

Warm Springs Composite Products Certified Door Components

Information and Users Guide

Warm Springs Composite Products has been manufacturing and providing customers with quality certified fire rated door components for the last 20 years. We have tested and supply products for both domestic and international markets, with an emphasis on larger openings and higher ratings. Our door components are listed with BM Trada (Chiltern International Fire Ltd.) and carry the “Q Mark” certification as well as certification with IFC Group (International Fire Consultants).

All products have been test per B.S. 476 pt. 22 (1987)

- Global Assessment Report # Chilt/A06218 Rev G (Oct. 2023)**
- Field of Application Report # PAR/23081/01R (April 2022)**

**Manufacturer: Warm Springs Composite Products
3270 Highway 26, Building #8
Warm Springs, Oregon 97761
United States of America**

<u>Component Type</u>	<u>Rating</u>	<u>Product</u>	<u>Wt. per kg/m3</u>
Tectonite Stiles	60-90-120 min.	Tectonite	990 minimum
Tectonite Rails	60-90-120 min.	Tectonite	990 minimum
Mineral Core	60-90-120 min.	Mineral Core	288 minimum

Note: Technical Data Sheet and MSDS for each product is included at the end of this document, and available upon request from Warm Springs Composite Products offices.

Manufacturing:

All Warm Springs Composite Products door components are manufactured from a selection of inorganic and organic products. These products are blended in large slurry mixers, evacuated into forms, pressed to specific dimension and dried to desire tolerances.

Products are then surfaced and cut to desired dimensions, before being packaged for shipment to customer destinations.

Packaging:

Door components are stacked on solid wood pallets to enable maximum height and weight per unit with reference to the size of the container used for transport. All units are shrink wrapped and banded (metal strapping) to secure product to the pallets. Most units will also have a cardboard top covering.

Storage:

Warm Springs Composite Products door components have been designed and tested for interior door applications and should be stored under cover of roof at all times. Components should be stored in areas that will not be exposed to rain or other water sources. Exposure to moisture other than normal humidity can be very detrimental to the integrity and usability of the product. Ideal storage would be in a building or warehouse that would protect the products from external weather elements.

Handling:

Components on pallets may be easily moved with a mechanical fork lift or hydraulic dolly.

Although the Tectonite stile and rail product is much more dense and stronger than the mineral core, it must be handled with care. This product will break if dropped to a hard surface (concrete floor) or if struck against a hard immovable object.

WSCP's 412 mineral core is very porous and light weight, but has sufficient strength to be handled by one person. One mineral core at 54mm thickness will weigh about 63 lbs. or 140 kilograms.

Both component products will have surface dust and a small degree of abrasiveness. Wearing gloves when handling is recommended to reduce skin irritation on the hands.

Sawing or Cutting

- 1. Tectonite: WSCP's gray colored stile and rail product has a density of about 1,000 kg/m³. This density must be maintained to adequately secure ironmongery to the door. With this increased density and the nature of the inorganic binders in the product, it is recommended that this product be sawn or cut with industrial grade diamond tooling. WSCP uses 14" (60 tooth) industrial diamond tip blades. Very hard or industrial grade carbide will cut the components, but wear on the tooling is very significant.**

Also, when tooling Tectonite the operator must have a sufficient dust control system, as this product will produce a significant amount of dust !

- 2. WSCP Mineral Core: The light weight mineral core has a very low density (288 kg/m³) and is easily sawn or machined with normal carbide tooling. It will produce much less dust when machined than the Tectonite, but an adequate dust collection system should still be used when processing this component.**

Surfacing or Sanding Components:

Tectonite Stile & Rail and the Mineral Core components may be easily sanded to achieve desired tolerances during the manufacturing flow. An aggressive (2 head) belt sander, using 24 to 40 grit paper can easily reduce the thickness by as much as .050" or 1.5mm per pass on either material.

Care should be taken in surfacing banded mineral core in order to maintain desired tolerances. The differences in density from the Tectonite stiles and rails, to the softer mineral core, dictates that less material should be taken off per pass when surfacing. This eliminates

tolerance differences between the two products after surfacing.

Note: Again, adequate dust collection when surfacing these components is needed.

Bonding Components:

Warm Springs Composite Products fire rated door components have been successfully tested numerous times using “Cross-Linked PVAs”. A list of certified bonding agents is available upon request.

To achieve maximum bonding strength the surfaces of each component to be bonded should be clean and dust free. This can be accomplished by using pneumatic pressure to remove dust and or foreign agents from the bonding area.

All components when constructing a banded mineral core or loose-layup, are flush (90 degree) joint. There are no tongue and groove or machined joints in any application. This includes the following:

- 1. Wood Lipping to Tectonite Stiles**
- 2. Tectonite Stiles to Tectonite Rails**
- 3. Tectonite Stiles to Mineral Core**
- 4. Tectonite Rails to Mineral Core**
- 5. Mineral Core to Mineral Core**

Care should be given in using adequate, but not excessive pressure when bonding components using an RF-Press. When components are used in a “Loose-Lay-up” construction, attention should be given to ensure components are fitted together tightly before door faces and bonding agents are applied.

Please follow adhesive manufacturers instructions with reference to product amounts, press times and required pressure for both hot press and cold press applications.

Bonding Faces to Banded Cores:

Again, to achieve maximum bonding strength the surface of those components adjacent to the face material should be cleaned by pneumatic pressure. The mineral core is a very porous material, and although it bonds exceptionally well to the face stock, it must also be free of dust and other foreign materials. Prepping the surface of the components with a sizing agent to enhance bonding is allowed. Please follow adhesive manufacturers' recommendations on sizing agents.

Adhering face stock material to the mineral components can again be achieved with a cross-linked PVA adhesive. All wood faces (MDF, HDF, plywood or veneers) may be hot or cold pressed to the mineral components. Plastic Laminates should be adhered to MDF or HDF backers using those bonding agents referenced by the Plastic Laminate manufacturer.

Note: Please use adhesive manufacturer's recommendations and instructions when bonding components.

Conclusion:

Warm Springs Composite Products will always provide quality customer service to all of our component product users. If additional information is required or questions need to be answered, please contact us for immediate attention.

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