310   352   309   327   336   166   282   176   16.55   279   383   167   80   78   310   352   309   327   336   166   282   176    | 13.75 | 259   | 310   | 153    | 76    | 74    | 225    | 277    | 251    | 258    | 280    | 128    | 242    | 142    | 143  |
| 14.50   252   307   165   77   75   235   291   268   278   295   137   257   151   14.75   264   314   165   77   76   240   293   272   264   301   141   261   154   15.00   261   324   157   78   76   245   295   276   292   306   144   264   157   15.50   267   339   165   78   77   273   311   265   304   316   150   268   160   15.50   267   339   165   78   77   273   311   285   304   316   150   268   163   15.75   272   320   166   79   77   266   325   291   309   321   154   271   167   16.00   289   329   168   79   78   293   333   328   316   325   158   274   170   16.50   262   344   174   80   78   302   339   304   322   331   162   279   173   16.55   279   355   164   80   78   302   339   304   322   331   162   279   173   16.55   277   383   167   80   79   337   371   318   333   342   171   289   180   17.00   288   384   167   81   80   382   387   331   342   349   180   303   187   17.55   285   379   170   81   80   382   387   331   342   349   180   303   187   17.55   272   364   184   82   80   412   401   338   344   349   180   303   187   18.25   274   347   378   388   403   337   332   348   345   175   296   183   18.85   379   378    | 14.00 | 276   | 302   | 155    | 76    | 74    | 227    | 284    | 258    | 265    | 285    | 131    | 247    | 145    | 14   |
| 14.75  | 14.25 | 256   | 322   | 162    | 77    | 75    | 231    | 288    | 263    | 272    | 291    | 134    | 253    | 148    | 14   |
| 15.00  | 14.50 | 252   | 307   | 165    | 77    | 75    | 235    | 291    | 268    | 278    | 295    | 137    | 257    | 151    | 15   |
| 15.25   270  | 14.75 | 264   | 314   | 165    | 77    | 76    | 240    | 293    | 272    | 284    | 301    | 141    | 261    | 154    | 15   |
| 15.50  | 15.00 | 261   | 324   | 157    | 78    | 76    | 245    | 295    | 276    | 292    | 306    | 144    | 264    | 157    | 15   |
| 15.75  | 15.25 | 270   | 317   | 162    | 78    | 76    | 254    | 301    | 279    | 298    | 311    | 147    | 268    | 160    | 15   |
| 16.00   289   329   168   79   78   293   333   298   316   325   158   274   170   1     16.25   279   355   164   80   78   302   339   304   322   331   162   279   173   1     16.50   262   344   174   80   78   310   352   309   327   336   166   282   176   1     16.75   277   383   167   80   79   337   371   318   333   342   171   289   180   1     17.00   288   384   167   81   79   350   378   325   338   345   175   296   183   1     17.25   285   379   170   81   80   382   387   331   342   349   180   303   187   1     17.50   288   345   176   82   80   406   398   342   347   352   184   308   190   1     17.75   272   384   184   82   80   412   401   338   344   354   189   315   193   1     18.00   270   338   177   82   81   388   403   337   352   364   189   315   193   1     18.50   271   333   182   83   82   390   403   332   348   366   203   318   203   1     18.75   286   325   184   84   82   429   418   344   359   374   208   325   206   2     19.00   292   344   180   84   83   515   438   371   373   382   213   330   209   2     19.55   294   334   180   84   83   515   438   371   373   382   213   330   209   2     19.75   303   317   186   85   84   617   473   406   403   397   225   277   219   2     20.00   295   325   180   86   85   639   497   428   415   409   233   243   226   22   20.55   294   331   191   89   87   681   538   497   445   436   427   418   237   249   229   20.55   296   325   180   86   85   639   497   428   415   409   233   243   226   22   20.55   296   325   180   86   85   639   497   428   415   409   233   243   226   22   20.55   296   325   180   86   85   639   497   428   415   409   233   243   226   22   20.55   296   325   180   86   85   639   497   428   415   409   233   243   226   22   20.55   296   325   180   86   85   639   497   428   415   409   233   243   226   22   20.55   316   373   184   87   86   637   539   484   447   470   402   229   254   222   20.55   316   373   184   87   86   639   508   638   639   636  | 15.50 | 267   | 339   | 165    | 78    | 77    | 273    | 311    | 285    | 304    | 316    | 150    | 268    | 163    | 16   |
| 16.25  | 15.75 | 272   | 320   | 166    | 79    | 77    | 286    | 325    | 291    | 309    | 321    | 154    | 271    | 167    | 16   |
| 16.50  | 16.00 | 289   | 329   | 168    | 79    | 78    | 293    | 333    | 298    | 316    | 325    | 158    | 274    | 170    | 16   |
| 16.75         277         383         167         80         79         337         371         318         333         342         171         289         180         1           17.00         268         384         167         81         80         382         337         3325         338         345         175         296         183         1           17.25         285         379         170         81         80         382         387         331         342         349         180         303         187         1           17.75         226         364         184         82         80         412         401         338         344         354         189         315         193         1           18.05         271         333         182         83         81         393         401         338         366         203         318         200         1           18.75         286         325         184         84         82         429         418         344         359         374         208         325         206         2           19.00         292         344 <td>16.25</td> <td>279</td> <td>355</td> <td>164</td> <td>80</td> <td>78</td> <td>302</td> <td>339</td> <td>304</td> <td>322</td> <td>331</td> <td>162</td> <td>279</td> <td>173</td> <td>17</td>   | 16.25 | 279   | 355   | 164    | 80    | 78    | 302    | 339    | 304    | 322    | 331    | 162    | 279    | 173    | 17   |
| 17.00         268         384         167         81         79         350         378         325         338         345         175         296         183         1           17.25         285         379         170         81         80         382         387         331         342         349         180         303         187         1           17.50         268         345         176         82         80         406         398         342         347         352         184         308         190         1           17.75         272         364         184         82         80         412         401         338         344         354         189         315         193         11         196         1           18.00         270         333         177         82         81         388         403         337         352         364         199         318         200         1           18.50         271         333         182         83         82         390         403         332         364         199         318         200         1           18.00   | 16.50 | 262   | 344   | 174    | 80    | 78    | 310    | 352    | 309    | 327    | 336    | 166    | 282    | 176    | 17   |
| 17.25         285         379         170         81         80         382         387         331         342         349         180         303         187         1           17.50         268         345         176         82         80         406         398         342         347         352         184         308         190         1           17.75         272         364         184         82         80         412         401         338         344         354         189         315         193         11           18.00         270         338         177         82         81         393         401         338         350         359         193         317         196         1           18.50         271         333         182         83         81         388         403         332         348         366         203         318         200         1           18.00         292         344         180         84         82         390         403         337         374         208         325         206         22           19.05         308         329 <td>16.75</td> <td>277</td> <td>383</td> <td>167</td> <td>80</td> <td>79</td> <td>337</td> <td>371</td> <td>318</td> <td>333</td> <td>342</td> <td>171</td> <td>289</td> <td>180</td> <td>17</td>  | 16.75 | 277   | 383   | 167    | 80    | 79    | 337    | 371    | 318    | 333    | 342    | 171    | 289    | 180    | 17   |
| 17.50         268         345         176         82         80         406         398         342         347         352         184         308         190         1           17.75         272         364         184         82         80         412         401         338         344         354         189         315         193         1           18.00         270         338         177         82         81         393         401         338         350         359         193         317         196         1           18.25         274         347         178         83         81         388         403         332         364         199         318         200         1           18.50         271         333         182         83         82         390         403         332         348         366         203         318         203         1           19.00         292         344         180         84         83         515         438         371         373         382         217         331         213         213         213         213         213         213 <td>17.00</td> <td>268</td> <td>384</td> <td>167</td> <td>81</td> <td>79</td> <td>350</td> <td>378</td> <td>325</td> <td>338</td> <td>345</td> <td>175</td> <td>296</td> <td>183</td> <td>18</td>  | 17.00 | 268   | 384   | 167    | 81    | 79    | 350    | 378    | 325    | 338    | 345    | 175    | 296    | 183    | 18   |
| 17.75         272         364         184         82         80         412         401         338         344         354         189         315         193         1           18.00         270         338         177         82         81         393         401         338         350         359         193         317         196         1           18.50         274         347         178         83         81         388         403         337         352         364         199         318         200         1           18.50         271         333         182         83         82         390         403         332         348         366         203         318         200         1           18.00         282         344         180         84         83         515         438         371         373         382         213         330         209         2           19.25         294         334         180         84         83         544         447         383         371         373         382         213         331         213         21         213         331 <td>17.25</td> <td>285</td> <td>379</td> <td>170</td> <td>81</td> <td>80</td> <td>382</td> <td>387</td> <td>331</td> <td>342</td> <td>349</td> <td>180</td> <td>303</td> <td>187</td> <td>18</td>   | 17.25 | 285   | 379   | 170    | 81    | 80    | 382    | 387    | 331    | 342    | 349    | 180    | 303    | 187    | 18   |
| 18.00         270         338         177         82         81         393         401         338         350         359         193         317         196         1           18.25         274         347         178         83         81         388         403         337         352         364         199         318         200         1           18.50         271         333         182         83         82         390         403         332         348         366         203         318         203         1           18.75         286         325         184         84         82         429         418         344         359         374         208         325         206         2           19.00         292         344         180         84         83         515         438         371         373         386         217         331         213         213         21         335         216         2         219         334         181         86         85         84         617         473         406         403         397         225         277         219         22   | 17.50 | 268   | 345   | 176    | 82    | 80    | 406    | 398    | 342    | 347    | 352    | 184    | 308    | 190    | 18   |
| 18.25         274         347         178         83         81         388         403         337         352         364         199         318         200         1           18.50         271         333         182         83         82         390         403         332         348         366         203         318         203         1           18.75         286         325         184         84         82         429         418         344         359         374         208         325         206         2           19.00         292         344         180         84         83         515         438         371         373         382         213         330         209         2           19.50         308         329         181         85         84         584         459         392         387         391         221         335         216         22           19.75         303         317         186         85         84         617         473         406         403         397         225         277         219         2           20.00         295 <td>17.75</td> <td>272</td> <td>364</td> <td>184</td> <td>82</td> <td>80</td> <td>412</td> <td>401</td> <td>338</td> <td>344</td> <td>354</td> <td>189</td> <td>315</td> <td>193</td> <td>18</td>   | 17.75 | 272   | 364   | 184    | 82    | 80    | 412    | 401    | 338    | 344    | 354    | 189    | 315    | 193    | 18   |
| 18.50         271         333         182         83         82         390         403         332         348         366         203         318         203         1           18.75         286         325         184         84         82         429         418         344         359         374         208         325         206         2           19.05         294         334         180         84         83         515         438         371         373         382         213         330         209         2           19.50         308         329         181         85         84         684         459         392         387         391         221         335         216         213         213         22         218         337         381         221         335         216         22         29         254         222         22         20.00         295         325         180         86         85         639         484         417         407         402         229         254         222         22         20.00         205         325         181         86         85         639   | 18.00 | 270   | 338   | 177    | 82    | 81    | 393    | 401    | 338    | 350    | 359    | 193    | 317    | 196    | 19   |
| 18.75         286         325         184         84         82         429         418         344         359         374         208         325         206         2           19.00         292         344         180         84         83         515         438         371         373         382         213         330         209         2           19.50         308         329         181         85         84         584         459         392         387         391         221         335         216         2           19.75         303         317         186         85         84         617         473         406         403         397         225         277         219         2           20.00         295         325         180         86         85         639         484         417         407         402         229         254         222         2           20.05         325         325         180         86         85         639         497         428         415         409         233         243         226         2         2         20.25         20.25 <td>18.25</td> <td>274</td> <td>347</td> <td>178</td> <td>83</td> <td>81</td> <td>388</td> <td>403</td> <td>337</td> <td>352</td> <td>364</td> <td>199</td> <td>318</td> <td>200</td> <td>19</td>  | 18.25 | 274   | 347   | 178    | 83    | 81    | 388    | 403    | 337    | 352    | 364    | 199    | 318    | 200    | 19   |
| 18.00         292         344         180         84         83         515         438         371         373         382         213         330         209         2           19.25         294         334         180         84         83         544         447         383         379         386         217         331         213         2           19.75         303         317         186         85         84         681         459         392         387         391         221         335         216         2           20.00         295         325         180         86         85         639         484         417         407         402         229         254         222         20.25         302         354         181         86         85         639         497         428         415         409         233         243         226         22         20.50         294         353         185         87         86         639         508         438         427         418         237         249         229         2         20.50         299         362         190         88  | 18.50 | 271   | 333   | 182    | 83    | 82    | 390    | 403    | 332    | 348    | 366    | 203    | 318    | 203    | 19   |
| 19.25         294         334         180         84         83         544         447         383         379         386         217         331         213         2           19.50         308         329         181         85         84         584         459         392         387         391         221         335         216         2           19.75         303         317         186         85         84         617         473         406         403         397         225         277         219         2           20.05         325         180         86         85         639         484         417         407         402         229         225         227         219         2           20.50         294         353         185         87         86         639         508         438         427         418         237         249         229         22         2           20.75         316         373         184         87         86         647         517         445         436         427         241         254         232         2           21.00   | 18.75 | 286   | 325   | 184    | 84    | 82    | 429    | 418    | 344    | 359    | 374    | 208    | 325    | 206    | 20   |
| 19.50         308         329         181         85         84         584         459         392         387         391         221         335         216         2           19.75         303         317         186         85         84         617         473         406         403         397         225         277         219         2           20.00         295         325         180         86         85         639         484         417         407         402         229         254         222         2           20.50         294         353         185         87         86         639         508         438         427         418         237         249         229         22         20.75         316         373         184         87         86         647         517         445         436         427         241         254         232         2           21.00         299         362         190         88         87         648         525         453         479         434         244         356         235         2         2         21.50         287         441 </td <td>19.00</td> <td>292</td> <td>344</td> <td>180</td> <td>84</td> <td>83</td> <td>515</td> <td>438</td> <td>371</td> <td></td> <td>382</td> <td>213</td> <td>330</td> <td>209</td> <td>20</td>   | 19.00 | 292   | 344   | 180    | 84    | 83    | 515    | 438    | 371    |        | 382    | 213    | 330    | 209    | 20   |
| 19.75         303         317         186         85         84         617         473         406         403         397         225         277         219         2           20.00         295         325         180         86         85         639         484         417         407         402         229         254         222         2           20.50         294         353         185         87         86         639         508         438         427         418         237         249         229         22           20.75         316         373         184         87         86         639         508         438         427         418         237         249         229         22           21.00         299         362         190         88         87         648         525         453         479         434         244         356         235         22         21.75           21.75         307         341         191         91         87         751         548         487         512         462         255         379         242         22           21.7   | 19.25 | 294   | 334   | 180    | 84    | 83    | 544    | 447    | 383    | 379    | 386    | 217    | 331    | 213    | 20   |
| 20.00         295         325         180         86         85         639         484         417         407         402         229         254         222         2           20.25         302         354         181         86         85         639         497         428         415         409         233         243         226         2           20.50         294         353         185         87         86         639         508         438         427         418         237         249         229         2           21.00         299         362         190         88         87         648         525         453         479         434         244         356         235         2           21.25         307         341         191         89         87         681         538         469         495         449         249         312         239         22           21.50         287         441         191         91         87         751         548         487         512         462         255         379         242         2           21.50         285 <td>19.50</td> <td>308</td> <td>329</td> <td>181</td> <td>85</td> <td>84</td> <td>584</td> <td>459</td> <td>392</td> <td>387</td> <td>391</td> <td>221</td> <td>335</td> <td>216</td> <td>21</td>   | 19.50 | 308   | 329   | 181    | 85    | 84    | 584    | 459    | 392    | 387    | 391    | 221    | 335    | 216    | 21   |
| 20.25         302         354         181         86         85         639         497         428         415         409         233         243         226         2           20.50         294         353         185         87         86         639         508         438         427         418         237         249         229         2           20.75         316         373         184         87         86         647         517         445         436         427         241         254         232         2           21.00         299         362         190         88         87         648         525         453         479         434         244         356         235         2           21.25         307         341         191         89         87         681         538         469         495         449         249         312         239         2           21.50         287         441         191         91         87         751         548         487         512         462         225         379         242         2           21.75         285  | 19.75 | 303   | 317   | 186    | 85    | 84    | 617    | 473    | 406    | 403    | 397    | 225    | 277    | 219    | 21   |
| 20.50         294         353         185         87         86         639         508         438         427         418         237         249         229         22           20.75         316         373         184         87         86         647         517         445         436         427         241         254         232         2           21.00         299         362         190         88         87         648         525         453         479         434         244         236         235         2           21.25         307         341         191         89         87         681         538         469         495         449         249         312         239         2           21.50         287         441         191         91         87         751         548         487         512         462         255         379         242         2           21.75         285         420         204         92         88         1146         564         512         523         469         261         384         246         22         22         22         25  | 20.00 | 295   | 325   | 180    | 86    | 85    | 639    | 484    | 417    | 407    | 402    | 229    | 254    | 222    | 21   |
| 20.75         316         373         184         87         86         647         517         445         436         427         241         254         232         2           21.00         299         362         190         88         87         648         525         453         479         434         244         356         235         2           21.25         307         341         191         89         87         681         538         469         495         449         249         312         239         2           21.50         287         441         191         91         87         751         548         487         512         462         255         379         242         2           21.75         285         420         204         92         88         1146         564         512         523         469         261         384         246         22           22.00         290         374         197         93         88         1020         629         552         540         508         264         390         250         22         22.50         290         42   | 20.25 |       | 354   |        |       | 85    |        | 497    | 428    |        | 409    |        | 243    |        | 22   |
| 21.00         299         362         190         88         87         648         525         453         479         434         244         356         235         2           21.25         307         341         191         89         87         681         538         469         495         449         249         312         239         2           21.50         287         441         191         91         87         751         548         487         512         462         255         379         242         2           21.75         285         420         204         92         88         1146         564         512         523         469         261         384         246         2           22.00         290         374         194         94         89         1126         674         605         550         514         268         299         254         2           22.50         290         426         196         95         89         1007         695         623         561         525         272         284         258         2           22.50         290 </td <td></td> <td>294</td> <td></td> <td></td> <td>87</td> <td>86</td> <td></td> <td>508</td> <td>438</td> <td></td> <td>418</td> <td>237</td> <td>249</td> <td></td> <td>22</td>  |       | 294   |       |        | 87    | 86    |        | 508    | 438    |        | 418    | 237    | 249    |        | 22   |
| 21.25         307         341         191         89         87         681         538         469         495         449         249         312         239         2           21.50         287         441         191         91         87         751         548         487         512         462         255         379         242         2           21.75         285         420         204         92         88         1146         564         512         523         469         261         384         246         2           22.00         290         374         197         93         88         1020         629         552         540         508         264         390         250         2           22.50         290         426         196         95         89         1007         695         623         561         525         272         284         258         2           22.75         282         411         199         96         90         996         721         633         580         541         278         336         263         2           23.25         255 </td <td></td> <td>22</td>  |       |       |       |        |       |       |        |        |        |        |        |        |        |        | 22   |
| 21.50         287         441         191         91         87         751         548         487         512         462         255         379         242         2           21.75         285         420         204         92         88         1146         564         512         523         469         261         384         246         2           22.00         290         374         197         93         88         1020         629         552         540         508         264         390         250         2           22.50         290         374         194         94         89         1126         674         605         550         514         268         299         254         2           22.50         290         426         196         95         89         1007         695         623         561         525         272         284         258         2           22.75         282         411         199         96         90         996         721         633         580         541         278         336         263         2           23.00         254<   |       |       | 362   |        |       |       |        | 525    |        |        | 434    | 244    |        |        | 23   |
| 21.75         285         420         204         92         88         1146         564         512         523         469         261         384         246         2           22.00         290         374         197         93         88         1020         629         552         540         508         264         390         250         2           22.25         287         374         194         94         89         1126         674         605         550         514         268         299         254         2           22.75         282         411         199         96         90         996         721         633         580         541         278         336         263         2           23.00         254         423         196         97         90         1001         759         638         594         569         283         323         267         2           23.25         255         417         193         98         91         1010         822         665         657         615         290         430         272         2           23.75         301   |       |       | 341   |        | 89    |       |        | 538    |        |        |        |        |        |        | 23   |
| 22.00         290         374         197         93         88         1020         629         552         540         508         264         390         250         2           22.25         287         374         194         94         89         1126         674         605         550         514         268         299         254         2           22.50         290         426         196         95         89         1007         695         623         561         525         272         284         258         2           23.00         254         423         196         97         90         1001         759         638         594         569         283         323         267         2           23.25         255         447         193         98         91         1010         822         665         657         615         290         430         272         2           23.50         255         449         198         99         91         997         893         760         706         634         296         324         277         2           23.75         301   |       |       |       |        | 91    |       |        | 548    | 487    |        |        | 255    |        |        | 23   |
| 22.25         287         374         194         94         89         1126         674         605         550         514         268         299         254         2           22.50         290         426         196         95         89         1007         695         623         561         525         272         284         258         2           22.75         282         411         199         96         90         996         721         633         580         541         278         336         263         2           23.00         254         423         196         97         90         1001         759         638         594         569         283         323         267         2           23.25         255         417         193         98         91         1010         822         665         657         615         290         430         272         2           23.50         255         449         198         99         91         997         893         760         706         634         296         324         277         2           23.75         301<   | 21.75 | 285   | 420   | 204    | 92    | 88    | 1146   | 564    | 512    | 523    | 469    | 261    | 384    | 246    | 24   |
| 22.50         290         426         196         95         89         1007         695         623         561         525         272         284         258         2           22.75         282         411         199         96         90         996         721         633         580         541         278         336         263         2           23.00         254         423         196         97         90         1001         759         638         594         569         283         323         267         2           23.50         255         417         193         98         91         1010         822         665         657         615         290         430         272         2           23.00         255         449         198         99         91         997         893         760         706         634         296         324         277         2           23.75         301         466         198         101         92         1008         960         856         754         639         304         487         281         2           24.00         317   | 22.00 | 290   | 374   | 197    | 93    | 88    | 1020   | 629    | 552    |        | 508    | 264    |        |        | 24   |
| 22.75         282         411         199         96         90         996         721         633         580         541         278         336         263         2           23.00         254         423         196         97         90         1001         759         638         594         569         283         323         267         2           23.25         255         417         193         98         91         1010         822         665         657         615         290         430         272         2           23.50         255         449         198         99         91         997         893         760         706         634         296         324         277         2           23.75         301         466         198         101         92         1008         960         856         754         639         304         487         281         2           24.00         317         453         199         103         93         1036         979         1081         791         621         312         506         285         2           24.25         3   | 22.25 | 287   | 374   | 194    | 94    | 89    |        | 674    | 605    | 550    | 514    | 268    | 299    |        | 25   |
| 23.00         254         423         196         97         90         1001         759         638         594         569         283         323         267         2           23.25         255         417         193         98         91         1010         822         665         657         615         290         430         272         2           23.50         255         449         198         99         91         997         893         760         706         634         296         324         277         2           23.75         301         466         198         101         92         1008         960         856         754         639         304         487         281         2           24.00         317         453         199         103         93         1036         979         1081         791         621         312         506         285         2           24.25         313         503         198         104         93         1292         1030         1120         832         636         322         531         289         2           24.50         <   |       |       |       |        |       |       |        |        |        |        |        |        |        |        | 25   |
| 23.25         255         417         193         98         91         1010         822         665         657         615         290         430         272         2           23.50         255         449         198         99         91         997         893         760         706         634         296         324         277         2           23.75         301         466         198         101         92         1008         960         856         754         639         304         487         281         2           24.00         317         453         199         103         93         1036         979         1081         791         621         312         506         285         2           24.25         313         503         198         104         93         1292         1030         1120         832         636         322         531         289         2           24.50         319         482         194         105         93         1377         1044         1002         1033         731         332         462         293         22           25.00  |       |       |       |        |       |       |        |        |        |        |        |        |        |        | 26   |
| 23.50         255         449         198         99         91         997         893         760         706         634         296         324         277         2           23.75         301         466         198         101         92         1008         960         856         754         639         304         487         281         2           24.00         317         453         199         103         93         1036         979         1081         791         621         312         506         285         2           24.25         313         503         198         104         93         1292         1030         1120         832         636         322         531         289         2           24.50         319         482         194         105         93         1377         1044         1002         1033         731         332         462         293         2           24.75         345         435         191         107         94         1455         1081         976         1138         801         343         457         297         3           25.00  |       |       |       |        |       |       |        |        |        |        | 569    |        | 323    |        | 26   |
| 23.75         301         466         198         101         92         1008         960         856         754         639         304         487         281         2           24.00         317         453         199         103         93         1036         979         1081         791         621         312         506         285         2           24.25         313         503         198         104         93         1292         1030         1120         832         636         322         531         289         2           24.50         319         482         194         105         93         1377         1044         1002         1033         731         332         462         293         2           24.75         345         435         191         107         94         1455         1081         976         1138         801         343         457         297         3           25.00         325         476         199         108         94         1384         1105         1187         1061         907         354         440         301         3   |       |       |       |        |       |       |        |        |        |        |        |        |        |        | 27   |
| 24.00     317     453     199     103     93     1036     979     1081     791     621     312     506     285     2       24.25     313     503     198     104     93     1292     1030     1120     832     636     322     531     289     2       24.50     319     482     194     105     93     1377     1044     1002     1033     731     332     462     293     2       24.75     345     435     191     107     94     1455     1081     976     1138     801     343     457     297     3       25.00     325     476     199     108     94     1384     1105     1187     1061     907     354     440     301     3   |       |       |       |        |       |       |        |        |        |        |        |        |        |        | 27   |
| 24.25     313     503     198     104     93     1292     1030     1120     832     636     322     531     289     2       24.50     319     482     194     105     93     1377     1044     1002     1033     731     332     462     293     2       24.75     345     435     191     107     94     1455     1081     976     1138     801     343     457     297     3       25.00     325     476     199     108     94     1384     1105     1187     1061     907     354     440     301     3  |       |       |       |        |       |       |        |        |        |        |        |        |        |        | 28   |
| 24.50     319     482     194     105     93     1377     1044     1002     1033     731     332     462     293     2       24.75     345     435     191     107     94     1455     1081     976     1138     801     343     457     297     3       25.00     325     476     199     108     94     1384     1105     1187     1061     907     354     440     301     3  | 24.00 | 317   |       | 199    | 103   | 93    | 1036   |        |        |        | 621    |        | 506    |        | 28   |
| 24.75     345     435     191     107     94     1455     1081     976     1138     801     343     457     297     3       25.00     325     476     199     108     94     1384     1105     1187     1061     907     354     440     301     3   |       |       |       | 10,000 |       |       |        |        |        |        |        |        |        |        | 29   |
| <b>25.00</b> 325 476 199 108 94 1384 1105 1187 1061 907 354 440 301 3  |       | 319   |       |        |       |       |        |        |        |        |        |        |        |        | 29   |
|  | 24.75 |       |       |        | 107   | 94    |        |        |        |        |        | 343    |        |        | 30   |
| 25.25 327 496 208 109 95 1227 1152 1213 1072 1061 368 437 306 3  | 25.00 | 325   | 476   | 199    | 108   | 94    | 1384   | 1105   | 1187   | 1061   | 907    | 354    | 440    |        | 31   |
|  | 25.25 | 327   | 496   | 208    | 109   | 95    | 1227   | 1152   | 1213   | 1072   | 1061   | 368    | 437    | 306    | 32   |



Telephone: 210-635-8100 Facsimile: 210-635-8101 www.intertek.com/building

# TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS

Report No.: G105260808SAT-001 R1

Date: 01/06/23

|               | Pass/          | Pass/          | Pass/          | Pass/          | Pass/          |        |                |                |        |        |        |                |                | Pass           |
|---------------|----------------|----------------|----------------|----------------|----------------|--------|----------------|----------------|--------|--------|--------|----------------|----------------|----------------|
| <b>T</b>      | Fail<br>TC #15 | Fail<br>TC #16 | Fail<br>TC #17 | Fail<br>TC #18 | Fail<br>TC #19 | TC #20 | TO #04         | TO //22        | TC #23 | TC #24 | TC #25 | TO #00         | TO #27         | Fail<br>TC #28 |
| Time<br>(min) | (°F)           | (°F)           | (°F)           | (°F)           | (°F)           | (°F)   | TC #21<br>(°F) | TC #22<br>(°F) | (°F)   | (°F)   | (°F)   | TC #26<br>(°F) | TC #27<br>(°F) | (°F)           |
| (11111)       | ( . ,          | ( , ,          | ( , ,          | ( , ,          | ( , ,          | ( . ,  | ( , ,          | ( , )          | (1)    | (1)    | ( , ,  | ( , ,          | ( . ,          | (.)            |
| 25.50         | 339            | 421            | 209            | 111            | 96             | 1209   | 1190           | 1280           | 1085   | 1158   | 384    | 405            | 311            | 327            |
| 25.75         | 341            | 476            | 217            | 112            | 97             | 1416   | 1206           | 1211           | 1120   | 1383   | 408    | 370            | 316            | 335            |
| 26.00         | 352            | 435            | 194            | 113            | 97             | 1313   | 1208           | 1293           | 1128   | 1301   | 433    | 368            | 320            | 343            |
| 26.25         | 347            | 502            | 196            | 115            | 98             | 1322   | 1205           | 1195           | 1141   | 1348   | 467    | 384            | 325            | 353            |
| 26.50         | 366            | 483            | 191            | 115            | 98             | 1307   | 1204           | 1160           | 1142   | 1376   | 497    | 399            | 330            | 361            |
| 26.75         | 387            | 432            | 191            | 116            | 99             | 1321   | 1205           | 1176           | 1143   | 1338   | 535    | 372            | 335            | 371            |
| 27.00         | 401            | 400            | 182            | 117            | 99             | 1340   | 1206           | 1180           | 1129   | 1360   | 568    | 338            | 341            | 379            |
| 27.25         | 376            | 356            | 179            | 118            | 100            | 1289   | 1207           | 1163           | 1160   | 1364   | 608    | 310            | 348            | 387            |
| 27.50         | 406            | 385            | 181            | 118            | 100            | 1304   | 1207           | 1194           | 1140   | 1393   | 643    | 284            | 354            | 393            |
| 27.75         | 362            | 409            | 180            | 118            | 101            | 1311   | 1210           | 1283           | 1196   | 1354   | 682    | 281            | 360            | 399            |
| 28.00         | 377            | 493            | 180            | 119            | 101            | 1295   | 1214           | 1309           | 1240   | 1274   | 713    | 295            | 366            | 405            |
| 28.25         | 366            | 447            | 190            | 121            | 102            | 1297   | 1216           | 1321           | 1420   | 1309   | 745    | 298            | 372            | 410            |
| 28.50         | 359            | 461            | 180            | 121            | 102            | 1289   | 1215           | 1412           | 1366   | 1371   | 772    | 314            | 377            | 415            |
| 28.75         | 349            | 503            | 179            | 122            | 102            | 1312   | 1212           | 1287           | 1290   | 1468   | 803    | 312            | 383            | 420            |
| 29.00         | 349            | 555            | 192            | 122            | 103            | 1313   | 1211           | 1339           | 1272   | 1462   | 830    | 306            | 388            | 423            |
| 29.25         | 374            | 528            | 185            | 123            | 103            | 1294   | 1210           | 1256           | 1149   | 1594   | 858    | 490            | 394            | 427            |
| 29.50         | 368            | 600            | 189            | 124            | 104            | 1288   | 1211           | 1267           | 1144   | 1617   | 880    | 470            | 399            | 432            |
| 29.75         | 390            | 518            | 189            | 124            | 104            | 1320   | 1223           | 1290           | 1167   | 1564   | 903    | 486            | 405            | 437            |
| 30.00         | 395            | 525            | 190            | 124            | 105            | 1304   | 1240           | 1242           | 1126   | 1525   | 923    | 901            | 410            | 442            |
| Max Temp      | 406            | 600            | 217            | 124            | 105            | 1455   | 1240           | 1412           | 1420   | 1617   | 923    | 901            | 410            | 442            |
| Max Allowed   | 1000           | 1000           | 1000           | 1000           | 1000           |        |                |                |        |        |        | •              |                | 1000           |



Telephone: 210-635-8100 Facsimile: 210-635-8101 www.intertek.com/building

# **TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS**

Report No.: G105260808SAT-001 R1

Date: 01/06/23

|              |          |          | Pass/          |              |              |
|--------------|----------|----------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------------|--------------|
| Time         | TC #29   | TC #30   | Fail<br>TC #31 | Fail<br>TC #32 | Fail<br>TC #33 | Fail<br>TC #34 | Fail<br>TC #35 | Fail<br>TC #36 | Fail<br>TC #37 | Fail<br>TC #38 | Fail<br>TC #39 | Fail<br>TC #40 | TC #41       | TC #42       |
| (min)        | (°F)     | (°F)     | (°F)           | (°F)           | (°F)           | (°F)           | (°F)           | (°F)           | (°F)           | (°F)           | (°F)           | (°F)           | (°F)         | (°F)         |
| (            | ( - /    |          | ( - )          | ,              |                |                | ( - )          | ( - )          | ,              |                | ,              | ,              |              |              |
| 0.00         | 64       | 65       | 66             | 65             | 65             | 66             | 66             | 65             | 65             | 65             | 65             | 65             | 95           | 122          |
| 0.25         | 64       | 65       | 66             | 65             | 65             | 66             | 65             | 65             | 65             | 65             | 65             | 65             | 596          | 702          |
| 0.50         | 64       | 65       | 66             | 65             | 65             | 66             | 66             | 65             | 65             | 65             | 65             | 65             | 952          | 1120         |
| 0.75         | 64       | 65       | 66             | 65             | 65             | 66             | 67             | 65             | 65             | 65             | 65             | 66             | 1115         | 1258         |
| 1.00         | 65       | 66       | 66             | 65             | 65             | 67             | 68             | 66             | 65             | 65             | 65             | 68             | 1175         | 1260         |
| 1.25         | 65       | 66       | 66             | 65             | 65             | 68             | 71             | 66             | 65             | 65             | 65             | 69             | 1259         | 1272         |
| 1.50         | 65       | 67       | 66             | 65             | 65             | 70             | 73             | 66             | 65             | 66             | 66             | 71             | 1304         | 1282         |
| 1.75         | 65       | 68       | 66             | 65             | 65             | 71             | 76             | 67             | 65             | 67             | 66             | 72             | 1386         | 1320         |
| 2.00         | 65       | 69       | 66             | 65             | 66             | 73             | 78             | 67             | 66             | 68             | 66             | 74             | 1375         | 1355         |
| 2.25         | 65       | 70       | 66             | 65             | 66             | 75             | 81             | 67             | 66             | 68             | 67             | 76             | 1407         | 1360         |
| 2.50         | 65       | 70       | 66             | 66             | 66             | 76             | 84             | 68             | 66             | 69             | 67             | 78             | 1406         | 1409         |
| 2.75         | 66       | 71       | 66             | 65             | 67             | 78             | 87             | 68             | 67             | 70             | 68             | 80             | 1417         | 1408         |
| 3.00         | 66       | 73       | 66             | 65             | 67             | 80             | 89             | 68             | 67             | 71             | 68             | 82             | 1466         | 1384         |
| 3.25         | 67       | 73       | 67             | 65             | 67             | 81             | 92             | 69             | 67             | 72             | 69             | 84             | 1504         | 1400         |
| 3.50         | 67       | 74       | 67             | 66             | 67             | 83             | 94             | 69             | 67             | 73             | 69             | 86             | 1495         | 1439         |
| 3.75         | 68       | 75       | 67             | 65             | 68             | 84             | 96             | 69             | 68             | 73<br>74       | 70             | 88             | 1514         | 1484         |
| 4.00         | 68<br>69 | 76<br>77 | 67<br>67       | 66<br>66       | 68<br>68       | 86<br>87       | 99<br>101      | 70<br>70       | 68<br>68       | 75             | 71<br>72       | 90<br>92       | 1510<br>1519 | 1442<br>1482 |
| 4.25<br>4.50 | 69       | 78       | 67             | 66             | 68             | 89             | 103            | 70             | 68             | 76             | 73             | 95             | 1546         | 1488         |
| 4.75         | 70       | 79       | 67             | 66             | 69             | 90             | 103            | 71             | 69             | 76             | 74             | 97             | 1551         | 1460         |
| 5.00         | 71       | 80       | 67             | 66             | 69             | 91             | 108            | 71             | 69             | 77             | 76             | 100            | 1575         | 1470         |
| 5.25         | 71       | 81       | 68             | 66             | 70             | 93             | 110            | 72             | 70             | 78             | 78             | 100            | 1595         | 1475         |
| 5.50         | 72       | 82       | 68             | 66             | 70             | 94             | 112            | 73             | 70             | 78             | 80             | 103            | 1584         | 1456         |
| 5.75         | 72       | 83       | 68             | 66             | 70             | 97             | 115            | 73             | 70             | 79             | 81             | 106            | 1582         | 1489         |
| 6.00         | 73       | 84       | 68             | 66             | 70             | 98             | 118            | 73             | 70             | 80             | 83             | 109            | 1610         | 1516         |
| 6.25         | 73       | 87       | 68             | 66             | 70             | 100            | 121            | 74             | 71             | 81             | 84             | 112            | 1603         | 1484         |
| 6.50         | 74       | 87       | 68             | 66             | 71             | 101            | 123            | 75             | 71             | 81             | 86             | 115            | 1598         | 1488         |
| 6.75         | 74       | 89       | 69             | 66             | 71             | 104            | 127            | 75             | 72             | 82             | 89             | 117            | 1607         | 1488         |
| 7.00         | 75       | 91       | 69             | 66             | 71             | 106            | 130            | 76             | 72             | 83             | 90             | 120            | 1596         | 1482         |
| 7.25         | 76       | 92       | 69             | 67             | 72             | 108            | 134            | 76             | 73             | 84             | 93             | 124            | 1626         | 1499         |
| 7.50         | 76       | 93       | 69             | 67             | 72             | 110            | 136            | 77             | 73             | 85             | 94             | 126            | 1627         | 1494         |
| 7.75         | 77       | 95       | 70             | 67             | 72             | 112            | 139            | 78             | 73             | 86             | 96             | 129            | 1602         | 1516         |
| 8.00         | 78       | 97       | 70             | 67             | 72             | 113            | 143            | 78             | 74             | 86             | 98             | 132            | 1623         | 1502         |
| 8.25         | 79       | 98       | 70             | 67             | 72             | 115            | 146            | 79             | 74             | 87             | 100            | 135            | 1619         | 1511         |
| 8.50         | 80       | 99       | 70             | 67             | 73             | 118            | 148            | 79             | 75             | 88             | 101            | 137            | 1608         | 1530         |
| 8.75         | 81       | 102      | 70             | 68             | 73             | 120            | 151            | 80             | 75             | 89             | 103            | 140            | 1633         | 1529         |
| 9.00         | 82       | 101      | 71             | 68             | 73             | 121            | 154            | 80             | 76             | 90             | 105            | 143            | 1631         | 1541         |
| 9.25         | 83       | 103      | 71             | 68             | 73             | 122            | 156            | 80             | 76             | 91             | 107            | 146            | 1662         | 1542         |
| 9.50         | 84       | 104      | 71             | 68             | 74             | 124            | 160            | 81             | 76             | 92             | 108            | 148            | 1627         | 1536         |
| 9.75         | 85       | 106      | 71             | 68             | 74             | 126            | 162            | 82             | 77             | 93             | 110            | 152            | 1638         | 1565         |
| 10.00        | 86       | 108      | 71             | 68             | 75             | 127            | 164            | 82             | 77             | 94             | 112            | 154            | 1621         | 1576         |
| 10.25        | 88       | 110      | 72             | 68             | 75             | 129            | 166            | 83             | 78             | 95             | 113            | 157            | 1636         | 1542         |
| 10.50        | 89       | 111      | 72             | 69             | 76             | 130            | 169            | 84             | 78             | 97             | 115            | 159            | 1665         | 1548         |
| 10.75        | 90       | 115      | 72             | 68             | 76             | 132            | 172            | 84             | 78             | 97             | 117            | 162            | 1635         | 1531         |
| 11.00        | 92       | 116      | 72             | 69             | 76             | 133            | 174            | 84             | 79             | 98             | 118            | 164            | 1646         | 1564         |
| 11.25        | 93       | 117      | 73             | 69             | 77             | 136            | 177            | 85             | 80             | 100            | 120            | 167            | 1664         | 1549         |
| 11.50        | 95       | 119      | 73             | 69             | 77             | 137            | 179            | 86             | 80             | 100            | 121            | 170            | 1654         | 1550         |
| 11.75        | 97       | 121      | 73             | 69             | 78             | 138            | 182            | 86             | 81             | 102            | 123            | 173            | 1659         | 1560         |
| 12.00        | 98       | 123      | 73             | 70             | 78             | 140            | 184            | 87             | 81             | 103            | 124            | 176            | 1662         | 1550         |
| 12.25        | 100      | 126      | 73             | 70             | 79             | 141            | 186            | 88             | 81             | 104            | 126            | 178            | 1642         | 1598         |
| 12.50        | 102      | 128      | 74             | 70             | 79             | 142            | 189            | 88             | 82             | 105            | 128            | 179            | 1659         | 1583         |



Telephone: 210-635-8100 Facsimile: 210-635-8101 www.intertek.com/building

# **TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS**

Report No.: G105260808SAT-001 R1

Date: 01/06/23

|       |            |            | _             |               | _             |               |               |               |               |               |               |               |              |          |
|-------|------------|------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|--------------|----------|
|       |            |            | Pass/<br>Fail |              |          |
| Time  | TC #29     | TC #30     |               | TC #32        |               |               |               |               |               |               | TC #39        |               | TC #41       | TC #4    |
| (min) | (°F)       | (°F)       | (°F)          | (°F)          | (°F)          | (°F)          | (°F)          | (°F)          | (°F)          | (°F)          | (°F)          | (°F)          | (°F)         | (°I      |
| 12.75 | 103        | 128        | 74            | 70            | 80            | 142           | 191           | 89            | 83            | 106           | 129           | 181           | 1663         | 158      |
| 13.00 | 105        | 129        | 74            | 70            | 80            | 145           | 193           | 89            | 83            | 107           | 130           | 184           | 1668         | 160      |
| 13.25 | 107        | 132        | 74            | 70            | 80            | 146           | 195           | 90            | 84            | 108           | 132           | 186           | 1649         | 158      |
| 13.50 | 109        | 133        | 75            | 70            | 81            | 147           | 197           | 91            | 84            | 109           | 133           | 188           | 1661         | 158      |
| 13.75 | 111        | 135        | 75            | 71            | 82            | 148           | 199           | 92            | 85            | 110           | 135           | 191           | 1684         | 158      |
| 14.00 | 113<br>115 | 135<br>140 | 75<br>75      | 71<br>71      | 82<br>83      | 150<br>150    | 201           | 92<br>93      | 85<br>86      | 111           | 137<br>137    | 195<br>197    | 1673<br>1681 | 15<br>16 |
| 14.50 | 117        | 140        | 76            | 71            | 84            | 152           | 205           | 94            | 86            | 113           | 139           | 200           | 1655         | 15       |
| 14.75 | 119        | 143        | 76            | 72            | 84            | 153           | 207           | 94            | 87            | 114           | 140           | 202           | 1655         | 16       |
| 15.00 | 121        | 145        | 76            | 72            | 85            | 153           | 209           | 95            | 87            | 115           | 141           | 205           | 1649         | 16       |
| 15.25 | 123        | 148        | 76            | 72            | 86            | 154           | 210           | 95            | 88            | 117           | 142           | 205           | 1733         | 16       |
| 15.50 | 125        | 150        | 77            | 72            | 86            | 155           | 212           | 96            | 89            | 118           | 143           | 209           | 1760         | 16       |
| 15.75 | 127        | 152        | 77            | 73            | 87            | 156           | 214           | 96            | 89            | 119           | 144           | 211           | 1756         | 16       |
| 16.00 | 130        | 153        | 77            | 73            | 88            | 158           | 217           | 97            | 90            | 120           | 145           | 214           | 1758         | 16       |
| 16.25 | 132        | 156        | 78            | 73            | 89            | 159           | 219           | 97            | 90            | 121           | 146           | 217           | 1767         | 16       |
| 16.50 | 135        | 159        | 78            | 73            | 89            | 160           | 220           | 98            | 91            | 121           | 147           | 217           | 1778         | 16       |
| 16.75 | 137        | 161        | 78            | 74            | 90            | 160           | 222           | 98            | 92            | 122           | 149           | 222           | 1748         | 16       |
| 17.00 | 139        | 163        | 78            | 74            | 91            | 161           | 224           | 98            | 92            | 123           | 149           | 225           | 1755         | 17       |
| 17.25 | 142        | 167        | 79            | 74            | 91            | 163           | 226           | 99            | 93            | 124           | 151           | 228           | 1758         | 17       |
| 17.50 | 145        | 171        | 79            | 74            | 92            | 164           | 227           | 100           | 93            | 125           | 152           | 229           | 1769         | 17       |
| 17.75 | 148        | 177        | 79            | 75            | 93            | 165           | 229           | 101           | 94            | 126           | 154           | 235           | 1762         | 17       |
| 18.00 | 150        | 178        | 79            | 75            | 93            | 165           | 230           | 101           | 94            | 127           | 155           | 235           | 1750         | 17       |
| 18.25 | 153        | 181        | 80            | 75            | 94            | 167           | 233           | 102           | 95            | 128           | 156           | 237           | 1736         | 17       |
| 18.50 | 155        | 184        | 80            | 76            | 94            | 167           | 233           | 103           | 96            | 129           | 157           | 238           | 1756         | 17       |
| 18.75 | 158        | 187        | 80            | 76            | 95            | 168           | 235           | 104           | 97            | 130           | 159           | 241           | 1778         | 17       |
| 19.00 | 161        | 187        | 81            | 76            | 96            | 170           | 240           | 104           | 97            | 131           | 161           | 246           | 1821         | 17       |
| 19.25 | 164        | 189        | 81            | 76            | 96            | 171           | 242           | 105           | 98            | 133           | 163           | 254           | 1791         | 17       |
| 19.50 | 166        | 191        | 81            | 77            | 97            | 172           | 244           | 106           | 98            | 134           | 165           | 255           | 1766         | 16       |
| 19.75 | 170        | 193        | 82            | 77            | 98<br>99      | 173           | 249           | 107<br>108    | 99            | 135           | 166           | 257           | 1799         | 17       |
| 20.00 | 172<br>176 | 196<br>199 | 82<br>82      | 77<br>78      | 99            | 175<br>176    | 251<br>254    | 109           | 100           | 137<br>138    | 168<br>169    | 261<br>262    | 1786<br>1773 | 1        |
| 20.50 | 179        | 201        | 82            | 78            | 100           | 177           | 260           | 110           | 102           | 140           | 171           | 265           | 1768         | 17       |
| 20.75 | 182        | 205        | 83            | 78            | 101           | 178           | 263           | 111           | 102           | 142           | 172           | 266           | 1768         | 1        |
| 21.00 | 185        | 207        | 83            | 79            | 101           | 182           | 270           | 112           | 103           | 143           | 174           | 268           | 1773         | 17       |
| 21.25 | 188        | 208        | 84            | 79            | 102           | 185           | 281           | 115           | 104           | 146           | 179           | 281           | 1803         | 17       |
| 21.50 | 192        | 212        | 84            | 79            | 103           | 189           | 292           | 116           | 105           | 148           | 185           | 292           | 1772         | 17       |
| 21.75 | 196        | 219        | 84            | 80            | 104           | 190           | 290           | 117           | 106           | 150           | 188           | 299           | 1784         | 17       |
| 22.00 | 200        | 223        | 85            | 80            | 105           | 194           | 304           | 119           | 106           | 153           | 196           | 320           | 1775         | 18       |
| 22.25 | 204        | 233        | 85            | 80            | 106           | 198           | 311           | 121           | 108           | 158           | 206           | 346           | 1788         | 17       |
| 22.50 | 208        | 237        | 86            | 81            | 107           | 204           | 320           | 122           | 109           | 162           | 214           | 363           | 1777         | 17       |
| 22.75 | 213        | 246        | 86            | 81            | 108           | 211           | 336           | 124           | 110           | 166           | 222           | 377           | 1757         | 17       |
| 23.00 | 217        | 249        | 86            | 81            | 109           | 217           | 340           | 125           | 111           | 170           | 230           | 385           | 1758         | 18       |
| 23.25 | 222        | 252        | 87            | 82            | 110           | 220           | 343           | 127           | 113           | 177           | 239           | 406           | 1801         | 17       |
| 23.50 | 226        | 257        | 87            | 83            | 112           | 224           | 347           | 129           | 115           | 184           | 248           | 420           | 1807         | 17       |
| 23.75 | 231        | 254        | 88            | 83            | 113           | 231           | 352           | 135           | 118           | 195           | 257           | 432           | 1736         | 17       |
| 24.00 | 235        | 252        | 88            | 83            | 114           | 233           | 355           | 135           | 121           | 206           | 274           | 455           | 1750         | 18       |
| 24.25 | 239        | 251        | 88            | 84            | 115           | 234           | 359           | 137           | 124           | 221           | 287           | 476           | 1755         | 17       |
| 24.50 | 243        | 253        | 89            | 84            | 117           | 239           | 369           | 138           | 128           | 236           | 303           | 486           | 1754         | 18       |
| 24.75 | 248        | 260        | 89            | 85            | 118           | 246           | 380           | 138           | 131           | 246           | 317           | 493           | 1754         | 17       |
| 25.00 | 251        | 266        | 90            | 86            | 119           | 255           | 397           | 139           | 132           | 254           | 328           | 493           | 1753         | 18       |
| 25.25 | 256        | 269        | 90            | 86            | 121           | 267           | 410           | 143           | 134           | 265           | 336           | 508           | 1760         | 18       |



Telephone: 210-635-8100 Facsimile: 210-635-8101 www.intertek.com/building

# **TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS**

Report No.: G105260808SAT-001 R1

Date: 01/06/23

|                     |        |        | Pass/       | Pass/  | Pass/       | Pass/       | Pass/       | Pass/       | Pass/       | Pass/       | Pass/       | Pass/       |      |       |
|---------------------|--------|--------|-------------|--------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|------|-------|
| _                   |        |        | Fail        | Fail   | Fail        | Fail        | Fail        | Fail        | Fail        | Fail        | Fail        | Fail        |      |       |
|                     | TC #29 | TC #30 | TC #31      | TC #32 | TC #33      | TC #34      | TC #35      | TC #36      | TC #37      | TC #38      | TC #39      | TC #40      |      | TC #4 |
| (min)               | (°F)   | (°F)   | (°F)        | (°F)   | (°F)        | (°F)        | (°F)        | (°F)        | (°F)        | (°F)        | (°F)        | (°F)        | (°F) | (°F   |
| 25.50               | 260    | 273    | 91          | 87     | 123         | 273         | 422         | 147         | 136         | 276         | 338         | 526         | 1776 | 181   |
| 25.75               | 265    | 285    | 91          | 88     | 125         | 287         | 439         | 170         | 141         | 290         | 344         | 555         | 1778 | 183   |
| 26.00               | 269    | 290    | 92          | 88     | 127         | 294         | 453         | 186         | 149         | 306         | 354         | 578         | 1830 | 178   |
| 26.25               | 277    | 295    | 92          | 89     | 130         | 300         | 461         | 179         | 153         | 308         | 365         | 579         | 1840 | 175   |
| 26.50               | 283    | 294    | 93          | 90     | 132         | 305         | 463         | 169         | 154         | 306         | 370         | 582         | 1885 | 173   |
| 26.75               | 290    | 298    | 94          | 91     | 136         | 308         | 463         | 158         | 154         | 307         | 389         | 574         | 1917 | 175   |
| 27.00               | 295    | 303    | 94          | 91     | 139         | 308         | 467         | 153         | 153         | 308         | 397         | 567         | 1906 | 174   |
| 27.25               | 302    | 307    | 95          | 92     | 143         | 306         | 473         | 152         | 152         | 308         | 395         | 580         | 1894 | 173   |
| 27.50               | 307    | 308    | 96          | 93     | 147         | 306         | 478         | 153         | 151         | 311         | 395         | 571         | 1905 | 172   |
| 27.75               | 314    | 312    | 96          | 94     | 152         | 312         | 483         | 155         | 151         | 318         | 390         | 585         | 1905 | 173   |
| 28.00               | 319    | 314    | 97          | 95     | 156         | 322         | 493         | 157         | 152         | 329         | 386         | 577         | 1821 | 169   |
| 28.25               | 325    | 318    | 98          | 96     | 161         | 325         | 514         | 162         | 153         | 339         | 387         | 578         | 1816 | 169   |
| 28.50               | 330    | 321    | 100         | 97     | 167         | 330         | 521         | 159         | 154         | 340         | 385         | 576         | 1854 | 168   |
| 28.75               | 336    | 325    | 101         | 98     | 173         | 344         | 544         | 163         | 155         | 350         | 385         | 587         | 1841 | 170   |
| 29.00               | 342    | 339    | 102         | 99     | 179         | 351         | 539         | 172         | 157         | 360         | 388         | 597         | 1808 | 181   |
| 29.25               | 350    | 341    | 103         | 101    | 186         | 356         | 551         | 175         | 161         | 372         | 395         | 611         | 1802 | 184   |
| 29.50               | 357    | 342    | 104         | 101    | 192         | 370         | 562         | 173         | 164         | 375         | 396         | 611         | 1815 | 183   |
| 29.75               | 363    | 341    | 105         | 102    | 199         | 375         | 567         | 168         | 165         | 375         | 398         | 608         | 1786 | 183   |
| 30.00               | 368    | 341    | 107         | 104    | 206         | 378         | 588         | 167         | 166         | 377         | 397         | 607         | 1776 | 181   |
| _                   |        | 0.10   | 407         |        |             | 070         | 500         | 400         | 400         |             |             |             | 4047 |       |
| x Temp<br>x Allowed | 368    | 342    | 107<br>1000 | 104    | 206<br>1000 | 378<br>1000 | 588<br>1000 | 186<br>1000 | 166<br>1000 | 377<br>1000 | 398<br>1000 | 611<br>1000 | 1917 | 187   |



Telephone: 210-635-8100 Facsimile: 210-635-8101 www.intertek.com/building

# **TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS**

Report No.: G105260808SAT-001 R1

Date: 01/06/23

|              |        |              |              |              |              |              | Pass/          | Pass/          | Pass/          | Pass/          | Pass/          | Pass/          |
|--------------|--------|--------------|--------------|--------------|--------------|--------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Time         | TC #43 | TC #44       | TC #45       | TC #46       | TC #47       | TC #48       | Fail<br>TC #49 | Fail<br>TC #50 | Fail<br>TC #51 | Fail<br>TC #52 | Fail<br>TC #53 | Fail<br>TC #54 |
| (min         |        | (°F)         | (°F)         | (°F)         | (°F)         | (°F)         | (°F)           | (°F)           | (°F)           | (°F)           | (°F)           | (°F)           |
| (            | , (.,  | ( - ,        | ( - ,        | ( - ,        | ( - ,        | (.,          | ( - )          | ( - /          | (.,            | ( - )          | (.,            | ( - ,          |
| 0.00         |        | 111          | 113          | 98           | 114          | 116          | 64             | 64             | 65             | 65             | 65             | 65             |
| 0.25         |        | 396          | 481          | 448          | 534          | 473          | 64             | 64             | 65             | 65             | 65             | 65             |
| 0.50         |        | 705          | 779          | 761          | 891          | 818          | 64             | 64             | 65             | 65             | 65             | 65             |
| 0.75         |        | 896          | 946          | 977          | 1052         | 991          | 64             | 64             | 65             | 65             | 65             | 65             |
| 1.00         |        | 969          | 1006         | 1059         | 1108         | 1042         | 64             | 64             | 65             | 65             | 65             | 65             |
| 1.25         |        | 1014         | 1046         | 1121         | 1165         | 1099         | 64             | 64             | 65             | 65             | 65             | 65             |
| 1.50         |        | 1051         | 1070         | 1184         | 1209         | 1167         | 64             | 64             | 65             | 65             | 65             | 65             |
| 1.75         |        | 1078         | 1100         | 1218         | 1218         | 1187         | 64             | 64             | 65             | 65             | 65             | 65             |
| 2.00         |        | 1108         | 1114         | 1233         | 1233         | 1201         | 64             | 64             | 65             | 65             | 65             | 65             |
| 2.25         |        | 1129         | 1125         | 1251         | 1254         | 1221         | 64             | 65             | 65             | 65             | 65             | 65             |
| 2.50         |        | 1139         | 1131         | 1259         | 1281         | 1239         | 65             | 65             | 65             | 65             | 65             | 65             |
| 2.75         |        | 1161         | 1148         | 1276         | 1300         | 1257         | 64             | 65             | 65             | 65             | 65             | 65             |
| 3.00<br>3.25 |        | 1174<br>1181 | 1162<br>1171 | 1288<br>1314 | 1303<br>1325 | 1264<br>1292 | 64<br>64       | 65<br>65       | 65<br>65       | 65<br>65       | 66<br>65       | 65<br>65       |
| 3.50         |        | 1199         | 1178         | 1333         | 1336         | 1312         | 64             | 64             | 65             | 65             | 65             | 65             |
| 3.75         |        | 1230         | 1202         | 1344         | 1342         | 1314         | 64             | 65             | 65             | 65             | 66             | 65             |
| 4.00         |        | 1250         | 1211         | 1415         | 1393         | 1380         | 65             | 65             | 65             | 65             | 66             | 65             |
| 4.25         |        | 1258         | 1211         | 1399         | 1416         | 1370         | 65             | 65             | 65             | 65             | 66             | 65             |
| 4.50         |        | 1243         | 1221         | 1386         | 1415         | 1374         | 65             | 65             | 66             | 65             | 66             | 65             |
| 4.75         |        | 1247         | 1235         | 1382         | 1409         | 1368         | 64             | 65             | 65             | 65             | 66             | 65             |
| 5.00         |        | 1251         | 1242         | 1381         | 1405         | 1373         | 65             | 65             | 65             | 65             | 66             | 65             |
| 5.25         |        | 1266         | 1245         | 1384         | 1403         | 1379         | 65             | 65             | 66             | 65             | 65             | 65             |
| 5.50         |        | 1271         | 1243         | 1403         | 1433         | 1389         | 65             | 65             | 66             | 65             | 66             | 65             |
| 5.75         |        | 1271         | 1253         | 1403         | 1426         | 1399         | 65             | 65             | 66             | 66             | 67             | 65             |
| 6.00         |        | 1271         | 1262         | 1409         | 1426         | 1404         | 65             | 65             | 65             | 65             | 67             | 65             |
| 6.25         |        | 1282         | 1263         | 1412         | 1444         | 1400         | 65             | 65             | 66             | 66             | 67             | 65             |
| 6.50         |        | 1292         | 1267         | 1419         | 1440         | 1406         | 65             | 65             | 65             | 66             | 67             | 65             |
| 6.75         | 1398   | 1294         | 1269         | 1423         | 1431         | 1405         | 65             | 65             | 66             | 66             | 67             | 65             |
| 7.00         | 1398   | 1294         | 1272         | 1435         | 1445         | 1410         | 65             | 65             | 66             | 66             | 66             | 66             |
| 7.25         | 1424   | 1296         | 1290         | 1427         | 1437         | 1410         | 65             | 65             | 66             | 66             | 67             | 65             |
| 7.50         | 1416   | 1303         | 1288         | 1428         | 1434         | 1411         | 65             | 65             | 66             | 66             | 67             | 66             |
| 7.75         | 1425   | 1310         | 1292         | 1435         | 1458         | 1421         | 65             | 65             | 66             | 66             | 67             | 66             |
| 8.00         | 1420   | 1308         | 1298         | 1442         | 1478         | 1428         | 65             | 65             | 66             | 66             | 67             | 66             |
| 8.25         | 1434   | 1307         | 1313         | 1444         | 1460         | 1434         | 65             | 65             | 66             | 66             | 67             | 66             |
| 8.50         | 1442   | 1313         | 1313         | 1436         | 1461         | 1435         | 65             | 65             | 66             | 66             | 67             | 66             |
| 8.75         | 1438   | 1321         | 1314         | 1452         | 1486         | 1449         | 65             | 65             | 67             | 67             | 67             | 66             |
| 9.00         |        | 1321         | 1319         | 1449         | 1477         | 1444         | 65             | 65             | 66             | 67             | 67             | 66             |
| 9.25         |        | 1330         | 1317         | 1459         | 1473         | 1448         | 65             | 65             | 66             | 67             | 66             | 66             |
| 9.50         |        | 1326         | 1328         | 1455         | 1479         | 1454         | 65             | 66             | 66             | 67             | 68             | 67             |
| 9.75         |        | 1329         | 1336         | 1458         | 1483         | 1460         | 65             | 65             | 67             | 67             | 68             | 67             |
| 10.00        |        | 1334         | 1336         | 1462         | 1492         | 1465         | 65             | 65             | 67             | 67             | 68             | 67             |
| 10.25        |        | 1344         | 1331         | 1469         | 1495         | 1465         | 65             | 65             | 67             | 67             | 68             | 67             |
| 10.50        |        | 1351         | 1327         | 1474         | 1489         | 1471         | 65             | 65             | 67             | 68             | 69             | 67             |
| 10.75        |        | 1349         | 1339         | 1478         | 1504         | 1475         | 66             | 65             | 67             | 68             | 68             | 67             |
| 11.00        |        | 1350         | 1346         | 1476         | 1499         | 1476         | 66             | 66             | 67             | 68             | 68             | 68             |
| 11.25        |        | 1355         | 1346         | 1482         | 1501         | 1479         | 66             | 66             | 67             | 68             | 68             | 67             |
| 11.50        |        | 1359         | 1349         | 1487         | 1525         | 1478         | 66             | 66             | 67             | 68             | 68             | 67             |
| 11.75        |        | 1363         | 1357         | 1485         | 1515         | 1492         | 66             | 66             | 67             | 68             | 69             | 68             |
| 12.00        |        | 1362         | 1360         | 1490         | 1512         | 1484         | 66             | 66             | 67             | 68             | 68             | 67             |
| 12.25        |        | 1362         | 1368         | 1485         | 1518         | 1495         | 66             | 67             | 67             | 68             | 68             | 67             |
| 12.50        | 1494   | 1368         | 1365         | 1485         | 1520         | 1495         | 66             | 67             | 67             | 68             | 68             | 68             |



Telephone: 210-635-8100 Facsimile: 210-635-8101 www.intertek.com/building

# **TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS**

Report No.: G105260808SAT-001 R1

Date: 01/06/23

|                |                |                |                |                |                |                | Pass/          | Pass/          | Pass/          | Pass/          | Pass/          | Pass/          |
|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| <b>T</b>       | TO #40         | TO #44         | TO #45         | TO #40         | TO #47         | TO #40         | Fail           | Fail           | Fail           | Fail           | Fail           | Fail           |
| Time<br>(min)  | TC #43<br>(°F) | TC #44<br>(°F) | TC #45<br>(°F) | TC #46<br>(°F) | TC #47<br>(°F) | TC #48<br>(°F) | TC #49<br>(°F) | TC #50<br>(°F) | TC #51<br>(°F) | TC #52<br>(°F) | TC #53<br>(°F) | TC #54<br>(°F) |
| ()             | ( . ,          | (.,            | ( . ,          | (.,            | ( . ,          | ( . ,          | ( . ,          | ( . ,          | (.,            | ( . ,          | ( . ,          | ( . ,          |
| 12.75          | 1486           | 1370           | 1370           | 1488           | 1524           | 1495           | 66             | 68             | 67             | 68             | 69             | 68             |
| 13.00          | 1490           | 1374           | 1373           | 1503           | 1530           | 1507           | 66             | 68             | 67             | 68             | 69             | 68             |
| 13.25          | 1493           | 1376           | 1374           | 1502           | 1541           | 1514           | 66             | 67             | 67             | 68             | 69             | 69             |
| 13.50          | 1506           | 1375           | 1382           | 1507           | 1545           | 1500           | 66             | 67             | 68             | 69             | 69             | 68             |
| 13.75          | 1494           | 1381           | 1379           | 1506           | 1543           | 1518           | 67             | 67             | 67             | 69             | 69             | 68             |
| 14.00          | 1500           | 1384           | 1383           | 1508           | 1544           | 1521           | 67             | 67             | 67             | 69             | 69             | 68             |
| 14.25          | 1497           | 1384           | 1381           | 1505           | 1552           | 1526           | 67             | 67             | 68             | 69             | 69             | 69             |
| 14.50          | 1512           | 1381           | 1386           | 1501           | 1547           | 1514           | 67             | 67             | 68             | 70             | 69             | 69             |
| 14.75          | 1511           | 1386           | 1390           | 1504           | 1545           | 1517           | 67             | 69             | 68             | 70             | 70             | 69             |
| 15.00          | 1506           | 1383           | 1399           | 1496           | 1561           | 1517           | 67             | 70             | 68             | 70             | 70             | 69             |
| 15.25          | 1548           | 1410           | 1420           | 1562           | 1607           | 1577           | 67             | 69             | 68             | 70             | 71             | 69             |
| 15.50          | 1566           | 1432           | 1436           | 1590           | 1623           | 1599           | 67             | 68             | 69             | 70             | 71             | 70             |
| 15.75          | 1575           | 1446           | 1440           | 1603           | 1657           | 1618           | 67             | 68             | 68             | 70             | 70             | 70             |
| 16.00          | 1585<br>1586   | 1449<br>1466   | 1448<br>1451   | 1619<br>1629   | 1675<br>1695   | 1612<br>1633   | 67<br>67       | 68<br>68       | 68<br>68       | 70<br>70       | 70<br>71       | 69<br>70       |
| 16.25<br>16.50 | 1597           | 1470           | 1462           | 1633           | 1686           | 1632           | 68             | 70             | 69             | 71             | 71             | 70             |
| 16.75          | 1601           | 1469           | 1470           | 1623           | 1705           | 1644           | 68             | 69             | 70             | 71             | 72             | 71             |
| 17.00          | 1610           | 1475           | 1482           | 1633           | 1705           | 1656           | 67             | 68             | 69             | 71             | 72             | 70             |
| 17.25          | 1607           | 1477           | 1485           | 1638           | 1731           | 1660           | 68             | 68             | 70             | 70             | 71             | 70             |
| 17.50          | 1616           | 1477           | 1491           | 1641           | 1727           | 1665           | 68             | 68             | 69             | 71             | 72             | 71             |
| 17.75          | 1624           | 1474           | 1498           | 1643           | 1729           | 1680           | 69             | 70             | 70             | 71             | 72             | 71             |
| 18.00          | 1618           | 1478           | 1496           | 1641           | 1723           | 1681           | 67             | 70             | 70             | 71             | 72             | 71             |
| 18.25          | 1622           | 1476           | 1503           | 1638           | 1720           | 1668           | 67             | 69             | 69             | 71             | 73             | 71             |
| 18.50          | 1616           | 1478           | 1498           | 1643           | 1710           | 1665           | 67             | 69             | 70             | 71             | 72             | 71             |
| 18.75          | 1618           | 1491           | 1498           | 1653           | 1720           | 1670           | 68             | 69             | 70             | 72             | 72             | 72             |
| 19.00          | 1624           | 1504           | 1487           | 1662           | 1709           | 1691           | 68             | 71             | 69             | 72             | 73             | 72             |
| 19.25          | 1631           | 1502           | 1495           | 1657           | 1717           | 1687           | 68             | 70             | 71             | 71             | 72             | 71             |
| 19.50          | 1617           | 1501           | 1490           | 1642           | 1730           | 1704           | 68             | 71             | 70             | 72             | 72             | 72             |
| 19.75          | 1614           | 1501           | 1491           | 1654           | 1725           | 1706           | 68             | 70             | 71             | 71             | 72             | 72             |
| 20.00          | 1631           | 1497           | 1503           | 1646           | 1728           | 1688           | 68             | 70             | 71             | 72             | 72             | 72             |
| 20.25          | 1623           | 1494           | 1501           | 1644           | 1700           | 1675           | 68             | 73             | 70             | 72             | 72             | 71             |
| 20.50          | 1617           | 1496           | 1502           | 1646           | 1712           | 1669           | 68             | 72             | 70             | 72             | 73             | 72             |
| 20.75          | 1628           | 1500           | 1509           | 1654           | 1735           | 1694           | 69             | 73             | 70             | 72             | 73             | 72             |
| 21.00          | 1624           | 1502           | 1517           | 1655           | 1733           | 1692           | 69             | 73             | 70             | 72             | 73             | 72             |
| 21.25          | 1632           | 1512           | 1507           | 1668           | 1733           | 1708           | 69             | 73             | 70             | 72             | 73             | 72             |
| 21.50          | 1639           | 1509           | 1518           | 1664           | 1729           | 1715           | 69             | 74             | 70             | 73             | 73             | 72             |
| 21.75          | 1649           | 1511           | 1529           | 1677           | 1741           | 1704           | 69             | 71             | 71             | 73             | 73             | 73             |
| 22.00          | 1647           | 1510           | 1534           | 1659           | 1739           | 1710           | 69             | 72             | 70             | 73             | 73             | 73             |
| 22.25          | 1641           | 1511           | 1530           | 1674           | 1747           | 1696           | 69             | 72             | 70             | 73             | 73             | 73             |
| 22.50          | 1602           | 1522           | 1507           | 1762           | 1724           | 1698           | 69             | 75             | 70             | 73             | 74             | 73             |
| 22.75          | 1618           | 1517           | 1507           | 1760           | 1703           | 1695           | 69             | 75             | 71             | 73             | 75             | 74             |
| 23.00          | 1603           | 1511           | 1501           | 1750           | 1716           | 1695           | 69             | 76             | 71             | 73             | 75             | 73             |
| 23.25          | 1627           | 1517           | 1517           | 1727           | 1743           | 1695           | 69             | 75             | 70             | 73             | 75             | 72             |
| 23.50          | 1638           | 1529           | 1523           | 1718           | 1750           | 1717           | 69             | 77             | 71             | 73             | 76             | 73             |
| 23.75          | 1652           | 1513           | 1540           | 1681           | 1757           | 1738           | 69             | 78             | 72             | 74             | 75             | 74             |
| 24.00          | 1635           | 1516           | 1539           | 1685           | 1772           | 1735           | 70             | 73             | 71             | 74             | 76             | 74             |
| 24.25          | 1608           | 1502           | 1519           | 1748           | 1800           | 1770           | 70             | 75             | 71             | 74             | 76             | 73             |
| 24.50          | 1603           | 1505           | 1518           | 1734           | 1779           | 1748           | 69             | 76             | 71             | 73             | 76             | 74             |
| 24.75          | 1592           | 1495           | 1512           | 1764           | 1777           | 1774           | 70             | 74             | 71             | 73             | 76             | 74             |
| 25.00          | 1586           | 1490           | 1507           | 1799           | 1752           | 1748           | 70             | 75             | 71             | 74             | 76             | 74             |
| 25.25          | 1612           | 1500           | 1530           | 1796           | 1823           | 1773           | 70             | 77             | 71             | 74             | 76             | 74             |



Telephone: 210-635-8100 Facsimile: 210-635-8101 www.intertek.com/building

# TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS

Report No.: G105260808SAT-001 R1

Date: 01/06/23

|             |        |        |        |        |        |        | Pass/<br>Fail | Pass/          | Pass/<br>Fail | Pass/          | Pass/          | Pass/          |
|-------------|--------|--------|--------|--------|--------|--------|---------------|----------------|---------------|----------------|----------------|----------------|
| Time        | TC #43 | TC #44 | TC #45 | TC #46 | TC #47 | TC #48 | TC #49        | Fail<br>TC #50 | TC #51        | Fail<br>TC #52 | Fail<br>TC #53 | Fail<br>TC #54 |
| (min)       | (°F)          | (°F)           | (°F)          | (°F)           | (°F)           | (°F)           |
| ()          | ( - )  | ( - ,  | ( - ,  | ( - ,  | ( . ,  | (.,    | ( - /         | ( - /          | (.,,          | ( - )          | (.,            | ( - ,          |
| 25.50       | 1606   | 1499   | 1535   | 1767   | 1785   | 1773   | 70            | 76             | 71            | 74             | 76             | 73             |
| 25.75       | 1622   | 1505   | 1540   | 1811   | 1812   | 1769   | 71            | 78             | 71            | 74             | 77             | 74             |
| 26.00       | 1648   | 1532   | 1529   | 1817   | 1830   | 1825   | 70            | 78             | 71            | 75             | 76             | 74             |
| 26.25       | 1643   | 1542   | 1525   | 1849   | 1868   | 1843   | 70            | 78             | 71            | 75             | 77             | 74             |
| 26.50       | 1652   | 1549   | 1521   | 1859   | 1884   | 1833   | 70            | 76             | 71            | 75             | 76             | 74             |
| 26.75       | 1680   | 1573   | 1530   | 1841   | 1853   | 1806   | 71            | 76             | 71            | 74             | 77             | 75             |
| 27.00       | 1667   | 1559   | 1530   | 1831   | 1861   | 1803   | 71            | 76             | 71            | 75             | 77             | 75             |
| 27.25       | 1685   | 1560   | 1533   | 1854   | 1889   | 1822   | 71            | 75             | 71            | 75             | 76             | 75             |
| 27.50       | 1666   | 1569   | 1527   | 1859   | 1910   | 1828   | 71            | 74             | 71            | 75             | 76             | 75             |
| 27.75       | 1668   | 1558   | 1526   | 1850   | 1904   | 1842   | 71            | 74             | 71            | 75             | 76             | 75             |
| 28.00       | 1652   | 1556   | 1526   | 1884   | 1897   | 1814   | 71            | 74             | 71            | 75             | 76             | 74             |
| 28.25       | 1654   | 1554   | 1524   | 1866   | 1894   | 1805   | 71            | 75             | 71            | 75             | 76             | 76             |
| 28.50       | 1648   | 1563   | 1526   | 1847   | 1887   | 1802   | 71            | 77             | 72            | 75             | 76             | 76             |
| 28.75       | 1660   | 1566   | 1527   | 1860   | 1890   | 1806   | 71            | 74             | 72            | 75             | 76             | 75             |
| 29.00       | 1633   | 1557   | 1539   | 1812   | 1825   | 1824   | 72            | 75             | 72            | 76             | 76             | 76             |
| 29.25       | 1624   | 1559   | 1544   | 1765   | 1779   | 1801   | 71            | 76             | 73            | 76             | 77             | 76             |
| 29.50       | 1661   | 1551   | 1548   | 1766   | 1811   | 1840   | 72            | 75             | 73            | 76             | 77             | 77             |
| 29.75       | 1650   | 1550   | 1547   | 1791   | 1831   | 1832   | 71            | 76             | 74            | 76             | 77             | 76             |
| 30.00       | 1650   | 1540   | 1543   | 1759   | 1841   | 1830   | 72            | 76             | 75            | 76             | 77             | 76             |
| Max Temp    | 1685   | 1573   | 1548   | 1884   | 1910   | 1843   | 72            | 78             | 75            | 76             | 77             | 77             |
| Max Allowed |        |        |        |        |        |        | 564           | 564            | 565           | 565            | 565            | 565            |



Telephone: 210-635-8100 Facsimile: 210-635-8101 www.intertek.com/building

#### **TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS**

Report No.: G105260808SAT-001 R1

Date: 01/06/23

#### **SECTION 15**

#### **DRAWINGS**

The "As-Built" drawings for the Arconic; Sheet Nos. 1-5 and dated 12/29/22; which follow have been reviewed by Intertek B&C and are representative of the project reported herein. Project construction was verified by Intertek B&C per the drawings included in this report. Any deviations are documented herein or on the drawings.

Version: 29 September 2020 Page 42 of 52 GFT-OP-10c



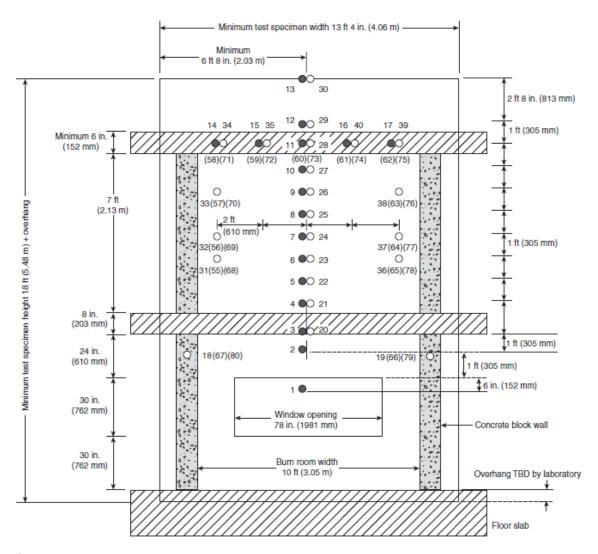
Telephone: 210-635-8100 Facsimile: 210-635-8101 www.intertek.com/building

#### TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS

Report No.: G105260808SAT-001 R1

Date: 01/06/23

#### **Standard TC Locations**



- Thermocouples 1 in. (25 mm) from exterior wall surface
- O Thermocouples In the wall cavity air space or the insulation, or both, as shown in Figure 6.1(b) Details A through I.
- ( ) Thermocouples Additional thermocouples in the insulation or the stud cavity, or both, where required for the test specimen construction being tested, as shown in Figure 6.1(b) Details C through I.

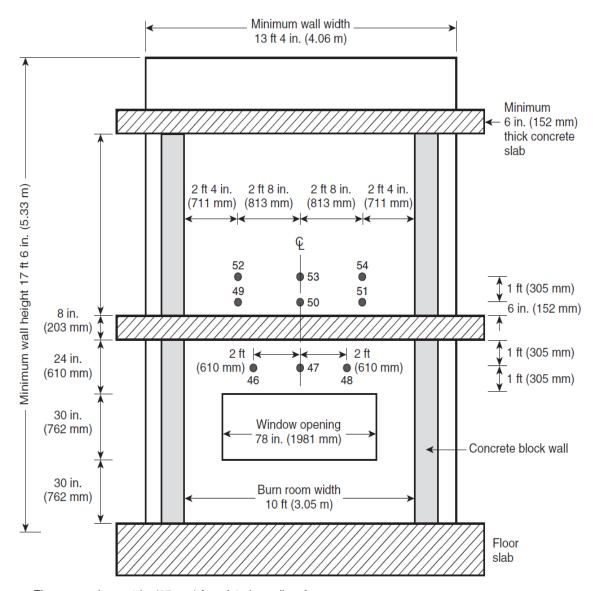


Telephone: 210-635-8100 Facsimile: 210-635-8101 www.intertek.com/building

#### **TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS**

Report No.: G105260808SAT-001 R1

Date: 01/06/23



● Thermocouples — 1 in. (25 mm) from interior wall surface

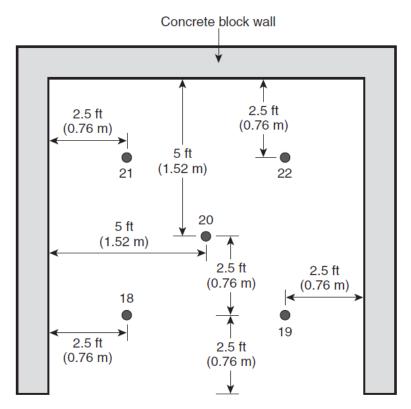


Telephone: 210-635-8100 Facsimile: 210-635-8101 www.intertek.com/building

# TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS

Report No.: G105260808SAT-001 R1

Date: 01/06/23



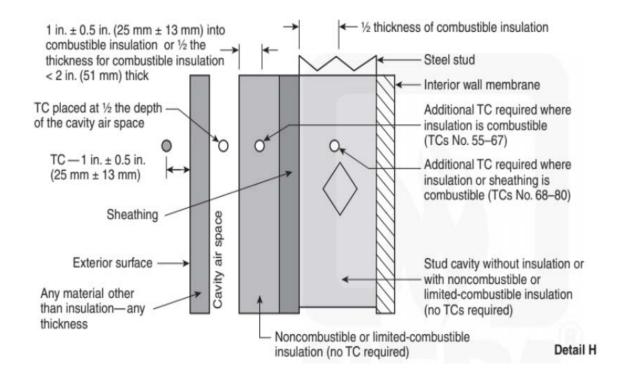
 Thermocouples (5) inside burn room 6 in. (152 mm) below ceiling



Telephone: 210-635-8100 Facsimile: 210-635-8101 www.intertek.com/building

#### TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS

Report No.: G105260808SAT-001 R1

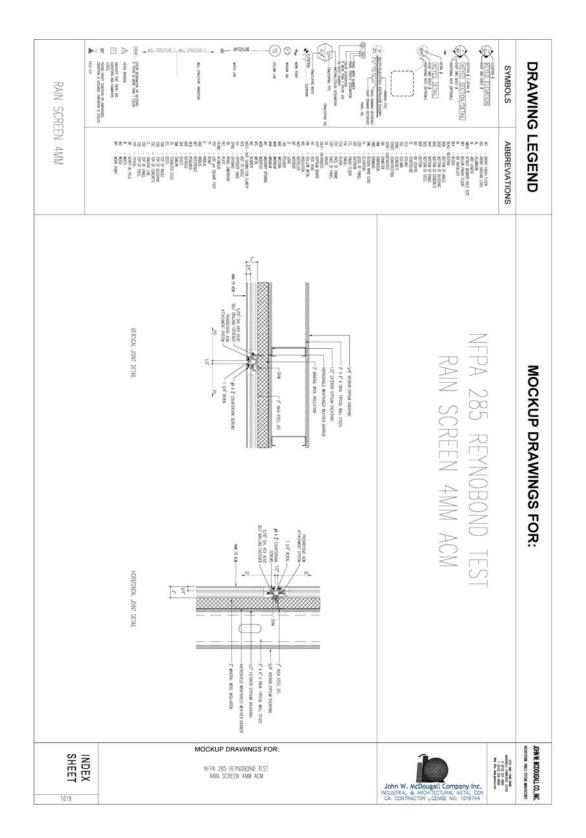




Telephone: 210-635-8100 Facsimile: 210-635-8101 www.intertek.com/building

#### **TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS**

Report No.: G105260808SAT-001 R1

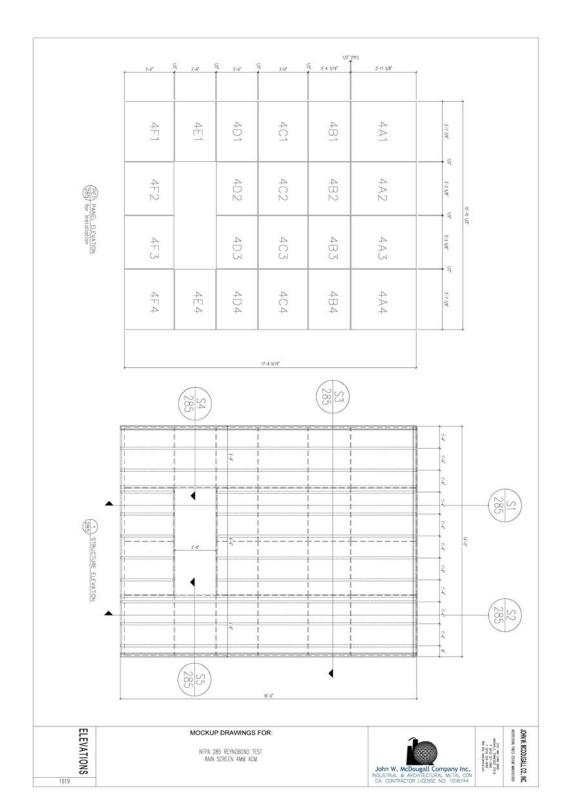




Telephone: 210-635-8100 Facsimile: 210-635-8101 www.intertek.com/building

# **TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS**

Report No.: G105260808SAT-001 R1

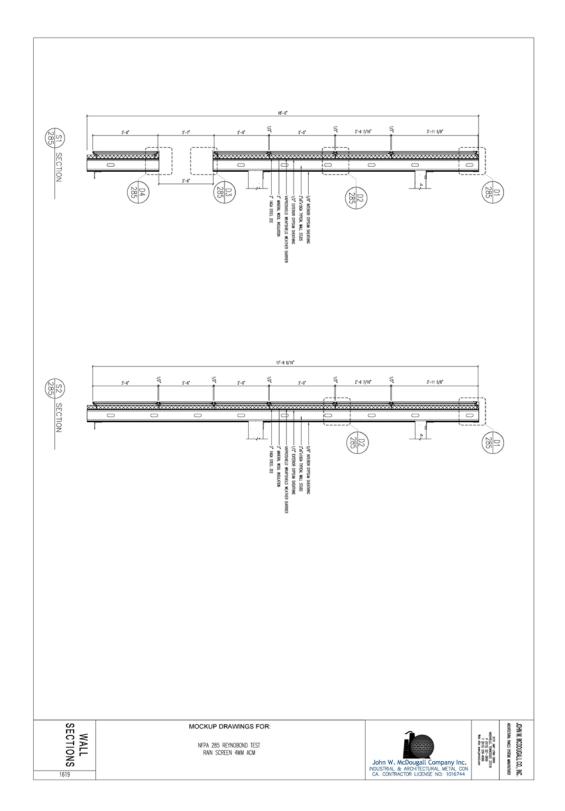




Telephone: 210-635-8100 Facsimile: 210-635-8101 www.intertek.com/building

# **TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS**

Report No.: G105260808SAT-001 R1

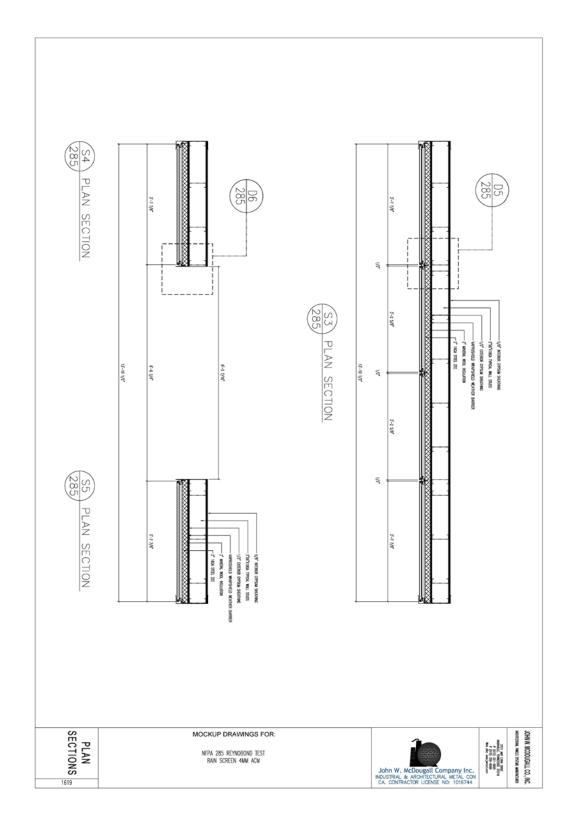




Telephone: 210-635-8100 Facsimile: 210-635-8101 www.intertek.com/building

# **TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS**

Report No.: G105260808SAT-001 R1

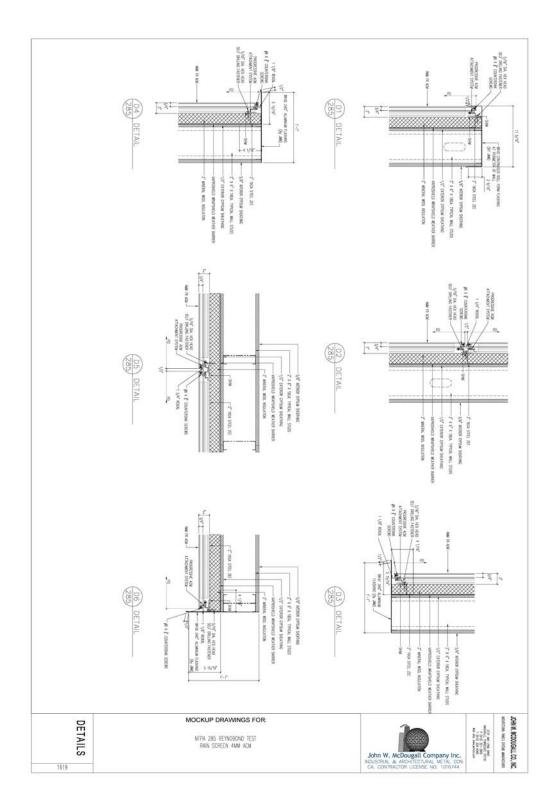




Telephone: 210-635-8100 Facsimile: 210-635-8101 www.intertek.com/building

# **TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS**

Report No.: G105260808SAT-001 R1





Telephone: 210-635-8100 Facsimile: 210-635-8101 www.intertek.com/building

# **TEST REPORT FOR ARCONIC ARCHITECTURAL PRODUCTS**

Report No.: G105260808SAT-001 R1

Date: 01/06/23

#### **SECTION 16**

#### **REVISION LOG**

| REVISION # | DATE     | SECTION | REVISION   |
|------------|----------|---------|--|
| 0          | 01/06/23 | N/A     | Original Report Issue  |
| 1          | 01/18/23 | 1, 8, 9 | Corrected date of NFPA 285 standard, corrected Rockwool insulation density, corrected typo in test observations. |