

Professional liquid for the flame retardant finishing of fabrics made of natural , cellulosic and blends with synthetic fibres.

INSTRUCTIONS FOR USE

What is Ecoflamtex used for?

The treatment applied to a material in order to delay ignition or to reduce the rate of combustion is called fireproofing.

The fire-retardant treatment is usually performed on flammable materials, especially textiles of various kinds and wood.

Ecoflamtex is a flame retardant product, a mixture of salts and other organic substances that act by delaying the ignition and slowing the propagation of fire.

Subjected to fire, the active ingredients of Ecoflamtex decompose, producing carbon dioxide and water vapor and absorbing heat.

The action of Ecoflamtex is twofold: it lowers the temperature of the treated material and it slows the propagation of flames. Ecoflamtex is a safe and environmentally friendly product, completely biodegradable.

NOTE: any material, once it reaches a sufficient high temperature, burns. Ecoflamtex, like all other flame retardants, does not prevent a fabric from burning, but it retards and slows the production of flame, when properly applied.

What kind of materials can be treated with Ecoflamtex?

You can effectively treat textile materials made of:

- natural fibres (cotton, wool, hemp, jute, linen, silk, etc.)
- mixed yarns of natural and synthetic fibres
- cellulosic fibres

Ecoflamtex has been developed for use in scenery, for materials used in the construction of sets, stage furniture and costumes.

It is particularly suitable for backdrops, curtains, covers, tapestry, costumes and other stage elements in:

NATURAL FIBRES	MIXED YARNS (synthetic + natural fibres)	CELLULOSIC FIBRES
cotton chenille	chiffon	rayon
cotton gauze/burlap	synthetic chenille	viscose
jute	lycra	
linen	nylon	
muslin	synthetic devetyne	
cotton duvetyne (molton)	satin	
duvetyne/wool serge/felt	nylon netting	
silk/cotton satin	synthetic silk	
cotton netting	acrylic fabric	
silk	polyester cloth/fabric	
taffetas	cotton mix fabric	
cotton canvas	polyester bobbinet, scrim	
gesso canvas	polyester velvet	
cotton bobbinet, scrim	synthetic fabric	
cotton velvet		

IMPORTANT: is not possible to treat waterproof or coated fabrics as the active ingredients can not penetrate into the fibres.

How to use Ecoflamtex?

Quantity

Ecoflamtex is liquid, ready to use. Stir well before use to avoid salt deposits on the bottom of the tank.

The right amount of YFT-Ecoflamtex Liquid depends on the fibre composition, fabric weight and construction, but also by the desired flame retardant effect. As a guideline, the amount of product to be applied varies from 30 to 50% on the total weight of the fabric, at least 30 g of Ecoflamtex per 100 g of tissue to be treated.

For very light and delicate fabrics dilute 15% with water and re-test.

ATTENTION: excessive amount may also cause the stiffening of the fibres and altering the hand of the fabric itself. Always perform an evaluation test to determine how the fabric will react and to verify the effective flame retardance.

Application

Ecoflamtex can be applied:

Chart 2 - Method of application

- by soaking:	completely immerse the fabric and let it soak for 10 minutes, hang to air dry at room temperature, away from direct sunlight. This system gives the best result because the product penetrates deeply and evenly into the fibres of the fabric. Recommended especially for heavy and closed fabrics (>200 g/m ²).
- using a brush:	spread the solution over the entire surface of the material, brush thoroughly to ensure adequate absorption into the fibres. Apply the product on the two sides to increase the efficacy. Allow to air dry at room temperature, away from direct sunlight.
- using a sprayer:	if it is possible hang the material to be treated and spray the solution with a medium/fine nozzle setting. Apply the product on the two sides to increase the efficacy. Allow to air dry at room temperature, away from direct sunlight. This system is recommended for light and delicate fabrics.

Drying

After treatment, hang the fabric to air dry at room temperature 20 - 30° C, away from direct sunlight.

Ecoflamtex Liquid does not require forced drying at high temperature.

Efficacy of the fireproofing treatment

The fireproofing treatment is effective only if the product is applied in the correct way and quantity.

This is the reason why it is recommended to perform a test to determine the proper quantity and flame retardant effect before treating the material.

How to verify the effectiveness of the treatment?

Cut a strip of 2 x 15 cm from the tissue treated with Ecoflamtex The specimen should be completely dry.

Hang the sample strip by means of a spring or tongs with the long axis vertical in a draft-free location.

Apply the flame of a common lighter to the center of the bottom edge of the sample for about 10/12 seconds at a distance of 1/2 cm.

At this point, stop the flame. If combustion ends within approximately 2 seconds, the fireproofing treatment can be considered successfully completed. Otherwise it will be necessary to increase the amount of Ecoflamtex and try again with a new test.

Washing of the treated materials

Dry cleaning

The treated fabrics can withstand dry cleaning because Ecoflamtex is insoluble in most of the products used for dry cleaning.

However, it is important to verify that the products used for dry cleaning are free of humidity or other detergents. It is always recommended to perform a new test on fabric after every dry cleaning.

Washing in water

Ecoflamtex is water soluble, so the effect of the fireproofing treatment is not resistant to washing or exposure to water.

TECHNICAL INFORMATION

Chemical character:	inorganic phosphorus with nitrogen synergist
Appearance:	clear, colourless liquid
Pack size:	5 liter canister
pH:	about 6 - 8
Density:	about 1.20 - 1.25 g/cm ³ (at 20 ° C)
Dilution:	if you should notice crystalline dust on the fabric, dilute 15% with water and re-test.
Coverage:	with a 5 liter canister is possible to treat approximately 50 - 60 m ² (indicative value for cotton canvas 200 g/m ²)
Storage:	store indoor, away from direct sunlight, at normal storage temperatures (20 - 30 ° C). Once opened can be kept for a maximum of 1 year. Do not use metallic containers. Crystallizes at temperatures below 5 ° C, but can be used without impact on quality and properties when re-dissolved at elevated temperature, preferably 30 to 40 ° C. Storage at elevated temperatures can lead to deformation of sealed canister, but commonly has no impact on product quality after aeration.
Safety:	Use with adequate ventilation. Observe the usual precautions for handling chemicals. Wear protective gloves and protective glasses. Do not ingest. Keep out of reach of children. If swallowed, drink large quantity of water. In case of eye contact, rinse immediately with plenty of water and seek medical advice. For further information related to handling and toxicology please refer to the safety data sheet.
Applications:	YFT-Ecoflamtex Liquid is eminently suitable for the flame retardant finishing of natural (cotton, flax, hemp, jute, wool) and cellulosic fibres and blends with synthetic fibres. The flame-retardant effect of YFT-Ecoflamtex Liquid is not wash-resistant, but can withstand a limited number of waterless dry cleaning treatments. YFT-Ecoflamtex Liquid does not require forced high temperature drying.
Side Effects:	YFT-Ecoflamtex Liquid can react slightly hygroscopic when concentrated too high, and due to its salt nature, storage e.g. at very high humidity can support spot formation (blooming) on treated materials. Storage at low humidity can support crystalline deposit formation (dust). Over concentration may also cause the stiffening of the fibers and altering the hand of the fabric itself. Always perform an evaluation test to determine how the fabric will react and to verify the effective flame retardance.
Certification:	Ecoflamtex is approved according to: - Oeko-Tex ® Standard 100 (International Association for Research and Testing in Textile Ecology) - GOTS 3.0 (Global Organic Textile Standard)
Disclaimer:	Peroni S.p.A. ensures the quality and the efficacy of YFT-Ecoflamtex Liquid used and stored correctly, but can not issue a certification of reaction to fire for materials treated with YFT-Ecoflamtex Liquid. It's possible to get a Reaction to Fire classification only by testing a sample of the material treated with YFT-Ecoflamtex Liquid by an approved laboratory. The user must determine the suitability of this product for the intended use since materials and methods of application are beyond the control Peroni S.p.A. Fire regulations vary from state to state. We advise you to check with local authorities to be sure the treated materials meet the standard of the country where they are used.