

**Design Number TRC/BP 120-04**  
**PERIMETER FIRE BARRIERS**

Rectorseal Corporation  
Biostop 750, Biostop 800, FlameSafe FS 3000, FlameSafe FS 4000, Metacaulk 1200 Spray, and  
Metacaulk 1500 Spray

**ASTM E 2307**

T-Rating- 1-3/4 hr

F-Rating-2 hr

**ASTM E 2307/ASTM E 1399 Cycling**

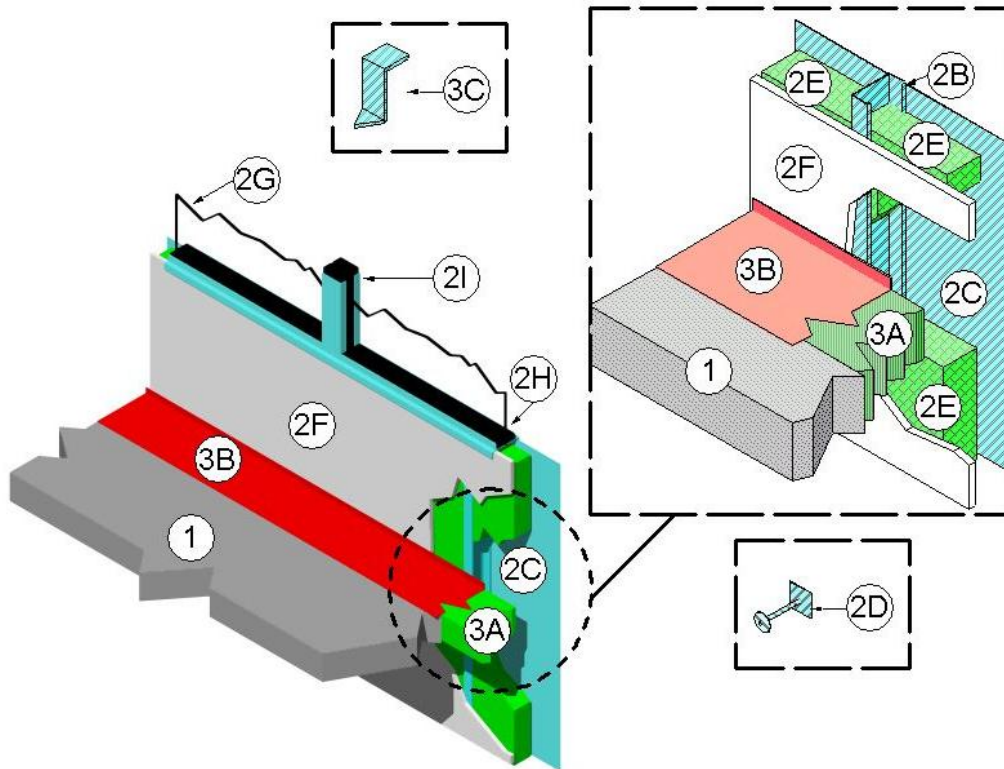
Class IV: 500 cycles @ 30 cpm

± 15% horizontal movement

± 6.25% vertical shear movement

**UL 2079**

L-Rating- <1.0 SCFM/LF



1. **CONCRETE FLOOR ASSEMBLY:** Two-hour rated concrete floor assembly made from either lightweight or normal weight concrete with a density of 100 to 150 pcf, having a min. thickness of 4-1/2 in. at the joint face. When a longitudinal recess (blockout) is required to contain an architectural joint system, increase concrete floor assembly thickness to

maintain a min. thickness of 4-1/2 in. and accommodate depth of blockout formed in the concrete: blockout width unrestricted.

2. **CURTAIN WALL ASSEMBLY:** Incorporate the following construction features:
  - A. **Mounting Attachment:** (Not shown) Attach steel stud framing (Item 2B)

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- to the structural framing according to the curtain wall manufacturer's instructions. When required, connect the mounting attachments to the joint face of the concrete floor assembly (Item 1) according to the curtain wall manufacturer's instructions. Limit distance between mounting attachments to max. 48 in..
- B. **Steel Stud Framing:** Use min. 3-5/8 in. by 1-5/8 in., 18 GA, C-shaped steel studs as vertical framing. Attach according to the curtain wall system manufacturer's guidelines. Limit distance between steel stud framing to max. 48 in.. When required, install horizontal framing members according to the curtain wall system manufacturer's guidelines.
- C. **Steel Panels:** Install min. 20 GA steel panels with max. dimensions of 48 in. by 144 in. to steel stud framing (Item 2B) according to the curtain wall system manufacturer's guidelines.
- D. **Impaling Pins:** (Optional) Use, locate, size, and install impaling pins according to the curtain wall system manufacturer's guidelines.
- E. **Curtain Wall Insulation:** (Optional) When used, install either mineral wool or fiberglass batt curtain wall insulation before the perimeter joint protection (Item 3). Attach curtain wall insulation to steel stud framing (Item 2B) by friction fit or mechanical fasteners.
- F. **Interior Curtain Wall Surface:** Continuously cover interior face of steel stud framing (Item 2B) with one layer of 5/8 in. thick, Type X gypsum board. Fasten gypsum board to steel stud framing (Item 2B) using min. #6 1-1/8 in. long bugle-head phillips drywall screws spaced nominally 12 in. on center (oc). **Joint Tape and Compound –** Apply vinyl or casein, dry or premixed joint compound to exposed face of gypsum board in two coats to all exposed screw heads and gypsum board joints. Embed minimum 2 in. wide paper, plastic, or fiberglass tape in first layer of premixed joint compound over joints in gypsum board. Create min. 3-5/8 in. deep wall cavity between unexposed face of gypsum board to unexposed face of steel panel (Item 2C).
- G. **Glass Vision Panels:** (Optional) When used, locate glass vision panels above spandrel area and a min. 6 in. above the top surface of the concrete floor assembly (Item 1). Install glass vision panels into window framing (Item 2I) according to manufacturer's guidelines. Use a min. 1/4 in. thick, clear tempered glass with a max. 56-1/2 in. width and max. 69 in. height.
- H. **Window Gaskets:** When glass vision panels (Item 2G) used, use a thermal break (thermal-set rubber extrusion) to secure glass vision panels (Item 2G).
- I. **Window Framing:** When glass vision panels used, use steel framing members a min. 3-5/8 in. by 1-5/8 in., 18 GA steel, U-shaped channel or similar construction compatible with steel stud framing (Item 2B). Locate window framing at least 6 inches above the top surface of the concrete floor assembly (Item 1).
3. **PERIMETER JOINT PROTECTION:** Do not exceed an 8 in. nominal joint width (joint width at installation). Incorporate the following construction features for the perimeter joint protection (also known as perimeter fire barrier system):
- A. **Packing Material:** Use a min. 4 in. thick, 4-pcf density, mineral wool batt insulation installed with the fibers running parallel to the edge of concrete floor assembly (Item 1) and curtain wall assembly (Item 2). Cut packing material width to achieve 50% compression when installed in the nominal joint width. Compress the packing material into the perimeter joint. Tightly compress together splices (butt joints) in the lengths of packing material by using min. 1/4 in. compression per piece of packing material. Use only Intertek certified products meeting the above min. requirements. When a spray coating is used, locate the top surface of the packing material flush with the top surface of the

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concrete floor assembly (Item 1).  
When the non-sag or self leveling  
silicone sealant is used, recess the  
top surface of the packing material  
1/4 in. from the top surface of the  
concrete floor assembly (Item 1).

in.wide by 3 in. high with a 2 in.  
upper leg and a 3 in. lower leg.

- B. CERTIFIED MANUFACTURER:  
Rectorseal Corporation

CERTIFIED PRODUCT: Biostop,  
FlameSafe, Metacaulk

MODEL: Biostop 750, Biostop 800,  
FlameSafe FS 3000, FlameSafe FS  
4000, Metacaulk 1200 Spray, or  
Metacaulk 1500 Spray

Fill, Void or Cavity Material: Apply  
either spray coating or sealant over  
the packing material (Item 3A) as  
follows:

Spray Coating – Spray apply the  
liquid to cover the exposed top  
surface of the packing material  
(Item 3A) compressed and installed  
in the perimeter joint. Apply a min.  
wet film thickness of 1/8 inch and  
overlap the spray coating a min. 1/2  
inch onto the adjacent curtain wall  
assembly (Item 2) and concrete  
floor assembly (Item 1). When the  
spraying process is stopped and the  
applied spray coating cures to an  
elastomeric film before installation  
process is restarted, then overlap  
the edge of the cured spray coating  
at least 1/8 in. with the liquid spray  
coating.

Sealant – Apply non-sag or self  
leveling sealant to cover the  
exposed surface of the packing  
material (Item 3A) compressed and  
installed in the perimeter joint. Apply  
min. 1/4 in. thickness non-sag or  
self leveling sealant over the  
packing material (Item 3A) and  
finish flush with the top surface of  
the concrete floor assembly (Item  
1).

- C. Support Clips: (Optional)  
Recommended for installations  
subject to vertical shear movement.  
Use standard 20 GA galvanized  
steel Z-shaped clips having the  
following nominal dimensions: 1