### MATTRESSES, MATTRESS PADS, & MATTRESS COMPONENTS

<table>
<thead>
<tr>
<th>TEST</th>
<th>SAMPLE SIZE</th>
<th>PERFORMANCE TIME</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTM E1590</td>
<td>1 mattress</td>
<td>7 – 10 days</td>
</tr>
<tr>
<td>Boston Fire Department IX-11</td>
<td>1 mattress</td>
<td>7 – 10 days</td>
</tr>
<tr>
<td>California Technical Bulletin 121</td>
<td>1 mattress</td>
<td>7 – 10 days</td>
</tr>
<tr>
<td>California Technical Bulletin 129</td>
<td>1 mattress</td>
<td>7 – 10 days</td>
</tr>
<tr>
<td>California Technical Bulletin 603</td>
<td>Replaced by 16 CFR 1633</td>
<td></td>
</tr>
<tr>
<td>NFPA 267</td>
<td>1 mattress</td>
<td>7 – 10 days</td>
</tr>
<tr>
<td>CFR 1632</td>
<td>1 mattress (See Note)</td>
<td>7 – 10 days</td>
</tr>
<tr>
<td>CFR 1633</td>
<td>1 – 3 mattresses (See Note)</td>
<td>7 – 10 days</td>
</tr>
<tr>
<td>CFR 1632 (Ticking)</td>
<td>2 yards</td>
<td>7 – 10 days</td>
</tr>
<tr>
<td>ASTM D7140 (Fire Barrier)</td>
<td>36” x 36”</td>
<td>7 – 10 days</td>
</tr>
<tr>
<td>CFR 1632 (Mattress Pads)</td>
<td>6 mattress pads</td>
<td>7 – 10 days</td>
</tr>
<tr>
<td>California Technical Bulletin 604 (Mattress Pads)</td>
<td>3 sections filling material: 12” x 12” x AT (305 mm x 305 mm x AT)</td>
<td>7 – 10 days</td>
</tr>
<tr>
<td>Michigan Roll Up Test ASTM F1085, Annex A3</td>
<td>1 flexible mattress</td>
<td>7 – 10 days</td>
</tr>
</tbody>
</table>

AT = Actual thickness.

**NOTE:** Complete details regarding this document may be found in the “CPSC – CFR Title 16 Specific Test List”.
Tests Explained

Note: Irrespective of the custom tests, all mattresses listed below must comply with CFR 1632 and 1633 which is quoted separately.

ASTM E1590
This is a full scale mattress test that is mandated by some of the building codes for certain unsprinklered occupancies.
The actual test procedure is substantially the same as that described in California Technical Bulletin 129 (See item # 4.).
ASTM E1590 also includes the maximum heat release of 100 kW that is specified by the building codes.
The reporting requirement of ASTM E1590 encompasses more categories than the Technical Bulletin 129 test.

Boston Fire Department IX-11
This test is mandatory for certain occupancies that are regulated by the Boston Fire Department.
The configuration of the test is quite different from most other full scale mattress tests.
The mattress is covered with typical bedding materials – primarily sheets, a blanket, and a pillow.
The bedding material is ignited and test observations are made.
The pass/fail criteria are much more detailed than CFR 1633.
Products which pass CFR 1633 might fail this Boston test.
The usual failure during the Boston test is related to mattress weight loss.

California Technical Bulletin 121
This is a full scale fire test which is cited for penal institutions.
The ignition source is a bucket of burning paper placed underneath the mattress.
The pass/fail criteria are primarily related to weight loss rather than heat release value.
The intent of this procedure is to determine whether or not the fire penetrates through to the surface of the mattress.
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**California Technical Bulletin 129**

This test is the precursor to CFR 1633.

The mattress is ignited with a barbeque type burner where the flames impinge on the side of the mattress.

There are two major distinctions between this test and 1633.

1633 has a side and top burner. The way mattresses are usually constructed, the main assault comes from the side burner.

The flame application time under CFR 1633 is 50 seconds for the side burner.

The flame application time of California 129 is 180 seconds.

California 129 has a more severe limitation on heat release: 100 kW maximum versus 200 kW maximum permitted by CFR 1633.

California Technical Bulletin 129 is frequently cited by dormitory authorities.

**California Technical Bulletin 603**

California Technical Bulletin 603 is the direct precursor to CFR 1633.

As it is superseded by CFR 1633, there is no need to issue any certificates against California Technical Bulletin 603.

**NFPA 267**

This is a full scale mattress test that is mandated by some of the building codes for certain unsprinklered occupancies.

The actual test procedure is substantially the same as that described in California Technical Bulletin 129.

This also includes the maximum heat release of 100 kW versus the 200 kW maximum permitted by CFR 1633.

Also, the reporting requirement of NFPA 267 encompasses more categories than the Technical Bulletin 129 test.
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CFR 1632/1633 (Ticking)
There are two current full mattress tests: CFR 1632 and CFR 1633.

For years, CFR 1632 existed on its own.

Prototype testing of mattresses requires that the records indicate whether Class A, B, or C ticking was used.

Most of the ticking found in the market place is of the Class B rating.

Products that comply with CFR 1632 allow free interchange of different ticking styles provided that the new ticking being introduced is the same classification as the ticking it is replacing.

The ticking substitution procedure that is contained in CFR 1632 is, in practical terms, a procedure that concludes with the ticking being rated either Class A, B, or C.

Once CFR 1633 was put on the books, it diminished the need for the ticking substitution test. CFR 1633 became the primary test.

The wording of CFR 1633 seems to permit changes in ticking if the certifier can support that the new ticking will not substantially alter the fire test performance by CFR 1633.

In Govmark’s opinion, it might be prudent to perform a single mattress test against CFR 1633 as a substantiation that the ticking will not have an adverse effect on the mattress’s fire performance.

ASTM D7140 (Fire Barrier)
This is a small scale heat transfer test which industry uses on a voluntary basis to categorize the heat transfer properties of fire barrier materials.

CFR 1632 (Mattress Pads)
Mattress pads are only required to undergo the cigarette ignition resistance test.

The federal government does not mandate open flame testing of mattress pads.

California Technical Bulletin 604 (Mattress Pads)
This is a proposed open flame test.

California is backing away from open flame testing of upholstered furniture; therefore, it is assumed that California will not go forward with Technical Bulletin 604.
**Michigan Roll Up Test (ASTM F1085, Annex A3)**

The Michigan Roll Up Test first appeared in the early 1980s.

It seems to have been a “word of mouth” test without documentation.


The standard seems vague as to pass/fail.

Govmark has determined that the key report values are weight loss and peak heat release.