

PART 1 - General**1.1 DESCRIPTION OF WORK**

- .1 Herculite Polymer Composite (HPC) form molded Institutional Furniture. All furniture shall be designed for secure installation with no exposed fastenings.

1.2 PERFORMANCE REQUIREMENTS**.1 General**

Units shall be manufactured to meet or exceed the following test criteria.

.2 Finished Product Specifications

Thickness tolerance	0.1875" + 0.050"
Density pcf	117 to 130
Barcol Hardness (ASTM D2583)	50 - 60
Loss on Ignition, Percent (ASTM D2584-68 79)	49.6 - 51.5
Flexural Strength (ASTM D790-71)	Face up 21, 000 psi Face down 18,000 psi
Tensile Strength (ASTM D638-76)	14,000 psi
Notched Izod (ASTM D256)	6.0 ft-lb/in ²

.3 Structural Characteristics**a. Wall and Floor Mounted Lower Bed**

Installation shall employ a concealed structural adhesive mounting system with no Exposed fasteners

Units shall be manufactured to withstand the following impact load test:

Tests shall consist of applying six impact loads successively to the unit through a spreader plate placed in three separate locations on the bed while the unit is supported in a suitable manner to simulate the actual installation conditions.

The spreader plate shall consist of solid plywood or approved equivalent, 12" x 12" x 1 1/2" thick, all edges and corners rounded to 1/4" radius.

The impact load shall consist of a suitable 250 lb. weight dropped from a height of 24" above the surface of the spreader plate.

The test locations shall be on the longitudinal axis of the bed measured to center of the spreader plate as follows:

First two drops - 15" from one end of the bed

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|------------------|---|-------------------------------|
| Second two drops | - | 15" from other end of the bed |
| Third two drops | - | at center of bed |

Following completion of the tests, the bed shall show no physical defects of any nature.

1.3 SUBMITTALS

- .1 Comply with requirements of Section 01 33 00.

.2 Shop Drawings

Shop drawings for each product specified, showing fabrication details, composite structure, materials to be used as well as outlining installation procedures with no exposed fastenings, caulking, etc. required for Architect's approval before fabrication.

.3 Samples

Submit the following samples to Architect for approval before fabrication:

Representative samples to determine color and finish. Size not less than 6" x 6". Re-submit as often as required to obtain approval.

.4 Structural Adhesives

Submit samples of structural adhesive mounting system with a representative 12" x 12" square bed section mounted on a 24" x 24" x 3/4" plywood base adequately demonstrating function of the mounting system.

.5 Maintenance Instructions

Complete maintenance instructions for preventative maintenance and repairs of the units shall be submitted for incorporation in Project Data Book.

PART 2 - Products

2.1 MATERIALS

.1 Herculite Polymer Composite

Fire retardant structural polymer composite formulated to obtain optimum processing and service qualities in the finished products. The surface coating shall have a satin, non-glare finish.

.2 Epoxy Caulking

Epoxy mastic filler to meet or exceed the following physical property requirements.

Freeze Thaw (ASTM C459 T)	No Evidence of cracking, checking, blistering, or other defects.
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Adhesion to Concrete (ASTM D952-51)	Exceeds internal strength of concrete backing.
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Impact Resistance Gardner Impact Tester	80" lbs. Without cracking film at 80 lbs. aggregates break without loosening of embedded section.
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Tensile Strength (ASTM D636-61T)	1,500 psi
Salt and Spray (ASTM D822-60)	No deterioration or other defects after 1000 hrs exposure
Water Immersion	No delamination from backing after seven days immersion.

2.2 FINISH

- .1 Finished surfaces shall be smooth, free from all defects, consistent in color and texture to match approved samples.

PART 3 - Execution

3.1 DELIVERY AND INSTALLATION

- .1 Institutional Furniture items are to be suitably packaged or crated to prevent damage in shipment and handling. Finished surfaces are to be protected by sturdy wrappings. Where it assists in the identification of the various types, the units are to be labelled.
- .2 The Furniture shall be delivered to location at building site for storage prior to installation.
- .3 The Furniture shall be removed from storage prior to installation.
- .4 All necessary tools, accessories and portable equipment shall be provided by installation contractor.
- .5 Install bunks in accordance with manufacturer's instructions.

3.1 CLANING

- .1 Final cleaning should be carried out by wiping Institutional Furniture with a clean mild solution of detergent and water. A final coat of wax shall be applied to seal all exposed surfaces of the units.

END OF SECTION