**SECTION 09 6429**

**RESIN INFUSED COMPOSITE FLOORING**

This section includes editing notes to assist the user in editing the section to suit project requirements. These notes are included as hidden text, and can be revealed or hidden by one of the following methods:

Microsoft Word 2010: Display the FILE tab on the ribbon, click OPTIONS, then on left menu click on DISPLAY. Under ALWAYS SHOW THESE select or deselect HIDDEN TEXT.

Microsoft Word 2007: Click the OFFICE button, select WORD OPTIONS, select DISPLAY, then select or deselect the HIDDEN TEXT option.

Corel WordPerfect: From the pull-down menus select VIEW, then select or deselect the HIDDEN TEXT option.

This guide specification has been prepared by TorZo Surfaces to assist design professionals in the preparation of a specification section covering Durum, Hemp, Indure, Orient, Parda, and Tiikeri resin infused composite flooring for interior locations. Refer to TorZo Surfaces literature for additional information.

The following should be noted in using this guide specification:

Optional text requiring a selection by the user is enclosed within brackets, e.g.: "Section [09 0000.] [\_\_ \_\_ \_\_.]"

Items requiring user input are enclosed within brackets, e.g.: "Section [\_\_ \_\_ \_\_ - \_\_\_\_\_\_\_\_]."

Optional paragraphs are separated by an "OR" statement, e.g.:

\*\*\*\* OR \*\*\*\*

"Green" requirements are included for projects requiring LEED certification, and are included as green text. For additional information on LEED, visit the U.S. Green Building Council website at [www.usgbc.org.](http://www.usgbc.org)

Other guide specifications are available from TorZo Surfaces covering other uses for resin infused composite products, including:

 Section 06 8313 - Resin Infused Composite Fabrications

 Section 09 7800 - Resin Infused Composite Wall Panels

For assistance on the use of the products in this section, contact TorZo Surfaces by calling 866-822-0002, by email at info@torzosurfaces.com, or visit their website at [(www.torzosurfaces.com](http://www.torzosurfaces.com)).

1. **GENERAL**
	1. SUMMARY
		1. Section Includes:
			1. Resin infused composite flooring.
			2. Setting materials and accessories.

Edit the following paragraphs to suit project requirements and to coordinate with other sections in the project manual.

* + 1. Related Sections:
			1. Division 01: Administrative, procedural, and temporary work requirements.
			2. Section [03 3000 - Cast-in-Place Concrete] [\_\_ \_\_ \_\_ - \_\_\_\_\_\_\_] - Concrete substrate.
			3. Section [06 1100 - Framing and Sheathing] [\_\_ \_\_ \_\_ - \_\_\_\_\_\_\_] - Wood substrate.
			4. Section [07 9200 - Joint Sealers] [\_\_ \_\_\_\_ - \_\_\_\_\_\_\_] - Joint sealers.
			5. Section [09 2813 - Cementitious Backing Boards] [\_\_ \_\_\_\_ - \_\_\_\_\_\_\_] - Cementitious backer unit substrate.
	1. REFERENCES

In the following paragraphs, include only those reference standards that are included within the text of this section.

* + 1. ASTM International (ASTM) [(www.astm.org](http://www.astm.org)):
			1. D1037 - Standard Test Methods for Evaluating Properties of Wood-Base Fiber and Particle Panel Materials.
			2. D2395 - Standard Test Methods for Specific Gravity of Wood and Wood-Based Materials.\
			3. D4442 - Standard Test Methods for Direct Moisture Content Measurement of Wood and Wood-Base Materials.
			4. E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
		2. Forest Stewardship Council (FSC) ([www.fscus.org](http://www.fscus.org)) STD-40-004 - Chain of Custody Standard.
	1. SUBMITTALS

Include the following if physical samples are required. Edit to suit project requirements.

* + 1. Samples:
			1. [3 x 3] [\_\_ x \_\_] inch resin infused composite flooring samples [in specified color.] [showing available colors.]
			2. [3] [\_\_] inch long joint sealer samples [in specified color.] [showing available colors.]

Include the following for submission of sustainable design submittals.

* + 1. Sustainable Design Submittals:
			1. Recycled Content: Certify percentages of post-consumer and pre-consumer recycled content.
			2. Low-Emitting Materials: Certify volatile organic compound (VOC) content.
			3. Rapidly Renewable Materials: Certify materials made from plants harvested within a ten year or shorter cycle.
			4. Certified Wood: Certify Forest Stewardship Council chain-of-custody certificate number.

Include the following for submission of closeout submittals for the Owner's record purposes.

* + 1. Closeout Submittals:
			1. Maintenance Data: Include recommended cleaning materials and procedures, and list of materials detrimental to resin infused composite flooring.
	1. QUALITY ASSURANCE

The following two paragraphs specify a minimum level of experience required of the parties performing the work of this section. Retain if required, and edit to suit project requirements.

* + 1. Manufacturer Qualifications: Minimum [10] [\_\_] years [documented] experience in manufacture of resin infused composite flooring.
		2. Installer Qualifications: Minimum [2] [\_\_] years [documented] experience in work of this Section.

Include the following for a full size mockup for review of construction and coordination of work of several sections. Edit to suit project requirements.

* + 1. Mockup:
			1. Construct flooring mockup, minimum [4 x 8] [\_\_ x \_\_] feet.
			2. Locate [where directed.] [\_\_\_\_.]
			3. Approved mockup may remain as part of the Work.
	1. PROJECT CONDITIONS
		1. Do not install flooring until overhead and adjacent work is complete.
		2. Environmental Requirements: Maintain following conditions in areas to receive flooring for minimum [72] [\_\_] hours prior, during, and after installation:
			1. Temperature: [65] [\_\_] degrees F minimum.
			2. Humidity: [50] [\_\_] percent maximum.
		3. Concrete Subfloor:
			1. Clean, dry, free of foreign matter.
			2. Moisture content: Maximum [4] [\_\_] percent by weight.
			3. Level to [1/4] [\_\_] inch in 10 feet.
	2. WARRANTY
		1. Provide manufacturer's 10 year warranty against defects in materials and workmanship.
1. **PRODUCTS**
	1. MANUFACTURERS
		1. Contract Documents are based on products by TorZo Surfaces. [(www.torzosurfaces.com](http://www.torzosurfaces.com))

Edit the following to indicate whether or not substitutions will be allowed; coordinate with Division 01 requirements.

* + 1. Substitutions: [Under provisions of Division 01.] [Not permitted.]
	1. MATERIALS

Include te following for Orient flooring.

* + 1. Resin Composite Flooring:
			1. Product: Orient.
			2. Recycled content: 50 percent pre-consumer recycled FSC-certified wood.
			3. Free from added urea formaldehyde.

Edit the following paragraph to indicate color of resin infused composite flooring.

* + - 1. Color: [\_\_\_\_.] [To be selected from manufacturer’s full color range.]

Include the following paragraph for plank flooring.

* + - 1. Size: 5 inches wide x random 2, 4 and 6 foot lengths x 1/2 inch thick.

\*\*\*\* OR \*\*\*\*

Include the following paragraph for tile flooring. Edit to indicate desired size.

* + - 1. Size: [12 x 12] [12 x 24] inches x 1/2 inch thick.
			2. Physical characteristics:
				1. Density: 72, tested to ASTM D2395.
				2. Internal bond: 498, tested to ASTM D1037.
				3. Modulus of rupture: 8823, tested to ASTM D1037.
				4. Modulus of elasticity: 1,281,514, tested to ASTM D1037.
				5. Hardness, Janka ball: 4589, tested to ASTM D1037.
				6. Screw holding; tested to ASTM D1037:

Face: 751.

Edge: 729.

* + - * 1. Linear expansion: 0.07, tested to ASTM D1037.
				2. Moisture content: 2.0, tested to ASTM D4442.
				3. Fire rating: Class C, tested to ASTM E84.

\*\*\*\* OR \*\*\*\*

Include te following for Tiikeri flooring.

* + 1. Resin Composite Flooring:
			1. Product: Tiikeri.
			2. Recycled content: 50 percent pre-consumer recycled rapidly renewable sorghum straw.
			3. Free from added urea formaldehyde.

Edit the following paragraph to indicate color of resin infused composite flooring.

* + - 1. Color: [\_\_\_\_.] [To be selected from manufacturer’s full color range.]

Include the following paragraph for plank flooring.

* + - 1. Size: 5 inches wide x random 2, 4 and 6 foot lengths x 1/2 inch thick.

\*\*\*\* OR \*\*\*\*

Include the following paragraph for tile flooring. Edit to indicate desired size.

* + - 1. Size: [11 x 11] [11 x 22] inches x 1/2 inch thick.
			2. Physical characteristics:
				1. Density: 62, tested to ASTM D2395.
				2. Internal bond: 112, tested to ASTM D1037.
				3. Modulus of rupture: 2397, tested to ASTM D1037.
				4. Modulus of elasticity: 550,473, tested to ASTM D1037.
				5. Hardness, Janka ball: 3100, tested to ASTM D1037.
				6. Screw holding; tested to ASTM D1037:

Face: 434.

Edge: 372.

* + - * 1. Linear expansion: 0.18, tested to ASTM D1037.
				2. Moisture content: 3.0, tested to ASTM D4442.
				3. Fire rating: Class B, tested to ASTM E84.
	1. ACCESSORIES
		1. Adhesives:
			1. Type recommended by resin infused composite flooring manufacturer.
			2. Maximum volatile organic compound (VOC) content: [70] [\_\_] grams per liter.
1. **EXECUTION**
	1. EXAMINATION
		1. Verify that concrete floors have cured a minimum [28] [\_\_] days and do not exhibit negative alkalinity, carbonization, or dusting.
	2. PREPARATION
		1. At least [72] [\_\_] hours prior to beginning installation, stack flooring in areas to receive flooring to allow to reach prevailing temperature and humidity.
		2. Clean substrate; remove loose and foreign matter that could impede adhesion or performance of flooring.
		3. Test substrate for moisture content to ASTM F1869; do not install flooring until moisture emission level is acceptable to flooring manufacturer.
	3. INSTALLATION
		1. Install flooring in accordance with manufacturer's instructions.
		2. Apply adhesive to subfloor using notched trowel; follow manufacturer's instructions for application and coverage. Do not cover more area than can be covered with flooring before adhesive sets.
		3. Set each piece firmly into adhesive, using slight sliding motion to ensure full contact.
		4. Place flooring square with room.

Include the following paragraph for plank flooring.

* + 1. Offset end joints in adjacent rows [12] [\_\_] inches minimum.
		2. Butt ends and edges to moderate contact.
		3. Cut flooring to fit at perimeter and around penetrations with maximum [1/4] [\_\_] inch gaps.
		4. Roll completed flooring prior to final adhesive set with [100] [\_\_] pound roller.
	1. INSTALLATION TOLERANCES
		1. Maximum variation from level: 1/4 inch in 10 feet, noncumulative.
	2. CLEANING
		1. Clean flooring in accordance with manufacturer's instructions.
	3. PROTECTION
		1. Protect installed flooring with nonstaining sheet coverings.

END OF SECTION