Fabrics

The main flame retardant treatments formulated and applied by Fabric Flare for fabrics are ‘Duraflam’ and ‘Duraflam-Duracote’.

The Formulations
‘Duraflam’ and ‘Duraflam-Duracote’ are a complex mix of ammonium polyphosphates, urea, polyphosphoric acid, organo-phosphate resins, binders, penetrators and an intumescent based retardant. The formulations are virtually colourless, non-corrosive and non-hygroscopic. ‘Duraflam’ and ‘Duraflam-Duracote’ are durable treatments and not easily reduced by external factors, such as wetting, leaching, or high humidity. The inherent strength of the treated material is not diminished by the treatment process. Every fabric is first treated with a ‘Duraflam’ formulation and, if required, with a ‘Duracote’ intumescent formulation for certain types of substrate. The ‘Duraflam-Duracote’ system is especially effective with synthetic compositions and ‘plastic’ derivatives, such as vinyls, faux suedes and acrylics.

The System
1. Treatment of ‘Duraflam’ is via pad, clear back coat, or controlled pressure application.

2. Depending on fabric type and fibre composition, further applications of ‘Duraflam’ and/or ‘Duracote’ may be necessary to achieve the required degree of flame retardancy.

3. Treated products are cured in one of three bakers, depending on fabric type and width, with temperatures being lowered and increased, as required, to minimise shrinkage and distortion.

4. The treatment and curing process is via intermittent heat cycles, with heat used as the catalyst for durable fixation.

5. An indicative flammability assessment is conducted, based on the test criteria set out in the relevant standard.

Certification
Although our certification is recognised by most fire prevention authorities, both in the UK and abroad, our in-house assessments of compliance are based on indicative tests which replicate, as far as possible, the criteria for conformity. Therefore, we recommend that treated samples are submitted to accredited laboratories, at pre-set intervals, for independent assessment. The combination of results ensures the continuing integrity of both treatment and certification.

System Performance
Fabrics can be treated with ‘Duraflam’ and ‘Duraflam-Duracote’ to comply with the following standards:

1. BS 5852 in accordance with Section 4 [Wooden Crib 5]
2. BS 5852: Part 1 [Cigarette and Match]
3. BS 5867: Part 2: Type B
4. BS 476: Part 7 Class 1]
5. BS 476: Part 6 [Class 0]
6. BS 476: Part 6 [Class 0]
7. BS 4790
8. BS 7175 in accordance with Section 3 [Wooden Crib 5]
9. BS EN 1021-1 and BS EN 1021-2 [Cigarette and Match]

10. BS EN 13823

11. BS EN ISO 11925-2

12. EN 13773

13. NFP 92 501 [M Classification]

14. NFP 92 503 [M Classification]

15. DIN 4102 [B Classification]

16. SN 198898

17. FMVSS 302

18. CAA 8/FAR 25 (b)/JAR 25 (b)

19. IMO Resolution A. 652 (16)

20. IMO Resolution A. 688 (17)

21. IMO Resolution A. 653 (16)

22. IMO Resolution A. 563 (14)

European Standards
The European construction industry is entering a period of transition due to the progressive implementation of the Construction Products Directive. The introduction of the new pan-European system of fire testing is one consequence. We continue to review our procedures for future product treatment and fire test requirements accordingly.

Fabric Flare also formulates and applies ‘Duraseal’ Water and Soil Repellant for fabrics. The repellant is compatible with the ‘Duraflam’ and ‘Duraflam-Duracote’ system of flame retardancy.

The Formulation

‘Duraseal’ is a virtually colourless mix of fluorine polymers, with added emulsifiers in an organic solvent base, providing a durable repellant finish that is resistant to atmospheric contaminants, oil and grease, as well as many foodstuffs and beverages. ‘Duraseal’ is an effective repellant against most types of soiling but it does not form an impermeable barrier. The repellant ‘coats’ each and every textile fibre without blocking the interstices of the fabric weave. The treatment allows the fabric to ‘breathe’ and makes subsequent cleaning easier.

After Care

All types of soiling should be attended to as quickly as possible. Mopping up, with a sponge and cold water, is normally an effective means of removing the contaminant from a ‘Duraseal’ protected fabric. The use of hot water, detergents and solvents could reduce repellancy and increase the risk of re-soiling. Therefore, such corrective treatments are not recommended.

In the event of large spillages, cold water and mechanical extraction, via a wet vacuum machine, or the upholstery attachment of a carpet cleaning appliance, should remove the contaminant without reducing the level of repellancy. For the best results, we always recommend the use of a reputable and professional cleaning service.

System Performance

In the absence of any British or European Standard governing the performance of such repellants, together with variable traffic conditions in every venue, it is impossible to guarantee the effective life of a ‘Duraseal’ treatment. However, the product has been used extensively in hotels, schools, pubs, clubs and offices, without evidence of any deterioration over a five year period, and the empirical data supports a continuation of satisfactory performance beyond this trouble-free period.