FIRE SERVICES DEPARTMENT
FIRE PROTECTION COMMAND
FIRE SERVICES HEADQUARTERS BUILDING,
No. 1 Hong Chong Road, 5/F.,
Tsim Sha Tsui East, Kowloon,
Hong Kong

FSD Circular Letter No. 1/2000

Flammability Standards for Polyurethane (PU) Foam Filled Mattresses and Upholstered Furniture in Licensed Premises and Public Areas

This Circular Letter announces the flammability standards for Polyurethane (PU) Foam Foamed mattresses and upholstered furniture, both fixed and movable, to be adopted in licensed premises and public areas.

Following the Government's decision to introduce administrative measures to regulate the fire safety of PU foam filled mattresses and upholstered furniture, FSD in conjunction with other Departments and Bureaux has conducted an extensive research on international flammability standards for mattresses and upholstered furniture suitable for use in public areas. As a result, the following flammability standards have been identified and will be adopted for local use:

For Mattresses

British Standard : Specification for resistance to ignition of mattresses, divans and bed bases (for the use in medium hazard premises/building) BS 7177 : 1996 or its international equivalent. (Extract of the standard attached at Appendix I)

For Upholstered Furniture

British Standard : Specification for resistance to ignition for non-domestic seating by testing composites (for the use in medium hazard premises/building) BS 7176 : 1995 or its international equivalent. (Extract of the standard at Appendix II)
For new applications or existing licensed premises applying for major alterations, all PU foam filled furniture items to be used in the premises shall meet the specified standards. For existing licensed premises, all PU foam filled furniture items not meeting the specified standards shall be replaced through a phased programme.

PU foam filled furniture items meeting the specified standards shall bear an appropriate label as per appendix III and IV. In addition, the following documents are required to be produced for verification:

(i) The invoice from the manufacturers/suppliers indicating that the PU foam filled furniture items meet the relevant flammability standards; and

(ii) A copy of the testing certificate indicating that the material used for the fabrication of the furniture items comply with the relevant standards. The test certificate shall be issued by a testing laboratory accredited to conduct tests according to the specified standards. Such certificate must bear the supplier/manufacturer's company seal for authentication purpose.

The above measures will be implemented with effect from 20 January 2000.

Signed
(KWOK Jing-keung)
for Director of Fire Services
Table 1. Performance requirements and notes on application of hazard categories
(When using this table it is essential to consult the notes which follow it.)

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Low hazard</th>
<th>Medium hazard</th>
<th>High hazard</th>
<th>Very high hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resistant to ignition source:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>smouldering cigarette of BS EN 1021-1</td>
<td>smouldering cigarette of BS EN 1021-1</td>
<td>smouldering cigarette of BS EN 1021-1</td>
<td>smouldering cigarette of BS EN 1021-1</td>
<td></td>
</tr>
<tr>
<td>Resistant to ignition source:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>match flame equivalent of BS EN 1021-2</td>
<td>match flame equivalent of BS EN 1021-2</td>
<td>match flame equivalent of BS EN 1021-2</td>
<td>match flame equivalent of BS EN 1021-2</td>
<td></td>
</tr>
<tr>
<td>Resistant to ignition source 5 in</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>section 4 of BS 5852 : 1990.</td>
<td></td>
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<tr>
<td>Resistant to ignition source 7 in</td>
<td></td>
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<td></td>
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<tr>
<td>section 4 of BS 5852 : 1990.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Typical examples

<table>
<thead>
<tr>
<th>Offices</th>
<th>Schools</th>
<th>Colleges</th>
<th>Universities</th>
<th>Museums</th>
<th>Exhibitions</th>
<th>Day centres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hotel bedrooms</td>
<td>Public buildings</td>
<td>Restaurants</td>
<td>Services’ messes</td>
<td>Places of public entertainment</td>
<td>Public halls</td>
<td>Public houses and bars</td>
</tr>
<tr>
<td>Sleeping accommodation in certain hospital wards and in certain hostels</td>
<td>Offshore installations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Prison cells |

1) If a particular premises in the low hazard area is also used for sleeping purposes then consideration should be given to specifying a higher performance level.

2) Upholstered furniture which is ordinarily intended for private use in a dwelling is subject to Government Regulations (see foreword).
Table 1. Performance requirements and notes on application of hazard categories
(When using this table it is essential to consult the notes which follow it.)

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Domestic use (low hazard)</th>
<th>Medium hazard</th>
<th>High hazard</th>
<th>Very high hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resistant to ignition with source – match flame equivalent of BS EN 597-2 : 1995</td>
<td>Resistant to ignition with source – match flame equivalent of BS EN 597-2 : 1995</td>
<td>Resistant to ignition with source 5 of BS 6807 : 1996, Section 2</td>
<td>Resistant to ignition with source 7 of BS 6807 : 1996, Section 2</td>
<td>Additional tests specified by the user with greater than high hazard requirements</td>
</tr>
</tbody>
</table>

Typical examples (see notes 1 and 2)
- **Domestic dwellings (including non-motorized caravans)**
- **Hospitals**
- **Services’ messes**
- **Day Centres**
- **Hotels**
- **Hostels**
- **Old peoples’ homes**
- **Holiday camp chalets**
- **Boarding schools**
- **Residential schools**
- **Halls of residence at universities and colleges**
- **Certain hospital wards**
- **Off-shore installations**
- **Hotels**
- **Hostels**
- **Old peoples’ homes**
- **Prison cells**
- **Locked psychiatric accommodation**

3) The fillings used in domestic mattresses, divans and bed bases (low hazard) are also subject to Government Regulations (see foreword).
4) It cannot be assumed that mattresses, divans and bed bases meeting the requirements for medium, high or very high hazard will automatically meet the government requirements for fillings. It is recognized that fillings which do meet the government regulations are commonly used in mattresses, divans and bed bases for medium, high or very high hazard environments.
Complies with BS 7177: 1996 for medium hazard

Figure 1. Example of a label
Appendix IV

COMPLIES WITH BS 7176: 1995
DIRECT TEST/PREDICTIVE TEST\(^3\)
FOR MEDIUM HAZARD
\(^3\) Delete whichever is inappropriate

Figure 1. Example of a label