

**ENGINEERING SPECIFICATION**  
**STATE OF INDIANA**  
**DEPARTMENT OF CORRECTION**  
**PEN PRODUCTS**

**I. OBJECTIVE:**

To provide a foam core material for the manufacturing of mattresses used in correctional and detention facilities, that meets flammable and smoke standards per State, and Federal Regulations, and UL standards.

**II. REQUIREMENTS:**

- |                                  |   |
|----------------------------------|---|
| A. Material:                     | Polychloroprene latex as a foam with breathable open cells.   |
| B. Safety Properties             | Must be low smoke and flame resistant which shall last thru out service life. Spray on additives are not acceptable.  |
| C. Compatibility                 | Must be compatible with covering material:<br>00011-001 Vinyl, Ticking, 10.6 oz, Fawn. 36.5<br>00011-003 Vinyl, Ticking, 10.6 oz, Fawn. 42.5<br>(Brand Name Chemsafe 2000)                                |
| D. Color                         | Per each manufacturers Standard Practice.   |
| E. Physical Size                 | In sizes measured in board footage in general dimensions. Width x Length x Thickness in box like shape per method of specifying.<br>(Note: Variations of different sizes will occur per customer demand.) |
| F. Flammability                  | By Manufacturer Certification through Independent Laboratory by random sample with results submitted for Approval. State may recheck as needed.   |
| 1. ASTM E162-94<br>Radiant Panel | Maximum flame   |
| 2. ASTM D3675-95                 | Index – 5 (without specimen showing signs of melting or dripping.)  |

ORIGIN DATE	DESCRIPTION	DOCUMENT NO.
December 9, 2002	<b>FOAM, HIGH DENSITY</b>	03870-000
GENERATED BY		RELEASE DATE
J Hughes		February 24, 2010
ERN NO		REVISION NO.
100006		B

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| <p>3. ASTM E662-92<br/>NBS Smoke Chamber</p>   | <p>Flaming and Non-Flaming modes<br/>DS 90 sec 100 Maximum<br/>DS 4 min 175 Maximum<br/>DM 200 Maximum</p>                       |
| <p>4. ASTM E906-83 Rate of Heat Release</p> <p style="padding-left: 40px;">Radiant Flux 3.5 W/cm Sq.</p> <p style="padding-left: 40px;">Vertical Mode</p> <p style="padding-left: 40px;">Ignition – 2 pilots</p>                                     | <p>(method A or B)</p> <p>50 KW/m Sq maximum</p> <p>Heat Release at 3 min.</p> <p>5.0 MJ/m sq. maximum</p>                       |
| <p>5. ASTM E1354-94</p> <p style="padding-left: 40px;">Radiant Flux 3.5 W/cm Sq.</p> <p style="padding-left: 40px;">Horizontal Mode</p>  | <p>Heat Release Rate</p> <p>50 KW/m Sq maximum<br/>5.0 MJ/m sq. maximum</p> <p>Heat Release at 3 min.<br/>50 KW/m Sq maximum</p> |
| <p>6. ASTM D 2863-91<br/>(Paragraph 9)<br/>Oxygen Index</p>  | <p>50 minimum</p>  |
| <p>7. California Tests</p> <p style="padding-left: 20px;">California 117</p> <p style="padding-left: 20px;">California 121</p> <p style="padding-left: 20px;">California 129</p> <p style="padding-left: 20px;">California 133</p>                   | <p>Pass</p> <p>Pass</p> <p>Pass</p> <p>Pass</p>  |
| <p>8. Other Fire Properties</p> <p style="padding-left: 40px;">A. UI-1895 Standard for fire test of mattress</p> <p style="padding-left: 40px;">B. Ignition Resistance Federal Regulation Title 16 FF-4-72 part 1632 flammability of mattresses.</p> |  |

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**F. Physical Properties**

1. Density: Test A	5.0 To 7 lbs maximum
Indentation Force Test B1	Medium 35 ± 10
Deflection	25 % Maximum
Compression Set Test D 50% constant deflection percent of original thickness	12% Maximum
Tensile Test E	8lbs / sq inch minimum
Elongation Test E	150% minimum
Dynamic Fatigue Test B Constant Force Pounding	75,000 Cycles ± 5,000 40% I.F.D. Loss
Thickness Loss	5 % Maximum
Resiliency Test H	30% Minimum
Tear Strength Test F	2.0 lbs/inch Minimum
2. ASTM G-21 & G-22	
Fungal and Bacterial Growth	No Growth

**III. PROCUREMENT:**

- A. Packaging/Shipping  
Per purchase order  
B. Reference

Chestnut Ridge Foam Inc.  
Texas State specification (565-15-02),  
Tennessee Procedures (29.8),  
Florida Specification (No. 850-500-80)

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C. Method of Specifying	03870-001	25 x 72 x 4
	03871-001	24 x 73 x 4
	03872-001	35 x 74 x 4
	03873-001	35 x 74 x 4
	03874-001	35 x 72 x 4
	03875-001	27 x 77 x 3
	03876-001	35 x 80 x 4
	03937-001	28 x 77 x 4
	03938-001	35 x 78 x 3
	03939-001	35 x 78 x 4
	03943-001	26 x 78 x 3
	03952-077	28 x 77 x 3
	03958-001	25 x 72 x 3
	03962-001	35 x 74 x 3
	03988-001	35 x 88 x 4

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