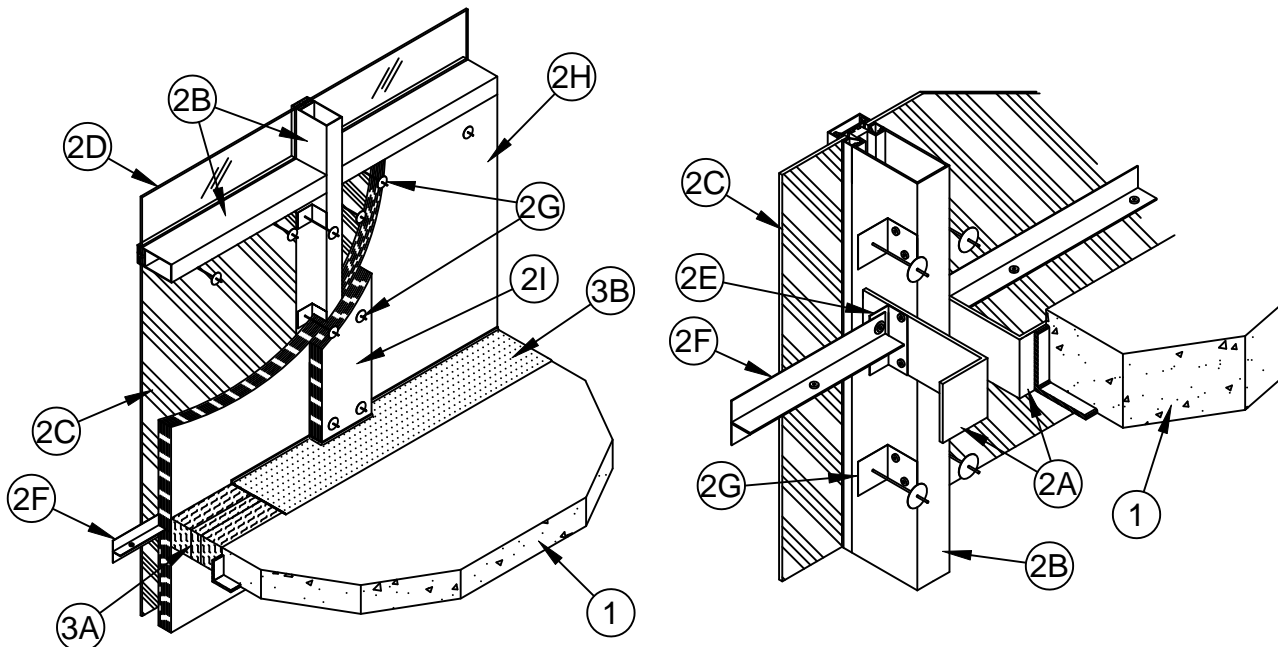


## System No. CW-S-2071

F Rating - 3 Hr  
T Rating - 1/4 Hr  
Integrity Rating - 3 Hr  
Insulation Rating - 1/4 Hr  
Linear Opening Width - 8 In. Max  
Rating At Ambient - Less Than 1 CFM/Lin Ft  
Rating At 400°F - Less Than 1 CFM/Lin Ft



- 1. Floor Assembly** - Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m<sup>3</sup>) structural concrete. Perimeter of floor assembly to be provided with min 3 by 3 by 1/4 in. (76 by 76 by 6 mm) thick cast-in-place structural steel angle for weld-attachment of mullion mounting clips (Item 2A).
- 2. Curtain Wall Assembly** - The curtain wall assembly shall incorporate the following construction features:
  - A. Mullion Mounting Brackets** - Nom 4 in. (102 mm) long angles with one nom 4 in. (102 mm) leg for attachment to edge of floor assembly and with one leg approx 4 in. (102 mm) longer than the distance from the floor edge to the mullion. Clips to be formed of min 1/4 in. (6 mm) thick steel. Clips welded to steel angle at edge of floor assembly (Item 1) on each side of vertical mullion (Item 2B) at each floor level. Top edge of each clip to be recessed min 1/2 in. (13 mm) below top surface of floor.
  - B. Framing** - The rectangular tubing mullions (vertical members) and transoms (horizontal members) shall be min 2-1/2 in. (64 mm) wide by 5 in. (127 mm) deep and shall be formed from min 0.100 in. (2.5 mm) thick aluminum. Mullions spaced max 60 in. (1524 mm) OC and secured to mullion mounting clips (Item 2A) at each floor level with two 3/8-16 by 4 in. (10-16 by 102 mm) long hex head steel bolts in conjunction with steel nuts and washers. Interior face of mullions to be max 8 in. (203 mm) from edge of floor assembly. Transoms to be spaced min 66 in. (1676 mm) OC. The minimum height from the top of the floor to the bottom of the vision panel sill is 33 in. (838mm).
  - C. Spandrel Panels** - The spandrel panels shall consist of one of the following types:
    - a. Glass Panels** - Nom 1/4 in. (6 mm) thick or nom 1 in. (25 mm) thick (double pane) heat-strengthened glass panels. Each panel installed on silicone rubber setting blocks and secured in position with aluminum pressure plates in conjunction with glazing gaskets and steel screws.
    - b. Aluminum Panels** - Nom 1/8 in. (3.2 mm) thick aluminum panels with 1/4 in. (6 mm) thick edges. Each panel installed on silicone rubber setting blocks and secured in position with aluminum pressure plates in conjunction with glazing gaskets and steel screws.
    - c. Stone Panels** - Nom 1-3/16 in. (30 mm) thick polished granite panels with 1 in. (25 mm) thick edges. Each panel installed on silicone rubber setting blocks and secured in position with aluminum pressure plates in conjunction with glazing gaskets and steel screws.



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- D. **Vision Panels** - Nom 1 in. (25 mm) thick insulated glass units with two layers of nom 1/4 in. (6 mm) thick transparent heat-strengthened glass separated by a 1/2 in. (13 mm) air space. Each panel installed on silicone rubber setting blocks and secured in position with aluminum pressure plates in conjunction with glazing gaskets and steel screws.
- E. **Stiffener Tee Attachment Angles** - Nom 1-1/2 by 1-1/2 by 4 in. (38 by 38 by 102 mm) long No. 22 gauge galvanized steel angles. Each angle secured to steel mullion mounting clip (Item 2A) with two No. 10 by min 1/2 in. (13 mm) long self-tapping steel screws. Angle recessed from interior face of framing as necessary to accommodate the thickness of curtain wall insulation (Item 2H).
- F. **Stiffener Tee** - Two nom 1-1/2 by 1-1/2 in. (38 by 38 mm) No. 22 gauge galv steel angles secured together, back-to-back, to form stiffener tee for installation between mullions at each floor level to restrain curtain wall insulation (Item 2H) against outward movement when forming material (Item 3A) is installed. The angle legs forming the stem of the tee shall be secured together using No. 8 by 1/2 in. (13 mm) long self-drilling, self-tapping steel screws spaced max 8 in. (203 mm) OC. The tee shall be installed with a clearance of 1/8 to 1/4 in. (3.3 to 6 mm) at each end and shall be screw-attached to the stiffener tee attachment angles (Item 2E) with No. 10 by min 1/2 in. (13 mm) long self-drilling, self-tapping steel screws, with steel washers, through two predrilled 1/4 in. (6 mm) diam holes at each end. Each stiffener tee shall be located with its stem at an elevation 3 in. (76 mm) below the top plane of the floor.
- G. **Insulation Hangers** - Min 4-1/2 in. (114 mm) long No. 12 gauge steel pins swaged to nom 2 by 2 by 2 in. (51 by 51 by 51 mm) long No. 28 gauge galvanized steel angles. Insulation hangers screw-attached to mullions and transoms with two No. 10 by min 1/2 in. (13 mm) long self-drilling, self-tapping steel screws per hanger. Insulation hangers to be located in each corner of spandrel panel and spaced max 12 in. (305 mm) OC along sides and top of each spandrel panel. No insulation hangers to be used on the transom at the head (lintel) of a vision panel.
- H. **Curtain Wall Insulation\*** - Min 2 in. (51 mm) thick mineral wool batt insulation faced on one side with aluminum foil/scrim vapor retarder, supplied in min 36 in. (914 mm) wide batts. Insulation batts to be installed with no vertical seams and with horizontal seams spaced min 36 in. (914 mm) OC. Insulation panels tightly-fitted between vertical mullions and between the stem of the stiffener tee (Item 2F) and the transom, flush with the interior surface of framing. Insulation panels impaled on steel pins (Item 2G) and secured in place with nom 1-1/2 in. (38 mm) diam steel self-locking washers ("clinch shields"). The horizontal seam between insulation panels shall be located 3 in. (76 mm) below the top plane of the floor at each floor level.

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- I. **Framing Covers - Curtain Wall Insulation\*** - Min 1 in. (25 mm) thick mineral wool batt insulation faced on one side with aluminum foil/scrim vapor retarder, supplied in min 24 by 48 in. (610 by 1219 mm) boards. Nom 8 in. (203 mm) wide strips to be centered over mullions and impaled on the same pins (Item 2G) and secured in place with nom 1-1/2 in. (38 mm) diam steel self-locking washers ("clinch shields"). Where more than one spandrel panel occurs between vertically separated vision panels, the horizontal transom between spandrel panels shall also be covered with an 8 in. (203 mm) wide framing cover in the same manner as on the vertical mullions. Framing covers on mullions to abut the mineral wool batt safining material (Item 3A) above and below floor.

**ROCKWOOL MALAYSIA SDN BHD** - CurtainRock 80

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3. **Safing System** - The safining system shall incorporate the following construction features:

- A. **Forming Material\*** - Nom 4 pcf (64 kg/m<sup>3</sup>) density mineral wool batt insulation. Batt sections cut to a min 4-1/2 in. (114 mm) width and stacked to a thickness, which is min 25 percent greater than the width of linear gap between the curtain wall insulation and the edge of the concrete floor slab to attain a min 20 percent compression in the thickness direction. The forming material is compressed and inserted cut-edge-first into linear gap such that its top surface is flush with the top surface of the floor assembly. A max of one tightly-butted seam is permitted between mullions. Additional pieces of forming material to be friction-fit into spaces between mullion mounting clips at each mullion location.

**ROCKWOOL MALAYSIA SDN BHD** - SAFE

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- B. **Fill, Void or Cavity Material\*** - Min 1/8 in. (3.2 mm) wet thickness (min 1/16 in. (1.6 mm) dry thickness) of fill material spray-applied over top of forming material and lapping min 1/2 in. (13 mm) onto the top surface of the floor and onto the curtain wall insulation and framing covers. When SpecSeal Fast Tack Spray is used, wet and dry thickness of spray is min 5/64 in. (2 mm).

**SPECIFIED TECHNOLOGIES INC** - SpecSeal AS200 Elastomeric Spray or SpecSeal Fast Tack Spray

\* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.



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