



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

SafeCoat FR41 is designed for use on a wide variety of substances. It is extremely effective on wood, wood base products, straw, hay, dry vegetation, paper, cardboard and practically all water absorbent materials where fire protection is desired.

SafeCoat FR41 is formulated to be used as an exterior/interior absorbent fire retardant and provides excellent protection against grass and wild fires. It is non-toxic and contains no harmful ingredients. Re-treatment required following rain or laundering.

SafeCoat FR41 can be applied by spraying, padding or immersion, or it can be incorporated directly into the product. The method of application depends on the type of material and structure of the fibre to be protected.

FEATURES

- is an aqueous solution of inorganic salts. It is colorless and has a slight odor of ammonia in the 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.
- Treated fabric remains soft and pliable. Since **SafeCoat FR41 Broad Spectrum Fire Retardant** is water soluble it can be washed out of both textiles and materials. Re-treat after laundering.
- is approved in a ready to use, liquid form.
- easy to use, colorless, safe to use, bromine free.

USES

Applications By Industry:

Convention/Hospitality; Furniture; Carpet; Entertainment; Residences; Trade Shows/Exhibitions/Fairs; Senior Citizen Homes; Nursing Homes; Recreation Complexes; Military; Forestry; Retail; Pulp and Paper; Mining; Libraries; Theaters and Museums; Public Office Buildings; Long Term Care Facilities; Food Service; Wood Surfaces, Shingles & Siding, Posts; Dimensional Lumber Structures; Manufactured Wood Surfaces; Vegetation & Grass Fire Retardant; Publishing; Hospitals & Clinics; Hotels & Convention Centers; Rodeo (Straw); Government 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: Coveralls; 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 and Sawdust; Packaging; Cardboard; Books and Documents; Crepe Paper; Fiber Roof Board; Wood; Dry Vegetation. *The water-soluble properties of **SafeCoat FR41 Broad Spectrum Fire Retardant** limits these applications. Addition of a sealant is required to protect the Fire Retardant from leaching if exposed to water.

TECHNICAL DATA and PROPERTIES

Appearance/Odor	Colorless free flowing liquid/slight ammonia odor
Specific Gravity Solids by Weight	8.65 lbs/USG or 1.04 g/mL 33%
pH	7.0-8.0
Flash Point	0 (non-flammable)
Solvents	Water base no petroleum derivatives
Fungal Charac.	Resistant
Bacterial Charac.	Resistant
Corrosive Toxic	Mild in liquid form Non-toxic, insect resistant, mold resistant
Preservative	Non harmful, bio-degradable
Dry Time	Dependent upon surface material type and thickness
Coverage	1 to 1 (1:1) - i.e.: one pound of solution for one pound of surface material
Boiling Point	Not available
Storage Limits	Store in a cool dry location away from direct sunlight. Keep from freezing, above 32° F (0°C)
Packaging	Available in one quart, one US Gallon and five US Gallon quantities

Note: SafeCoat FR41 Broad Spectrum Fire Retardant complies with US Federal regulations. It has very low toxicology, but should be kept out of the reach of children. Read MSDS for detailed precautions.

APPLICATION INSTRUCTIONS

Typical Application

- **SafeCoat FR41 Broad Spectrum Fire Retardant** can be applied by spraying, coating or immersing a surface material.
- apply directly to surface area. Buildings and wood roofs apply 3 or more applications. (Take care to treat cracks and crevices where possible.)
- on grass and brush be sure to saturate to the soil.
- do not dilute or mix with other products.
- distribute solution evenly across the entire surface, ensuring that solution does not flow or drip to the extremes whenever possible.
- surface to be treated should be dry and free from moisture for 3 to 4 hours.
- to spray **SafeCoat FR41 Broad Spectrum Fire Retardant**, 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 Fr41** 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 120 g to 150 g after drying.

Application to Straw, Paper and Other Cellulose-based Products

Hay or Straw Bales for Display: Approximately 1 quart of **SafeCoat FR41 Broad Spectrum Fire Retardant** per bale is required for good penetration. Spray on with an atomizer nozzle.

Cardboard: Corrugated cardboard is best treated with a fine atomized spray on both sides. Do not soak material in any one spot for too long a period, since this will warp the cardboard and make it lose its shape.

Paper and Decorative Materials: Thorough saturation of paper with spray will work. For best results, hang paper during spraying. Total immersion can be used but a test sample is advised.

Wood Utility Poles: Thoroughly saturate surface - approximately 100ft² per U.S. Gallon.

Grass and/or Groundcover Vegetation: Spray directly on dry or dead vegetation to thoroughly saturate. Typically 150-200 ft² per gallon is adequate.

Safety Precautions

SafeCoat FR41 is environmentally responsible and causes little to no harm to the environment. Avoid contact with eyes. Personal protective clothing should be used to protect eyes, lungs and skin from prolonged contact. Clean up with soap and water. Clean spray equipment with water. **Keep out of reach of children. Do not take internally.**

Hazard Class

SafeCoat FR41 Fire Retardant Fabric Treatment is not subject to WHMIS Regulations, nor is it regulated by Transportation of Dangerous Goods.

TEST RESULTS

SafeCoat FR41 Broad Spectrum Fire Retardant is tested under **CAN/CGSB 4.2 27.1 MS**. The results show "**a high degree of flame resistance**" on surface materials such as:

- Polyester surface materials - 100%
- Cotton - 100%
- Polyester/Cotton blend - 65/35%
- Wood and straw fiber
- Vegetation and groundcover
- Wood surfaces and wood roofs

PRODUCT WARRANTY

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).