SECTION 06 48 00

FIRE RATED COMPOSITE DOOR FRAMES

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\*\* NOTE TO SPECIFIER \*\* Warm Springs Composite Products; fire rated composite door frame products.
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This section is based on the products of Warm Springs Composite Products, which is located at:
3270 US Highway 26 Unit 8
Warm Springs, OR 97761
Toll Free Tel: 800-853-1143
Tel: 541-553-1143
Fax: 541-553-1145
Email: [request info (mellsbury@wscp.com)](http://admin.arcat.com/users.pl?action=UserEmail&company=Warm+Springs+Composite+Products&coid=47287&rep=&fax=541-553-1145&message=RE:%20Spec%20Question%20(06460wsc):%20%20&mf=)
Web: [www.wscp.com](http://www.wscp.com)
 [ [Click Here](http://www.arcat.com/arcatcos/cos47/arc47287.html) ] for additional information.
Warm Springs Composite Products patented FRX series of fire-rated composite or wood door frames allow architects and contractors to comply with the strictest of fire ratings without compromising the aesthetic appeal of natural wood finishes. The frame's unique design allows it to achieve required fire ratings with both neutral and positive pressure testing. WSCP frames meet U.S. standards for 20, 45, 60, and 90-minute fire ratings with certification provided by Intertek Testing Service, UBC 7-2 (1997)/UL 10(c) (1998). WSCP also holds certifications to meet British Standard 476, part 22, up to 120 minutes and BS EN 1634-1; 2014 up to 3 hours.
WSCP fire-rated frames are sold through a network of remanufacturing companies that have been certified by Intertek Testing Systems and approved by Warm Springs Composites Products to use WSCP's rated constructions to properly machine and finish the frames. Fire-rated frames are available in an unlimited assortment of hardwood and softwood veneers, as well as paint grade and high pressure laminates to match the doors, wood casings, and trim throughout the interior space. The frames are available as single or double rabbet, for single or paired openings, as well as communicator frames. Moisture resistant substrate is available on request.
WSCP's frame design incorporates intumescent material concealed in the frame itself, thereby eliminating the need for intumescent in the doors. This results in significant cost savings without compromising the ability for the opening to achieve the necessary fire-rating. An available patented adjustable clip system allows for simple and quick installation, saving the contractor both time and money. The frames can be installed using traditional methods as well.
WSCP frames are certified under ITS approvals to achieve positive or neutral pressure 20, 45, 60, and 90 minute ratings in openings up to 96 inches by 96 inches with wall thickness of 4.5 inches or greater. Call WSCO for details on British Standards.

1. GENERAL
	1. SECTION INCLUDES

\*\* NOTE TO SPECIFIER \*\* Delete items below not required for project.

* + 1. Interior fire rated composite door frames.
	1. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. Section 05 40 00 - Cold-Formed Metal Framing.
		2. Section 06 10 00 - Rough Carpentry.
		3. Section 06 20 00 - Finish Carpentry.
		4. Section 06 40 00 - Architectural Woodwork.
		5. Section 07 21 26 - Blown Insulation.
		6. Section 07 90 00 - Joint Protection.
		7. Section 08 14 23.16 - Plastic-Laminate-Faced Wood Doors.
		8. Section 08 16 00 - Composite Doors
		9. Section 08 71 53 - Security Door Hardware.
		10. Section 09 25 23 - Lime Based Plastering.
		11. Section 09 90 00 - Painting and Coating.
	1. REFERENCES

\*\* NOTE TO SPECIFIER \*\* Delete references from the list below that are not actually required by the text of the edited section.

* + 1. ANSI/NFPA 252 - Standard Methods of Fire Tests of Door Assemblies.
		2. ANSI/UL 9 - Fire Tests of Window Assemblies.
		3. ANSI/UL 10C - Positive Pressure Fire Tests of Door Assemblies.
		4. ANSI/UL 1784 - Air Leakage Tests of Door Assemblies
		5. UBC 7-2 (1997) - Positive Pressure Testing.
		6. WH - Certification Listings; Warnock Hersey International Inc.
		7. NFPA 80 - Standard for Fire Doors and Other Opening Protectives.
		8. NFPA 105 - Standard For The Installation Of Smoke Door Assemblies And Other Opening Protectives.
		9. DHI-WDHS-3 - Recommended Hardware Locations for Wood Flush Doors.
		10. DHI A115-W - Wood Door Hardware preparation.
		11. Architectural Woodwork Institute (AWI) - Quality Standards Illustrated (QSI).
		12. Woodwork Institute (WI) - Manual of Millwork (MM).
		13. Window and Door Manufacturers Association (WDMA).
	1. DESIGN / PERFORMANCE REQUIREMENTS

\*\* NOTE TO SPECIFIER \*\* Warm Springs Composite Products patented FRX series of fire-rated composite or wood door frames achieve fire ratings with both neutral and positive pressure testing. WSCP frames meet U.S. standards for 20, 45, 60 and 90 minute fire ratings with certification provided by Intertek Testing Service. Products are also certified to meet British Standard 476, part 22, up to 120 minutes.

* + 1. Fire-Rated Door Assemblies: Assemblies complying with UBC 7-2 (1997)/UL 10(c) (1998) that are listed and labeled by Intertek Testing Service, for fire-protection ratings indicated, based on testing at both neutral and positive pressure.
		2. Smoke-Control Door Assemblies: Comply with NFPA 105 or UL 1784.
	1. SUBMITTALS
		1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
		2. Product Data: Manufacturer's data sheets on each product to be used, including:
			1. Component materials, dimensions, profiles.
			2. Preparation instructions and recommendations.
			3. Storage and handling requirements and recommendations.
			4. Installation methods.
		3. Shop Drawings: installation details
			1. Show all openings in the door schedule and/or the Drawings.
			2. Provide details of door frame types and details, anchor types and spacing requirements.
			3. Provide door frame schedule, and hardware requirements.

\*\* NOTE TO SPECIFIER \*\* Edit the following paragraphs as required. Delete if LEED is not applicable.

* + 1. LEED Submittals: Provide documentation of how the requirements of Credit will be met:
			1. Product Data for Credit IEQ 4.1: For adhesives and glues used at Project site, documentation including printed statement of VOC content.
			2. Product Data for Credit IEQ 4.4: For composite wood products, documentation indicating that product contains no urea formaldehyde.
			3. Laboratory Test Reports for Credit IEQ 4 (Schools): For adhesives and composite wood products, documentation indicating that products comply with testing and product requirements of California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
			4. Product Certificates for Credit MR 5: For products and materials required to comply with requirements for regional materials, certificates indicating location of material manufacturer and point of extraction, harvest, or recovery for each raw material. Include statement indicating distance to Project, cost for each regional material, and fraction by weight that is considered regional.
		2. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square, representing actual product, color, and finishes.
		3. Manufacturer's Certificates: Certify products meet or exceed specified requirements including:
			1. Evaluation reports and WHI certification by Intertek.
		4. Closeout Submittals: Provide manufacturer's maintenance instructions.
	1. QUALITY ASSURANCE
		1. Manufacturer Qualifications: Company specializing in manufacturing products specified with ten years of documented experience.
		2. Fabricator/Approved OEM Qualifications: Company specializing in performing Work of this section with minimum five years documented experience and a Pre-Approved Warm Springs Composite Products, OEM.
		3. Source Limitations: Obtain fire-rated wood frames from single manufacturer.
	2. DELIVERY, STORAGE, AND HANDLING
		1. Deliver and store products in fabricator's unopened packaging until ready for installation.
		2. Do not deliver or install wood frame materials until building is enclosed and weatherproof, wet work in space is completed and nominally dry, and HVAC system is operating and maintaining temperature and relative humidity at occupancy levels during remainder of construction period.
	3. SEQUENCING
		1. Ensure that schedules, hardware templates and other information required for preparation and installation of products of this section are furnished in time to prevent interruption of construction progress.
	4. PROJECT CONDITIONS
		1. Field Measurements: Verify rough openings by field measurements before fabrication and indicate measurements on Shop Drawings.
		2. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.
1. PRODUCTS
	1. MANUFACTURERS
		1. Acceptable Manufacturer: Warm Springs Composite Products, which is located at: 3270 US Highway 26 Unit 8; Warm Springs, OR 97761; Toll Free Tel: 800-853-1143; Tel: 541-553-1143; Fax: 541-553-1145; Email: [request info (mellsbury@wscp.com)](http://admin.arcat.com/users.pl?action=UserEmail&company=Warm+Springs+Composite+Products&coid=47287&rep=&fax=541-553-1145&message=RE:%20Spec%20Question%20(06460wsc):%20%20&mf=); Web: [www.wscp.com](http://www.wscp.com)

\*\* NOTE TO SPECIFIER \*\* Warm Springs Composites are sold only to approved OEMs who are ITS certified and approved by Warm Springs to do the machining, finishing and labeling of fire rated composite door frames. A list of approved OEMs is available at [www.wscp.com/USA\_Reps.htm](http://www.wscp.com/USA_Reps.htm) and [www.wscp.com/Intl\_Reps.htm](http://www.wscp.com/Intl_Reps.htm) . List the OEMs below as required for your region.

* + - 1. Manufacturer Approved OEMs:
				1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
				2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
				3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
				4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
		2. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

\*\* NOTE TO SPECIFIER \*\* Edit the following General paragraphs as required and applicable to project requirements. Delete the paragraphs that are not applicable. Indicate opening locations, sizes, frame type, ratings and other requirements on the Drawings or on the Schedule at the end of this Section.

* 1. FIRE-RATED INTERIOR DOOR FRAMES
		1. General: Provide door frames, frame anchors, and hardware preparation for each of rating level to meet the requirements of the performance ratings specified.
		2. Interior Door Frames: Frames comply with UBC 7-2 (1997) / UL 10(c) (1998) / UBC 7-2 (1997) for 20, 45, 60 and 90 minute fire ratings with certification provided by Intertek Testing Service and labeled by testing and inspecting agency acceptable to authorities having jurisdiction. Frames are also certified to meet British Standard 476, part 22, up to 120 minutes.
			1. Size Limitation:
				1. Single Swing 20-60 minute rating: Positive or Neutral Pressure.

Material: MDF Frame Leg and Head Construction, Minimum Density 50 pcf.

Maximum Opening Width 4 feet 0 inches.

Maximum Opening Height 8 feet 0 inches.

Minimum Frame Leg/Head Thickness 3/4 inch.

Minimum Frame Leg/Head Width 4-1/2 inches

Maximum Frame Leg/Head Width Equivalent to wall thickness

* + - * 1. Single Swing 90 minute rating: Positive or Neutral Pressure.

Material: Tectonite Frame Leg and Head Construction, Minimum Density 61 pcf.

Maximum Opening Width 4 feet 0 inches.

Maximum Opening Height 8 feet 0 inches.

Minimum Frame Leg/Head Thickness 3/4 inches.

Minimum Frame Leg/Head Width 4-1/2 inches.

Maximum Frame Leg/Head Width Equivalent to wall thickness.

* + - * 1. Pairs 45-60-90 minute rating: Positive or Neutral Pressure.

Material: Tectonite Frame Leg and Head Construction, Minimum Density 61 pcf.

Maximum Opening Width 8 feet 0 inches.

Maximum Opening Height 8 feet 0 inches.

Minimum Frame Leg/Head Thickness 3/4 inch.

Minimum Frame Leg/Head Width 4-1/2 inches.

Minimum Frame Leg/Head Width Equivalent to wall thickness.

* + - 1. Width: Finished frame leg width shall be 1/16 inch wider than the finished wall thickness, but no less than the minimum specified.
			2. Profile:
				1. Single-rabbet frame with stops will be a minimum of 5/8 inch thick and the stop set-back distance will depend on the door width and if the frame will be set up to have a smoke seal installed. Double-rabbet frame stop will be a minimum of 5/8" thick by 1-1/4 inches wide and the stop set-back distance will be determined by the width of the door.
				2. Communicator frame with stops will be a minimum wall width of 5 inches and a stop with the minimum dimensions of 5/8 inch thick by 1.25 inches wide.
			3. Intumescents: Provide as follows:
				1. Hinge and Stop Side of Frame Legs: Recessed and concealed under MDFin face of frame leg.
				2. Frame Legs / Back Side (Including Header): Recessed or surface applied.
				3. Frame Leg / Horizontal Header: Surface applied to each end of horizontal header on frame leg.
				4. Completed Frame / Back Side: Surface applied.
			4. Faces
				1. Frame Legs:

Wood Veneer: Maximum Thickness: 1/16 inch. (20-90 min.)

High Pressure Laminate: Maximum Thickness: 1/16 inch (20-60 min.)

Phenolic impregnated paper applied for standard paint grade frame

* + - * 1. Stops:

Wood Veneer: Maximum Thickness: 1/16 inch. (20-90 min.)

High Pressure Laminate: Maximum Thickness: 1/16 inch (20-60 min.)

Solid Wood: (20- 90 min.)

* + - * 1. Casing:

Wood Veneer:

High Pressure Laminate:

Solid Wood: (20- 90 min.)

\*\* NOTE TO SPECIFIER \*\* A wide range of veneer species are available from several OEM fabricators. Contact the OEM fabricators for availability and insert the veneer required for project. A list of approved OEM's is available at [www.wscp.com/USA\_Reps.htm](http://www.wscp.com/USA_Reps.htm) and [www.wscp.com/Intl\_Reps.htm](http://www.wscp.com/Intl_Reps.htm) .

* + - 1. Face Veneer Species:
				1. \_\_\_\_\_\_\_\_\_\_\_\_\_
		1. Sidelite and Borrowed Lites:
			1. Must fit within the 8/0 by 8/0 maximum pair size limitation for direct connection of heads and legs to each other. Beyond the 8/0 by 8/0 limitation a new fire rated opening must be made by applying either a double stud to each side or a double header to the top of the opening..
			2. Direct glazing of glass to frame stops is not allowed.
			3. Fire rated panels, with or without glass, must have a minimum of 3 inches of non-combustible material between glazing and the edge of the panel being installed in the frame.
			4. Fire rating of any installed panel must be the same or higher than the opening and must be certified to that rating by the fire panel manufacturer and to Warm Springs condition above.

\*\* NOTE TO SPECIFIER \*\* Select one of the following two anchorage systems and delete the one not required.

* + 1. Adjustable Clip Anchorage: WSP Adjustable Clip System installed according the manufacturers printed instructions. Shim installation is permissible following the manufacturers printed instructions.
		2. Fasteners for Interior Finish Carpentry: Nails, screws, and other anchoring devices of type, size, material, and finish required for application indicated to provide secure attachment, concealed where possible.
	1. FABRlCATlON
		1. Factory-machine frames for mortised hardware. Locate hardware to comply with DHI-WDHS-3. Comply with final hardware schedules, shop drawings, DHI A115-W series standards, and hardware templates furnished by door hardware supplier.
			1. Finish faces, all 4 edges, edges of cutouts, and mortises. Stains and fillers may be omitted on bottom edges, edges of cutouts, and mortises. Do not machine for surface applied hardware.
		2. Manufacturer's Label: Do not remove, cover, or paint over label. After completion of machining frame, apply Warnock Hersey (WH) certification label to finished frame with screw-type nails a minimum length of 5/8 inch or with minimum 18 gage staples with 1/4 inch crown and 5/8 inch leg length. If staples are used, Use 2 staples, 1 at each end of label.

\*\* NOTE TO SPECIFIER \*\* Select the following paragraphs for frames requiring smoke or draft gaskets. Delete if not required.

* + 1. Smoke/Draft Gaskets: Machine frames for smoke/draft gaskets by company certified by Warnock Hersey (Intertek Testing).
			1. Gaskets: Pressure-sensitive or kerf type (Category H) attached to machined frame per manufacturer's requirements in order to give frame an "S" label rating.

\*\* NOTE TO SPECIFIER \*\* A wide range of finishes are available from our OEM fabricators. Contact the OEM fabricators for availability and select the finish required for project from the paragraphs below as required. A list of approved OEMs is available at [www.wscp.com/USA\_Reps.htm](http://www.wscp.com/USA_Reps.htm) and [www.wscp.com/Intl\_Reps.htm](http://www.wscp.com/Intl_Reps.htm) .

* 1. FINISH
		1. General: Complete fabrication, including fitting doors for openings and machining for mortised hardware, before finishing.
			1. Finish faces, all 4 edges, edges of cutouts, and mortises. Stains and fillers may be omitted on bottom edges, edges of cutouts, and mortises.
		2. Transparent Finish:
			1. Grade:

\*\* NOTE TO SPECIFIER \*\* Select the finish grade required and delete the one not required. Usually will use the same grade for finish as specified for doors.

* + - * 1. Premium.
				2. Custom.

\*\* NOTE TO SPECIFIER \*\* Select one of three Finish paragraphs below and delete those not required.

* + - 1. Finish: AWI System
				1. Conversion varnish.
				2. Catalyzed polyurethane.
			2. Finish: WDMA System
				1. TR-4 conversion varnish.
				2. TR-6 catalyzed polyurethane.
			3. Finish: WI System
				1. 4 clear conversion varnish.
				2. 5 catalyzed polyurethane.
				3. 8 UV- curable coating.
			4. Staining:

\*\* NOTE TO SPECIFIER \*\* Select one of the three staining options in the following paragraph and delete those not required.

* + - * 1. Match Architect's sample,
				2. As selected by Architect from manufacturer's full range.
				3. None required.
			1. Effect:

\*\* NOTE TO SPECIFIER \*\* Select one of the three options in the following paragraph and delete those not required. Delete if only closed-grain wood species are used.

* + - * 1. Open-grain finish.
				2. Filled finish.
				3. Semifilled finish, produced by applying an additional finish coat to partially fill the wood pores.
			1. Sheen:

\*\* NOTE TO SPECIFIER \*\* Select one of the two options in the following paragraph and delete those not required

* + - * 1. Satin.
				2. Semigloss.
		1. Opaque Finish:
			1. Grade:

\*\* NOTE TO SPECIFIER \*\* Select the finish grade required and delete the one not required. Usually will use the same grade for finish as specified for doors.

* + - * 1. Premium.
				2. Custom.

\*\* NOTE TO SPECIFIER \*\* Select one of three Finish paragraphs below and delete those not required.

* + - 1. Finish: AWI System
				1. Conversion varnish.
				2. Catalyzed polyurethane.
			2. Finish: WDMA System
				1. OP-4 conversion varnish.
				2. OP-6 catalyzed polyurethane.
			3. Finish: WI System
				1. 4 clear conversion varnish.
				2. 5 catalyzed polyurethane.
				3. 8 UV- curable coating.
			4. Color: Selected by Architect from manufacturer's full range.
			5. Sheen:

\*\* NOTE TO SPECIFIER \*\* Select one of the two options in the following paragraph and delete those not required

* + - * 1. Satin.
				2. Semigloss.
		1. Laminate: High-pressure decorative laminates complying with NEMA LD 3.

\*\* NOTE TO SPECIFIER \*\* Select the grade required and delete the one not required.

* + - 1. Grade HGS. Vertical and post formable grade laminates are not acceptable.
			2. Grade VGS. Post formable grade laminates are not acceptable.

 \*\* NOTE TO SPECIFIER \*\* Revise "Colors, Patterns, and Finishes" Subparagraph below to indicate color, pattern, and finish if preselected.

* + - 1. Colors, Patterns, and Finishes: As selected from Wilson Art full range of products.
			2. Colors, Patterns, and Finishes: As selected from Pionite full range of products.
			3. Colors, Patterns, and Finishes: As selected from Nevamar full range of products.
			4. Colors, Patterns, and Finishes: As selected from Laminart full range of products.
			5. Colors, Patterns, and Finishes: As selected from Formica full range of products.
			6. Colors, Patterns, and Finishes: As selected from Abet Laminati full range of products.
1. EXECUTION
	1. EXAMINATION
		1. Verify rough opening sizes are of sufficient size to receive units and comply with manufacturer's requirements for opening clearances and other conditions affecting performance.
		2. Examine door frames and finish carpentry materials before installation. Reject materials that are wet, moisture damaged, and mold damaged.
		3. Do not begin installation until substrates and openings have been properly prepared.
		4. If substrate and opening preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
	2. PREPARATION
		1. Clean surfaces thoroughly prior to installation.
		2. Do not install wood frame materials that are wet, moisture damaged, or mold damaged.
			1. Indications that materials are wet or moisture damaged include discoloration, sagging, or irregular shape.
			2. Indications that materials are mold damaged include fuzzy or splotchy surface contamination and discoloration.
		3. Before installing, condition materials to average prevailing humidity in installation areas for a minimum of 24 hours unless longer conditioning is recommended by manufacturer.
		4. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
	3. INSTALLATION
		1. Install in accordance with manufacturer's installation instructions.
		2. Do not use materials that are unsound, warped, improperly finished, or with defective surfaces, sizes, or patterns.
		3. Comply with frame manufacturer's written instructions.
		4. Install wood frames level, plumb, true, and aligned with adjacent materials. Use concealed shims where necessary for alignment.
			1. Scribe and cut interior finish carpentry to fit adjoining work. Refinish and seal cuts as recommended by manufacturer.
			2. Coordinate wood frames with materials and systems in or adjacent to it. Provide cutouts for mechanical and electrical items that penetrate interior finish carpentry.
			3. Install frames after gypsum-board joint finishing operations are completed.
			4. Install without splitting; drill pilot holes before fastening where necessary to prevent splitting. Fasten to prevent movement or warping. Countersink fastener heads on exposed frame Work and fill holes.
		5. Site Modifications: Per NFPA 80, site modifications are restricted to the following:
			1. Circular or rectangular function holes for latch bolts.
			2. Prepping area around function holes for strike plates.
			3. Installing gasketing or seals to frame if required.
	4. ADJUSTING AND CLEANING
		1. Coordinate with door installation for proper operation, without binding, sticking, or racking.
		2. Remove excess sealant materials.
		3. Initiate and maintain all protection and other precautions required to ensure frames are in acceptable condition at time of substantial completion.
	5. CLEANING
		1. Clean wood frames on exposed and semiexposed surfaces. Touch up finishes to restore damaged or soiled areas. Touch-up, repair or replace damaged products before Substantial Completion.
	6. PROTECTION
		1. Protect installed products until completion of project.
	7. SCHEDULES

\*\* NOTE TO SPECIFIER \*\* Retain Paragraph below if required to suit project requirements. Identify products by name on the Drawings or use this paragraph to define the location of each type of material to be used.

* + 1. :
		2. :

END OF SECTION