Kingspan Insulated Panels, Inc.
Design No. KIP/MRP 90-01
Ceiling Assembly
K-ROC Fire Rated Panels
ASTM E119 and CAN/ULC-S101
Rating: 1-1/2 Hour
Superimposed Load: None

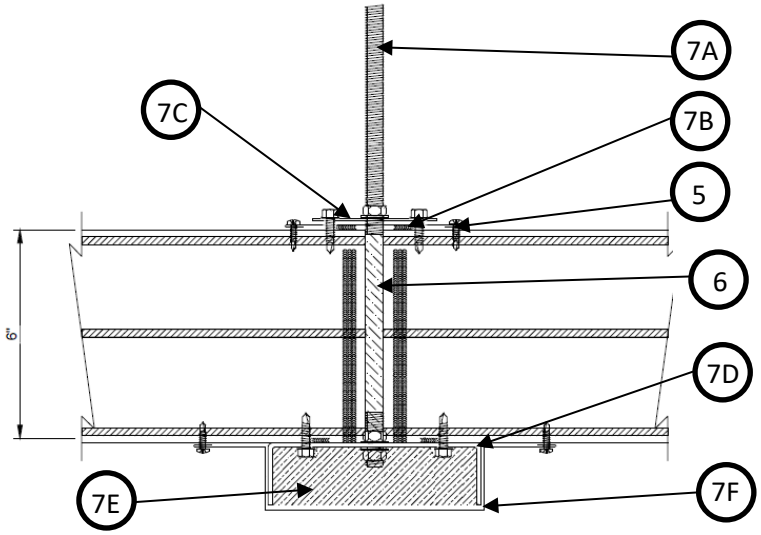


Figure 1: Butt Joint W/Hanger

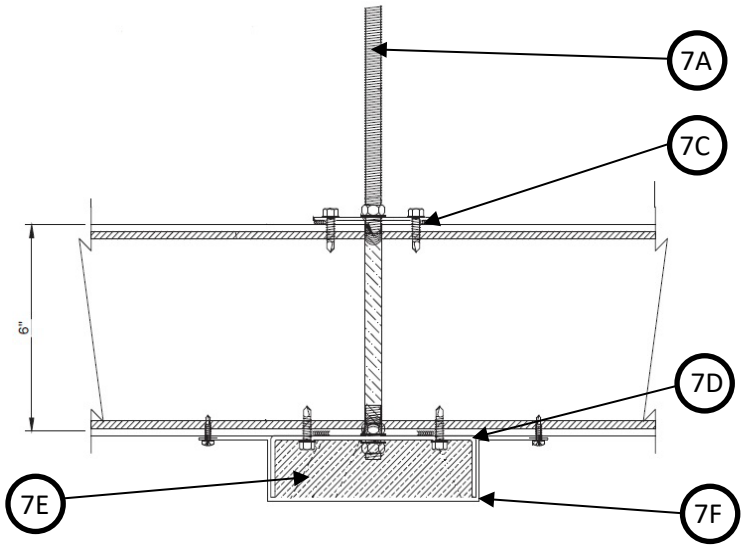


Figure 2: Mid-Panel W/Hanger

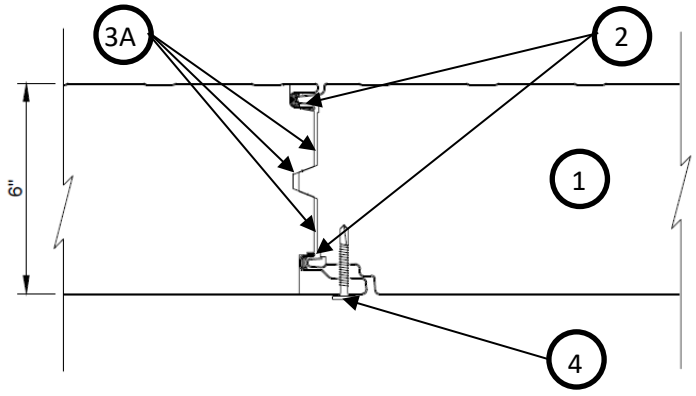


Figure 3: SAFire Intumescent Interlocking panel Joint

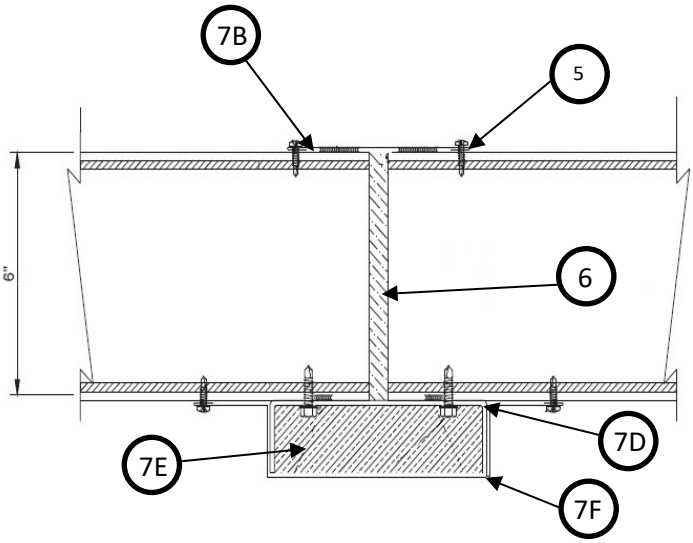


Figure 4: Butt Joint W/No Hanger

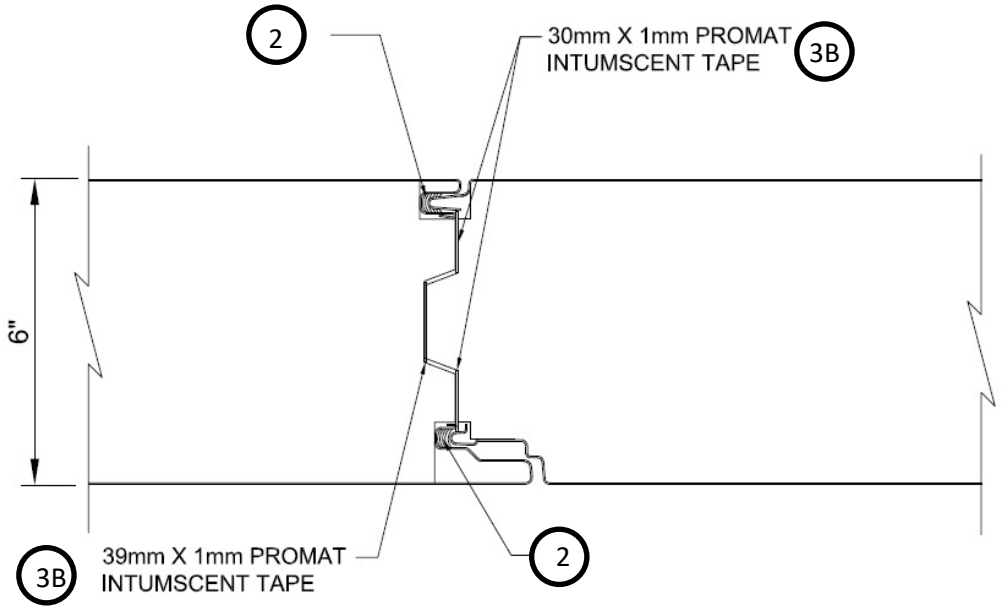


Figure 5: Promat Tape Interlocking Joint Promat Tape

1. **INSULATED METAL PANEL:**

   CERTIFIED PRODUCT: Kingspan Insulated Panels, Inc., K-ROC Fire Rated Insulated Metal Panels

   Install nominal 6 in. thick x 42 in. wide Kingspan K-ROC Panels w/min. 24/26 GA (ext./int) steel skins, horizontally using the mounting attachments (Item7). The Max. span between butt joints is 12 ft. Refer to **Figures 1 and 4** for butt joints, and **Figures 3 and 5** for interlocking joints.

2. **SEALANT:** Apply a bead of non-skinning butyl sealant at the top and bottom joints of the interlocking edges of the insulated metal panels.

3. **INTUMESCENT:** Use one of the options listed below.
   A. Option 1: Refer to **Figure 3**. Apply three 20 mm beads of Kingspan's Safire Intumescent Mastic in the interlocking joints of the mineral wool core.
   B. Option 2: Refer to **Figure 5**. Use Promat Promaseal®-LW intumescent tape with specified widths and locations.

4. **INTERLOCKING JOINT PANEL SCREWS**: Install No. 14-13 × 1-1/2 in. long, pancake-head screws to the underside (exposed side) of the panels. Space screws 24 in. on center (oc) along the length of the interlocking joints of the insulated metal panels.

5. **BUTT JOINT PANEL SCREWS**: Install No. 10 × 3/4 in. long, hex-head screws spaced at 12 in. oc at the end of the panels at the butt joints on the top (unexposed) surface of the panel joints.

6. **BUTT JOINT PACKING MATERIAL:** Install 1/2 in. thick × 6 in. wide nominal 8.5 pcf density strips of Roxul mineral wool at the end (butt) joints of the panels prior to securing cover trim.

7. **MOUNTING ATTACHMENTS:** Use the following items to secure the insulated metal panels:

   A. THREADED ROD – Install 3/8 in. diameter threaded rod and secure to structural member (not shown), spaced a max. of 42 in. oc. Secure threaded rod to mounting attachments using 3/8 in. nuts. The max. hole diameter for the rod installation shall be 1/8 in. greater than the rod diameter. Threaded rod shall be installed between the panel butt joint as shown in **Figure 1**. Alternatively, the rod can be installed through the middle of the panel, as shown in **Figure 2**. For installation at mid-span locations, apply 3M Fire Barrier CP 25WB+ sealant at the penetration points at the top and bottom of the panels. Maintain a max. of 5ft. oc ceiling channel spacing.

   B. BUTT JOINT COVER TRIM – After insulated metal panel butt joints are compressed against packing material, install 4 in. wide, 26 GA cover trim piece spanning the unexposed surface butt joint.

   C. SQUARE CEILING PLATES – Install 12 GA galvanized steel, 4 in. square ceiling plates through the threaded rod. Secure ceiling plate and cover trim using 1/4-14 x1 in. long hex-head Stitch Tek fasteners. For installation at mid-span locations, apply a continuous bead of Kingspan's non-skinning butyl sealant on the underside of the ceiling plate along its perimeter. Install four fasteners at each ceiling plate. Secure ceiling channel cover trim using #10x3/4" tek screws spaced 12 in. oc along the length of the cover trim, one fastener on each side of the butt joint through the insulated metal panels.

D. CEILING CHANNEL – Install 12 GA galvanized steel ceiling channel to the underside of the insulated metal panel butt joint and in line with mounting attachment threaded rod locations. Apply two continuous beads of Kingspan's non-skinning butyl sealant on the topside of the ceiling channel to set panel edges onto. Secure using 1/4"-14x1 in. long hex-head fasteners spaced 12 in. oc.

E. CHANNEL PACKING MATERIAL – Install 1-1/2 in. × 6 in. wide strips of 8 pcf density mineral wool on the underside of the ceiling channel prior to installing the butt joint trim.

F. CEILING CHANNEL COVER TRIM – After installing the channel packing material, install 26 GA butt joint trim pieces over the channel packing material and ceiling channel (Item 7C). Overlap joints min. 3 in. and secure using #10x3/4 in. long hex-head Stitch Tek fasteners spaced 12 in. oc.

Consult the listing report on the Directory of Building Products (https://bpdirectory.intertek.com) for the edition of the standard(s) evaluated.

Compliance of the assembly described in this Design Listing with the referenced standard relies on verification that the assembly constructed in the field is consistent with that described herein. Intertek certified products may be verified by the approved Intertek label; other products must be verified by the Authority Having Jurisdiction as meeting the specifications stated herein.