

ARCHITECTURE

SECTION 07842

FIRE-RESISTIVE JOINT SYSTEMS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes fire-resistive joint systems for the following:
 - 1. Floor-to-floor joints.
 - 2. Floor-to-wall joints.
 - 3. Head-of-wall joints.
 - 4. Wall-to-wall joints.
 - 5. Joints between perimeter edge of fire-resistance-rated floor assemblies and back of non-fire-resistance-rated, exterior, glazed aluminum curtain walls.
- B. Coordinate work of this Section with Section 05811, Architectural Joint Systems.

1.2 PERFORMANCE REQUIREMENTS

- A. General: For joints in the following constructions, provide fire-resistive joint systems that are produced and installed to resist spread of fire according to requirements indicated, resist passage of smoke and other gases, and maintain original fire-resistance rating of assembly in which fire-resistive joint systems are installed.
 - 1. Fire-resistance-rated load-bearing walls, including partitions, with fire-protection-rated openings.
 - 2. Fire-resistance-rated non-load-bearing walls, including partitions, with fire-protection-rated openings.
 - 3. Fire-resistance-rated floor assemblies.
 - 4. Exterior curtain-wall assemblies and fire-resistance-rated floor assemblies.
- B. Fire Resistance of Joint Systems: Assembly ratings and movement capabilities indicated, but with assembly ratings not less than that equaling or exceeding fire-resistance rating of constructions in which joints are located, as determined by UL 2079.
 - 1. Load-bearing capabilities as determined by evaluation during the time test.
- C. Fire Resistance of Perimeter Fire-Containment Systems: Integrity and insulation ratings indicated as determined by UBC Standard 26-9 and UL 2079.

1.3 SUBMITTALS

- A. Product Data: For each product indicated.
- B. Shop Drawings: For each fire-resistive joint system.
- C. Fill materials compatibility and adhesion test reports.
- D. Evaluation Reports: Evidence of fire-resistive joint systems' compliance with ICBO ES AC30, from the ICBO Evaluation Service.

1.4 QUALITY ASSURANCE

- A. Fill Materials Compatibility and Adhesion Testing: Use fire-resistive joint system manufacturer's standard test methods to determine whether priming or other specific joint preparation techniques are required to obtain rapid, optimum adhesion of fill materials to joint substrates.

ARCHITECTURE

- B. Fire-Test-Response Characteristics: Provide fire-resistive joint systems that comply with "Performance Requirements" Article, are identical to those tested by UL or another qualified testing and inspecting agency acceptable to authorities having jurisdiction, and the following:
1. Fire-resistive joint systems are tested per UL 2079 and ICBO ES AC30 and are qualified for joint movement capabilities indicated in a current ICBO Evaluation Report by the ICBO Evaluation Service.
 2. Perimeter fire-containment systems are identical to those tested per both UBC Standard 26-9 and UL 2079.

1.5 COORDINATION

- A. Do not cover up fire-resistive joint system installations that will become concealed behind other construction until Owner's inspecting agency and building inspector, if required by authorities having jurisdiction, have examined each installation.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. In other Part 2 articles where subparagraph titles below introduce lists, the following requirements apply for product selection:
1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the products specified.
 - a. Fire-Resistive Joint Systems:
 - 1) A/D Fire Protection Systems Inc.
 - 2) DAP Inc.
 - 3) Firestop Systems Inc.
 - 4) Hilti, Inc.
 - 5) International Protective Coatings Corp.
 - 6) ISOLATEK International.
 - 7) Nelson Firestop Products.
 - 8) NUCO Industries.
 - 9) RectorSeal Corporation (The).
 - 10) Specified Technologies Inc.
 - 11) 3M Fire Protection Products.
 - 12) Tremco, Inc.
 - 13) United States Gypsum Company.
 - b. Perimeter Fire-Containment Systems:
 - 1) Specified Technologies Inc.
 - 2) United States Gypsum Company.

2.2 FIRE-RESISTIVE JOINT SYSTEMS, GENERAL

- A. Compatibility: Provide fire-resistive joint systems that are compatible with joint substrates, under conditions of service and application, as demonstrated by fire-resistive joint system manufacturer based on testing and field experience.
- B. Accessories: Provide components of fire-resistive joint system, including forming materials that are needed to install fill materials and to comply with Part 1 "Performance Requirements" Article. Use only components specified by fire-resistive joint system manufacturer and approved by the qualified testing and inspecting agency for systems indicated.

2.3 FIRE-RESISTIVE JOINT SYSTEMS

ARCHITECTURE

- A. Where UL-classified fire-resistive joint systems are indicated, they refer to alphanumeric designations listed in UL's "Fire Resistance Directory" under product Category XHBN.

(XHBN) is a UL designation for a joint system/specific construction consisting of adjacent wall and/or floor/ceiling assemblies and the materials designated to prevent the spread of fire through the linear opening at the intersection of the two systems. The materials and installation requirements to achieve the established ratings are contained in the Fire resistance Directory – Volume 2 published by Underwriters Laboratories Inc.

The systems are numbered in an alpha-numeric identification system generally as follows:

Alpha=type of joint		numeric=nominal width of joint	
FF	Floor to Floor	0000-0999	Joints less than 2 inch
WW	Wall to Wall	1000-1999	Joints 2 inch to 6 inch
FW	Floor to Wall	2000-2999	Joints 6 inch to 12 inch
HW	Head of Wall	3000-3999	Joints 12 inch to 24 inch
CG	Wall to Wall joints	4000-4999	Joints greater than 24 inch

S = Joints with no movement and D = joints with movement.

In some locations the drawings and specifications list systems which have been used to establish the criteria for the joint system. These numbers are proprietary manufacturer's materials. Provide System details and copy of UL System for approval.

- B. Floor-to-Floor, Fire-Resistive Joint System FRJS-<#>:
FF-D-1012 using Hilti CP601 Elastomeric Firestop Sealant.
- C. Floor-to-Wall, Fire-Resistive Joint System FRJS-<#>:
FW-D-1011 using Hilti CP601 Elastomeric Firestop Sealant.
- D. Head-of-Wall, Fire-Resistive Joint System FRJS-<#>:
HW-D-0010 using Hilti CP672 firestop Spray products.
- E. Wall-To-Wall, Fire-Resistive Joint System FRJS-<#>:
WW-D 1011 using Hilti CP 606 Flexible Firestop Sealant.

2.4 PERIMETER FIRE-CONTAINMENT SYSTEMS

- A. Where UL-classified perimeter fire-containment systems are indicated, they refer to alphanumeric designations listed in UL's "Fire Resistance Directory" under product Category XHDG.
- B. Perimeter Fire-Containment System PFCS-<#>:
CW-S-1001 Thermafiber firesafing closure within sheetrock assembly.

2.5 THROUGH-PENETRATION FIRESTOP SYSTEMS:: REFER TO SECTION 07840.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install fire-resistive joint systems to comply with Part 1 "Performance Requirements" Article and fire-resistive joint system manufacturer's written installation instructions for products and applications indicated.

3.2 FIELD QUALITY CONTROL

- A. Inspecting Agency: Contractor will engage a qualified independent inspecting agency to inspect fire-resistive joint systems and to prepare inspection reports.

ARCHITECTURE

1. Inspecting agency will state in each report whether inspected fire-resistive joint systems comply with or deviate from requirements.
- B. Proceed with enclosing fire-resistive joint systems with other construction only after inspection reports are issued and inspecting agency has approved installed fire-resistive joint systems.
- C. If deficiencies are found, repair or replace fire-resistive joint systems so they comply with requirements.

END OF SECTION 07842