



Modular • Structural Security™ • Solutions

MCF Series iFortress™ HEMP-BLAST LOAD Standards

The Structural Security™ standards to which the MCF Series iFortress™ has been engineered, tested, and rated, and each shall meet the following criteria:

1. The finished structure will be a fully rated, self-contained, airtight, water and hermetically sealed, energy efficient, re-usable, "Green" facility/assembly that tested as an assembly complies with:
 - a. Structural - IBC Exterior Building Code Standards
 - i. Roof Load – minimum 40 Lbs/Ft²
 - ii. Wind Load – minimum 2 hours 75 mph sustained force
 - iii. Bending Stresses – minimum 13,000 Lbs psi
 - iv. Seismic – Site Class D
 - v. Sound Transfer Classification – minimum STC 30
 - b. Fire/Thermal
 - vi. Walls, Ceiling, Doors, Penetrations – Fully Rated Assembly against ASTM E119 - minimum 90 minutes
 - vii. Door NFPA 252 90 minute rating
 - viii. R value – Assembly – minimum r 22
 - c. Hydro-dynamics/Permeability
 - i. Airtight – NFPA 2001: Time (Size Dependent)
 - a. Annually recertified
 - ii. Encapsulation – ASTM E 1795-97 *
 - iii. Mildew Resistant – ASTM D3273/3274 *
 - iv. Permeability – ASTM D 1653 *
 - v. Weathering – ASTM G53/B 117 – Federal TT-C-555B *
 - vi. Humidity – ASTM D 4585 *
 - vii. ASTM E119 – Hose Stream Test
 - d. Environmental
 - i. "Green" – manufactured with recycled and recyclable materials, can be disassembled and relocated, re-used
 - ii. Insulated – energy efficient
 - iii. LEED component contributor – innovation point, Green, reduce operating cost, non-invasive field assembly (i.e. dust free assembly)

- e. Blast
 - a. Blast load min 8psi/max 11.5 psi
 - i. Tolerances/Criteria: No visible structural damage and all components will maintain 100% functionality after the explosion and to the blast overpressure.
- f. Interior Surfaces (Walls/Ceiling)
 - i. High reflectance white – minimum 85% reflectance quality
 - a. Reduction in light emanating sources/equipment/power consumption

g. Shielding

i. Sample Attenuation

Frequency (MHz)	SE (dB)
30	58.6
100	62.5
201	63.4
300	63.3
400	61.3
500	61.8
600	64.6
701	67.4
800	63.9
900	70.8
1000	65.2
1101	76.3
1200	78.7
1200	78.7
1300	65.9
1400	73.4
1500	70.0
1601	71.5
1700	78.8
1800	70.1
1900	66.9
2000	71.6

h. Warranty

i. Conditional Lifetime

- a. Subject to annual recertified by Factory Authorized Agent