

Estates and Facilities Division Alert

Engineering, Technology and Environment



Alert Category Immediate Action
 Action
 Update
 Information Request

DH (2007) 11

Issued: 19th December 2007

Gateway Ref : 9219

Product	Flame retardant cotton curtains / bed screens	
Manufacturer/Supplier	Curtains made by Gatoc Ltd (no longer trading). The cotton material was manufactured in 2000 by Gradus Fabrics Ltd	
Problem	Supposedly flame retardant cotton curtains / bed screens may exhibit poor flame retardancy, with resultant risk of fire	
Risk	Risk of fire	
Action	See below	
Deadline (Action Underway) : 04/01/2008		Deadline (Action Complete): 29/08/2008

Distribution :

Chief Executive/Board Member with special responsibility for health and safety, in accordance with local procedures ensure that this alert is brought to the attention of appropriate staff which may include:

- Directors of Estates and Facilities
- Facilities Managers
- Laundry Managers
- Risk Managers
- Fire Safety Managers
- Senior Nursing Staff (Matrons & Ward Managers)

Action Recommended :

1. All areas where curtains / bed screens are in use should be assessed for the potential for fire to occur as part of the fire risk assessment undertaken in compliance with the Regulatory Reform (Fire Safety) Order 2005. In areas considered to be higher risk, which might include but may not be limited to, Mental Health wards and Emergency Departments, consideration should be given to replacing cotton curtains (regardless of manufacturer) with inherently flame retardant polyester. In contrast to cotton, polyester is an inherently flame retardant material that melts away from the flame, allowing it to pass the BS 5867-2¹ flammability test without the need for flame retardant (FR) treatment. It is thought that polyester materials are not adversely affected by bleach. Polyester, as with FR treated cotton, can be ignited eventually, producing hot molten droplets. This should be taken into account as part of the fire risk assessment when choosing curtain materials.

HOW TO REPORT DEFECTS AND FAILURES

All staff working in a healthcare environment have a responsibility to report any defect or failure that occurs at work to the Department of Health. Guidance for reporting such incidents is contained in DH (2007) 01. If you have any queries, please seek advice from your Line Manager or the Department of Health

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2. Laundries (both NHS and commercial) should be reminded about the adverse effects of bleach on FR treated cotton and procedures in NHS laundries should be reviewed. Where commercial laundries are used, their current procedures should be assessed before awarding or renewing a contract.
3. At the planning stage of a new development or refurbishment of existing facilities, consideration should be given to the use of polyester curtains / bed screens in higher risk areas as identified above.
4. Where cotton curtains / bed screens are to be replaced with polyester, NHS organisations will need to decide whether to retain the cotton ones for use in lower risk areas, or to dispose of them.
5. Samples of any withdrawn cotton curtains / bed screens could be tested to ascertain the scope of the problem and to find out if other makes of FR cotton curtains are implicated. (The Department would be interested in the results, see contact details at the end of this alert). An accredited test house could carry out flammability testing to BS 5867-2.

Background

6. Two incidents have occurred in which a supposedly FR cotton curtain / bed screen was set alight by an in-patient in a Mental Health ward.
7. After the second incident, another bed screen of identical type and age from the same ward was tested by hospital staff, and later by Scottish Healthcare Supplies, who found it could be set alight with relative ease using a cigarette lighter.
8. The curtains were made by Gatoc Ltd who are no longer trading. The cotton material was manufactured in 2000 by Gradus Fabrics Ltd and involved treatment with the FR chemical Pyrovatex, which was carried out by a subcontractor. Both incidents involved material from the same batch.

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9. Samples of the curtains / bed screens involved in the incidents were tested by Gradus Fabrics Ltd to British Standard BS 5867-2 Type C. They failed the flammability test. A further eight curtains from the same batch were tested and only one failed the flammability test, indicating that the problem did not affect the entire batch.
10. Chemical analysis of the two curtains involved in the fires found only trace amounts of the Pyrovatex flame retardant chemical on the fabric surface, suggesting that the FR treatment had not been applied or had been applied incorrectly. The lack of Pyrovatex has not been explained fully but the possibilities suggested by the manufacturer include material being missed at the beginning / end of the roll and problems during the baking / curing process.
11. The use of hypochlorite bleach in the laundering of FR cotton curtains will reduce the effectiveness of the FR treatment. However, investigation into the processes at the laundry involved in the incidents has shown that the use of bleach was unlikely, and in any case it is improbable that bleach would have reduced the amounts of Pyrovatex to the low levels found.
12. Although no fire incidents have been reported, the findings of the investigation suggest that other makes of FR cotton curtains might also fail to perform as expected.

Enquiries

Enquiries to the Department of Health should be addressed to:

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¹ BS 5867 Part 2:1980 *Specification for fabrics for curtains and drapes - flammability requirements*, British Standards Institution, 1 Jan 1980 ISBN 0 580 11380 9

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