



**SafeCoat products are highly effective, environmentally friendly and economical fire retardant treatments. They can be used to fire retard fabrics, straw, cardboard paper and practically all water absorbent materials.**

- Apply by spraying, padding or immersion
- Colorless, odorless
- **FR31** does not substantially affect feel or appearance of fabric
- Water soluble, can be washed out
- Ready-to-use liquid form
- Chemically neutral pH 7.0 to 8.0

#### **FR31**

Highly effective for most fabric, both natural and synthetic. Tested to meet CAN/CGSB 4.2 27.1MS on 100% cotton, 100% polyester and 65/35 cotton/polyester blend. Also effective on cardboard and paper. It would be difficult to test these products on every conceivable material. If you have a material different than what has been tested by us you can do the following. Firstly, the **FR31** must be able to penetrate the material it is being applied to. Some synthetic fibres such as nylon for instance, do not allow penetration and the **FR31** will bead or sit on top of the fabric. The **FR31** would be unable to increase fire retardancy and the nylon would quickly melt or burn. If the **FR31** does penetrate the material, then you can do your own burn test by applying a flame. It should be fire resistant and when the flame is removed any burning activity on the material should stop immediately.

#### **FR41**

This product replaces our FR31S that was formulated to treat straw, hay, cardboard and paper. This is the same formula at a stronger concentration and is therefore more effective. It is used as an exterior/interior absorbent fire retardant which provides excellent protection against grass and wild fires and a wide variety of substances. It is highly effective on wood, wood base products, dry vegetation and all materials where fire protection is desired. This product will wash out in the rain or when laundered and will require re-treatment.



## PRODUCT DESCRIPTION

This product is highly effective, economical and environmentally friendly fire retardant treatment for fabric of most types. It can be used as a fire retardant and impregnating agent on practically all water absorbent materials. **SafeCoat FR31** can be applied by spraying, padding or immersion, or it can be incorporated directly into a product. The method of application depends on the type of material and structure of the fiber to be protected.

## FEATURES

- is an aqueous solution of inorganic salts. It is colorless and has a slight odor of ammonia in solution but is odorless when dry.
- is chemically neutral or slightly alkaline with a pH of 7.0 to 8.0. Its primary role is to act as a flame retardant.
- does not substantially affect the appearance or feel of the fabric if properly applied. The fabric remains soft and pliable. Since **SafeCoat FR31 Fire Retardant Fabric Treatment** is water soluble it can be washed out of both textiles and materials. Re-treat after laundering.
- is approved in ready to use, liquid form.

## USES

### Applications By Industry:

Convention/Hospitality; Furniture; Carpet; Entertainment; Residences; Trade Shows/Exhibitions/Fairs; Senior Citizen Homes; Nursing Homes; Military; Mining; Retail; Pulp and Paper; Libraries; Theaters and Museums; Public Office Buildings; Long Term Care Facilities; Automobile; Recreation Complexes; Publishing; Food Service; Government; Hospitals & Clinics; Hotels & Convention Centers; Rodeo (Straw). and other places of public assembly which are required to be furnished with fire resistant materials to protect the public, as well as property, against accidental ignition or arson.

### Applications By Product Group:

**Textiles:** Lab Coats; Coveralls; Velour; Drapery; Curtains; Carpets; Tents\*; Work Clothing; Wall Coverings; Cotton and Canvas; Linen (Table Cloths); Upholstery. **Paper and Cellulosics:** Trade Show Displays; Straw and Hay; Decorations; Acoustic Tiles; Wood Chips; Sawdust; Packaging; Cardboard; Books and Documents; Crepe Paper; Fiber Roof Board.  
\*The water-soluble properties of **SafeCoat FR31 Fabric Treatment** limits these applications. Addition of a sealant is required to protect the Fire Retardant from leaching if exposed to water.

## TECHNICAL DATA and PROPERTIES

<b>Appearance/Odor</b>	Colorless free flowing liquid/slight ammonia odor
<b>Specific Gravity</b>	8.65 lbs/USG or 1.04 g/mL
<b>Solids by Weight</b>	20%
<b>pH</b>	7.0-8.0
<b>Dry Time</b>	Dependent upon fabric type and thickness
<b>Coverage</b>	1 to 1 (1:1) - i.e.: one pound of solution for one pound of fabric
<b>Boiling Point</b>	Not available
<b>Storage Limits</b>	Store in a cool dry location away from direct sunlight. Keep from freezing, above 32° F (0°C)
<b>Packaging</b>	Available in one quart, one US Gallon and five US Gallon quantities

**Note: SafeCoat FR31 Fire Retardant Fabric Treatment** is an aqueous solution of inorganic salts, chemically neutral or slightly alkaline with a pH value of 7.0-8.0. It has very low toxicology, but should be kept out of the reach of children. Read MSDS for detailed precautions.

## APPLICATION INSTRUCTIONS

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### Typical Application

- **SafeCoat FR31 Fire Retardant Fabric Treatment** can be applied by spraying, coating or immersing a fabric at any point in the manufacturing process.
- do not dilute or mix with other products.
- check the fabric for color-fastness before starting the treatment.
- distribute solution evenly across the entire surface, ensuring that solution does not flow or drip to the extremes whenever possible.
- dry on a horizontal drying rack, at moderate temperature (between 70° and 175° F) for optimal results.
- tumble dry fabric in a warm dryer, (maximum temperature should not exceed 175° F).
- iron fabric using a warm iron (maximum temperature 200° F). Iron a small area first, to ensure the color is not affected.
- to spray **SafeCoat FR31 Fire Retardant Fabric Treatment**, use a hand held or back pack pressurized spray container with an atomizer nozzle. Filter the solution into the tank to keep out any solids that may plug the nozzle. With daily use, the sprayer must be flushed out with clean warm water.

### Coverage rate:

The required quantity depends on the absorbency of the material, its inherent flammability and its overall weight. As a rough guide:

- the maximum amount of **SafeCoat FR31 Fire Retardant Fabric Treatment** required is proportional to the original weight of the material to be treated (80 to 100%).
- i.e.: if the dry fabric starts out weighing 1 kg, then it should pick up between 0.8 to 1 kg of solution during treatment and retain an additional net added weight of 73 g to 91 g after drying.

### Fabric Cleaning and Care Instructions:

Detergents and water or shampooing (i.e.: of drapes, carpets, etc.) will remove **SafeCoat FR31 Fire Retardant Fabric Treatment** and re-application will be necessary. Re-treat after laundering.

### Hazard Class

**SafeCoat FR31 Fire Retardant Fabric Treatment** is not subject to WHMIS Regulations, nor is it regulated by Transportation of Dangerous Goods.

## TEST RESULTS

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**SafeCoat FR31 Fire Retardant Fabric Treatment** is tested under **CAN/CGSB 4.2 27.1 MS**. The results show "**a high degree of flame resistance**" on fabrics such as:

- Polyester fabrics - 100%
- Cotton - 100%
- Polyester/Cotton blend - 65/35%

Each of these fabrics is a medium weight (drapery/tablecloth) fabric.

## PRODUCT WARRANTY

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Recommendations for the use of our products are based on tests carried out at government approved labs. Manufacturer and seller are not responsible for results where the product is used under conditions beyond our control. The purchaser of this product must rely on his own judgement in determining suitability for his purpose, and in applying directions as to handling and use. Quantum makes no warranty, expressed or implied, except that if this product proves on inspection to be defective, Quantum will replace such quantity of the product proven to be defective or refund the purchase price of defective product. Labour costs and other consequential damages are hereby excluded. No representative or purported agent of Quantum has the authority to change this warranty. The information contained herein is subject to change without notice. If in doubt, contact your Quantum Representative for current Technical Data Sheets (TDS).

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