

# Health and Safety Executive OC 216/14

Field Operations Division

To

Factory Inspectors

FCG Specialist Inspectors (Process Safety)

## FIRE TESTING OF BULK TEXTILES AND CELLULAR PLASTICS

This OC, which revises and replaces OM 1991/119, gives advice on the procedures that are available for obtaining an assessment of the fire hazards created by many types of synthetic textiles and cellular plastics when made or stored in quantity.

### CURRENT GUIDANCE

1 General guidance on the fire hazards of solid materials is contained in booklet HS(G)64 *Assessment of fire hazards from solid materials and the precautions required for their safe storage and use (file 222)*, which was published jointly by HSE, the Home Office and the Scottish Office, and should therefore also be in use by fire officers. More specific advice on cellular plastics will be contained in a revision of booklet HS(G)1, due for publication in 1994.

### FIRE TEST METHODS

2 There are many different fire test methods in use for flammable solids, often intended to provide an assessment of finished products or information on quality control during manufacture. Such tests may give little relevant information about the hazards in the factory situation. Inspectors may need to assess the fire hazard arising from manufacture or storage of substantial quantities of flammable solids, and for this purpose, HS(G)64 recommends that the materials should be tested in a test rig described as the medium scale (or third scale) room.

3 Many factors can affect the fire properties of apparently similar materials. Surface treatments, flame retardants incorporated, bulk density and blowing agents used are likely to be important. Where inspectors or occupiers need an assessment of the fire hazards in the workplace of a particular material, full details of the product concerned should be obtained. The local FCG should then be consulted as they have a database of results of tests in the medium scale room.

### PROCEDURES FOR PRODUCT TESTING

4 If the FCG advises that there is no useful test data on a particular product, it may be necessary to carry out fire tests at HSL (formerly RLSD) Buxton. Occupiers who need information about the fire hazards of a particular product should be advised to submit samples for testing to appropriate organisations. An inspector may

indicate that this testing facility is available on a commercial basis at HSL, Fire and Thermofluids Section, Harpur Hill, Buxton.

5 Inspectors may also wish to submit samples for testing with a view to enforcement action. This should normally be with the involvement of the FCG.

#### QUANTITIES REQUIRED FOR TESTING

6 The medium scale test normally uses 5 kg of sample for a single run, which for low density products may amount to as much as 250 litres of sample. It is recognised that this sample size may cause problems, both for the occupier who may be unwilling to supply so much material, and for inspectors in arranging transport to Buxton.

7 Accordingly, a small scale test rig has been constructed, a ninth scale room. This requires only 200 g of sample per run, equivalent to about 10 litres of foam. Experience with this rig has shown that it will allow many samples to be correctly assessed, but for borderline cases, larger scale testing is still necessary.

8 To avoid repeated testing of essentially similar samples, full information should be provided by the originator. The information required should be under the following headings:

(1) Manufacturer and trade name/ eg ICI foam FF2

reference

(2) Base polymer type eg polyether/TDI

based polyurethane

(3) Any flame retardant eg contains melamine

treatment or surface at 4%, or surface

treatment treated with

aluminium salts

9 It is recognised that in some cases that the user of the material may have to consult his/her supplier for such information. Information provided will be treated confidentially.

10 Enquiries about this OC should be directed to THSD A3C, Magdalen House, Bootle.

## **Cancellation of instructions**

11 OM 1991/119 - cancel and destroy.

29 September 1994

(FOD/328/94)

Disc Ref: FODA1.Edt/J023/8.94/DH/CP

(NEW DISC REF: J:\EDITORS\CA1\J023AU94.SAM)

## **ASI headings**

Cellular plastics: fire: storage: testing: textiles.