

## DragonBoard

### DragonBoard Flooring Products

The DragonBoard family of products consists of DragonBoard wall, ceiling, roofing and flooring panels.

### Product Description, Applications

DragonBoard is a U.S. patented, UL approved fire resistant, water resistant, high-impact interior and exterior construction panel. Load capacities handle both residential and commercial structures. With its mold resistant, fire resistant and high-impact properties, DragonBoard should be used whenever there is a high value placed on a building's contents and equipment or when health and safety concerns exist.

Applications include single-family homes, apartment complexes, commercial high-rise buildings, theaters, museums, schools, hospitals, retail, hotels, restaurants, nightclubs, airports, subway stations, tunnels, fire separations, etc.

### Features, Advantages

- DragonBoard can be used with wood or light-gauge steel framing
- DragonBoard's diaphragm stiffness allows distributed loads, when supported on 16" (406) centers, of over 257 psf for L/360 and 393f for L/240. Flexural strength is equivalent to concrete at approximately 3000 psi (20,670 kPa) in compression
- DragonBoard can be used in heavy commercial construction with the assembly consisting of I-beam construction and Type B corrugated decking in spans up to 5' (1.5 m), thus eliminating time costly and time-consuming concrete pours
- DragonBoard significantly reduces installation costs, offering savings of 20 - 85% over competing products, depending on the application
- DragonBoard is a non-nutrient to mold or fungus per ASTM G21 and does not support insect life. It provides superior moisture resistance in high-humidity areas and combats the growth of mold and mildew
- DragonBoard is completely waterproof. It will not disintegrate when immersed in water or exposed to freeze/thaw cycles for prolonged periods of time

### Construction, Materials, Finishes

DragonBoard is manufactured from a combination of magnesium oxide and magnesium chloride and includes fibrous reinforcement. DragonBoard is light tan to cream in color. Standard production material is very smooth on one side and sand textured on the other. Square or shiplap joints are available. DragonBoard can be cut, trimmed or shaped using ordinary power tools. Every DragonBoard product is clearly labeled with the red dragon logo and pertinent UL design numbers to eliminate confusion in the field.

### Properties, Performance

The DragonBoard floor assembly is offered as a UL tested 2-hour fire resistant system. DragonBoard's New York City MEA number is 359-02-M. ICC approval is pending.





DragonBoard US  
8-01 26th Avenue  
Astoria, NY 11102  
Phone: (866) 447-3232  
Fax: (570) 796-0033  
E-mail: [info@dragonboard.com](mailto:info@dragonboard.com)  
[www.dragonboard.com](http://www.dragonboard.com)

This MANU-SPEC<sup>®</sup> utilizes the Construction Specifications Institute (CSI) *Project Resource Manual* (PRM), including *MasterFormat*<sup>™</sup>, *SectionFormat*<sup>™</sup> and *PageFormat*<sup>™</sup>. A MANU-SPEC is a manufacturer-specific proprietary product specification using the proprietary method of specifying applicable to project specifications and master guide specifications. Optional text is indicated by brackets [ ]; delete optional text in final copy of specification. Specifier Notes typically precede specification text; delete notes in final copy of specification. Trade/brand names with appropriate symbols typically are used in Specifier Notes; symbols are not used in specification text. Metric conversion, where used, is soft metric conversion.

This MANU-SPEC specifies a fire resistant, water resistant, high-impact and mold resistant construction panel for use in fire-rated assemblies. This product is manufactured by DragonBoard US. Revise MANU-SPEC section number and title below to suit project requirements, specification practices and section content. Refer to CSI *MasterFormat* for other section numbers and titles.

**SECTION 07 82 00  
BOARD FIREPROOFING**

**PART 1 GENERAL**

1.01 SUMMARY

Specifier Note: Revise paragraph below to suit project requirements. Add section numbers and titles per CSI *MasterFormat* and specifier's practice.

- A. Related Sections:
1. Metal Framing: Division 05 structural metal stud framing sections.
  2. Wood Framing: Division 06 rough carpentry sections.
  3. Metal Framing: Division 09 non-structural metal stud framing sections.

Specifier Note: Article below may be omitted when specifying manufacturer's proprietary products and recommended installation. Retain Reference Article when specifying products and installation by an industry reference standard. If retained, list standard(s) referenced in this section. Indicate issuing authority name, acronym, standard designation and title. Establish policy for indicating edition date of standard referenced. Conditions of the Contract or Section 01 42 19 - Reference Standards may establish the edition date of standards. This article does not require compliance with standard, but is merely a listing of references used. Article below should list only those industry standards referenced in this section.

1.02 REFERENCES

- A. ASTM International (ASTM):
1. ASTM C954 Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs from 0.033 in. (0.84 mm) to 0.112 in. (2.84 mm) in Thickness.
  2. ASTM D6109 Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastic Lumber and Related Products.
  3. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials.
  4. ASTM E119 Standard Test Methods for Fire Tests of Building Construction and Materials.
  5. ASTM G21 Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi.

Specifier Note: Retain below if required to conform to project requirements.

**1.03 SYSTEM DESCRIPTION****A. Performance Requirements:****1. Fire Performance:**

- a. Fire-Rated Assemblies: Provide panels suitable for use in fire-rated assemblies in accordance with ASTM E119.
- b. Surface burning characteristics when tested in accordance ASTM E84:
  - 1) Flamespread: 25, maximum.
  - 2) Smoke Developed: 450, maximum.

Specifier Note: Article below includes submittal of relevant data to be furnished by Contractor either before, during or after construction. Coordinate this article with Architect's and Contractor's duties and responsibilities in Conditions of the Contract and Section [01 33 00 - Submittals Procedures] [\_\_\_\_\_].

**1.04 SUBMITTALS**

**A. General:** Submit listed submittals in accordance with Conditions of the Contract and Section [01 33 00 - Submittal Procedures] [\_\_\_\_\_].

**B. Product Data:** Submit product data, including manufacturer's SPEC-DATA® sheet, for specified products.

**C. Quality Control Submittals:**

1. Manufacturer's Instructions: Manufacturer's installation instructions.

**D. Closeout Submittals:**

1. Warranty: Manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to, and not a limitation of, other rights Owner may have under Contract Documents.

Specifier Note: Article below should include prerequisites, standards, limitations and criteria that establish an overall level of quality for products and workmanship for this section. Coordinate article below with Division 01 Quality Assurance Section.

**1.05 QUALITY ASSURANCE**

**A. Regulatory Requirements:** In accordance with Section [01 41 00 - Regulatory Requirements] [\_\_\_\_\_].

**1.06 DELIVERY, STORAGE & HANDLING**

**A. General:** Comply with Section [01 61 00 - Common Product Requirements] [\_\_\_\_\_].

**B. Delivery:** Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.

**C. Storage and Protection:** Store materials protected from exposure to harmful environmental conditions and at temperature and humidity conditions recommended by the manufacturer.

Specifier Note: Coordinate article below with Conditions of the Contract and with Section 01 78 36 - Warranties.

**1.07 WARRANTY**

**A. Project Warranty:** Refer to Conditions of the Contract for project warranty provisions.

**B. Manufacturer's Warranty:** Submit in accordance with Section [01 78 36 - Warranties] [\_\_\_\_\_] for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to, and not a limitation of, other rights Owner may have under Contract Documents.

1. Warranty Period: [\_\_\_\_\_] years commencing on Date of Substantial Completion.

**PART 2 PRODUCTS**

Specifier Note: Retain article below for proprietary method specification. Add product attributes, performance characteristics, material standards and descriptions as applicable. Use of such phrases as "or equal" or "or approved equal" or similar phrases may cause ambiguity in specifications. Such phrases require verification (procedural, legal and regulatory) and assignment of responsibility for determining "or equal" products.

**2.01 BOARD FIREPROOFING**

Specifier Note: Paragraph below is an addition to CSI *SectionFormat* and a supplement to MANU-SPEC. Retain or delete paragraph below per project requirements and specifier's practice.

- A. Manufacturer: DragonBoard US.
  - 1. Contact: 8-01 26th Avenue, Astoria, NY 11102; Telephone: (866) 447-3232; Fax: (570) 796-0033; E-mail: [info@dragonboard.com](mailto:info@dragonboard.com); website: [www.dragonboard.com](http://www.dragonboard.com).
- B. DragonBoard:

Specifier Note: Select size and edge configuration below.

- 1. Size: [2 feet × 4 feet (0.6 × 1.2 m)] [2 feet × 8 feet (0.6 × 2.4 m)] [4 feet × 4 feet (1.2 × 1.2 m)].
- 2. Thickness: 3/4 inch (19.1 mm).
- 3. Edges: [Square] [Shiplap].
- 4. Physical Characteristics:
  - a. Flexural Modulus: Not less than  $0.93 \times 10^6$  psi when tested in accordance with ASTM D6109.
  - b. Flexural Strength: Not less than 1295 psi when tested in accordance with ASTM D6109.
  - c. Shear Strength: Not less than 391 psi when tested in accordance with ASTM D6109.
  - d. Fungus/Mold: Non-nutrient when tested in accordance with ASTM G21.

## 2.02 ACCESSORIES

- A. Fasteners: Sheet metal screws in accordance with ASTM C954.
  - 1. Size: No. 8.

## 2.03 PRODUCT SUBSTITUTIONS

- A. Substitutions: Substitutions in accordance with Section [01 25 13 - Product Substitution Procedures] [No substitutions permitted] [\_\_\_\_\_].

## PART 3 EXECUTION

Specifier Note: Paragraph below is an addition to CSI *SectionFormat* and a supplement to MANU-SPEC. Retain or delete paragraph below per project requirements and specifier's practice.

### 3.01 MANUFACTURER'S INSTRUCTIONS

- A. Compliance: Comply with manufacturer's product data, including product technical bulletins, product catalog installation instructions and product carton instructions for installation.

### 3.02 EXAMINATION

- A. Site Verification of Conditions: Verify that substrate conditions, which have been previously installed under other sections, are acceptable for product installation in accordance with manufacturer's instructions.

### 3.03 INSTALLATION

- A. In accordance with the requirements of fire-rated assemblies as indicated on the drawings.

Specifier Note: Smooth surface is suitable for paint; textured surface is suitable for tile. If both surfaces are required, indicate on the drawings.

- B. Exposed Surface: [Smooth] [Textured] [As indicated on the drawings].

### 3.04 CLEANUP

- A. Proceed in accordance with Section [01 74 23 - Final Cleaning] [\_\_\_\_\_].
- B. Upon completion and verification of performance of installation, remove surplus materials, excess materials, rubbish, tools and equipment.

**END OF SECTION**