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# **FLAME RETARDANT TREATMENT OF MATERIALS**

A guide to fire retardant applied  
to curtains and drapes

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## INTRODUCTION

Whether for reasons of satisfying the conditions of a licence (i.e. Theatres Act or Public Entertainment licence) or following a fire risk assessment, it is often necessary to ensure that certain materials in the form of furnishings, scenery, drapes and curtains, have good flame retardant characteristics. Such materials, may be inherently flame retardant or specially treated to render them flame retardant during the manufacturing process, (conforming to British Standard 5867 Part 2 type B). Alternatively, other materials can usually be treated subsequently by dipping or spraying with one or other of certain chemical compositions. It should be noted that in the case of licensed premises the treatment should be applied by an approved contractor who will issue a certificate on completion.

## COMMERCIAL TREATMENT

A number of specialist companies will undertake the treatment of certain materials to render them fire retardant. Reference should be made to trade directories for the names and addresses of such companies.

## DIY TREATMENT

In the absence of any proprietary treatments, it is possible to prepare your own solutions.

The following formulae are of 3 such solutions which have been found suitable. They are as follows:

<b>1)</b> Boric Acid 4 kg	<b>2)</b> Borax 283 grammes	<b>3)</b> Borax 200 grammes
Sodium Phosphate 2.7 kg	Boric Acid 227 grammes	Boric Acid 85 grammes
Water 45 litres	Water 4.5 litres	Water 2.25 litres

Solutions 1 & 2 have been found suitable for scenery and for coarser fabrics, and solution 2 can be used on more delicate fabrics and cotton and wool. Solution 3 has been recommended for the treatment of domestic materials (but not those which come into contact with the skin such as clothing or bed linen).

The best results are usually obtained by submerging the material in the solution until it is thoroughly impregnated, and then allowing the surplus to drain away. Pressure may be applied, but rinsing in water should be avoided as this tends to wash out the protective chemicals.

Built canvas scenery and large areas of draping can best be treated by applying solution 2 by means of a spray, either hand or mechanically operated. It is advisable before treatment to test a small piece of the fabric as in some cases colours are effected by the solution. Certain fabrics such as rayon and other acetate materials are not suitable for the above treatment and their use for stage scenery is not recommended. It is recommended that protective gloves, goggles and clothing is worn whilst handling these materials.

## TESTING FOR FIRE RETARDATION

Under normal circumstances a certificate of conformity issued by a manufacturer or a recognised contractor after a subsequent treatment, would be sufficient proof of fire retardancy.

In the case of DIY treatments, a letter from the Chairman, a Committee member or like person should be available for inspection. Alternatively a licensing officer or fire safety inspector may require a sample of the treated material for off site testing.