

Maintenance Procedures and Guarantee

SOLTIS[®]

FERRARI



CONTENTS

. Introduction

This notice 3

Fields of Application 3

. Maintenance conditions for Soltis® Textiles 4

. Checks

Regular checks 5

Spot checks 5

. Cleaning practices

Regular cleaning 6

Cleaning procedures 6/7

Case-by-case cleaning 8

. Procedures and cleaning agents not to be used with Soltis®

Textiles 9

. Conditions of application of the guarantee 10

. Appendix

Detergent specifications and instructions 11

Introduction

This notice:

The present notice sets out the following:

- Maintenance conditions for SOLTIS® membranes
- Standard checkpoints
- Required cleaning procedures
- The use of FERRARI® CLEAN detergent
- Excluded cleaning procedures
- Guarantee application conditions

Fields of application:

SOLTIS® textiles have been developed to protect buildings from the effects of the sun. They are based on FERRARI'S PRÉCONTRAINTE® ISO 9001-certified technology

For both outside and inside use, on movable awnings or fixed blinds, this technology enables extensive surfaces to be covered—whether vertical (facades) or horizontal (glass roofs and walls, verandas, balconies or terraces).

Like all high-performance materials, SOLTIS® textiles will keep their qualities when maintained correctly, as described in this notice.

Maintenance conditions for SOLTIS® Textiles

The composite nature of SOLTIS® technical textiles-using polyester and PVC-gives them very high resistance to climatic and atmospheric elements, such as wind, sun, rain, micro-organisms, dust and miscellaneous pollution.

Maintenance conditions are restricted to:

- regular or spot checks,
- regular or intermittent cleaning.

Maintenance and checking schedules depend primarily on:

- the position of the textile: dirt accumulates and builds up faster on a horizontal than on a vertical surface,
- the exposure of the textile to climatic conditions such as rain, wind, hail, snow; and organic elements such as leaves, pollen and dust.
- the nature and intensity of deposits.

The following table shows average maintenance intervals, expressed in months:

<i>TEXTILE POSITION</i>	<i>LIGHT PRECIPITATION</i>		<i>HEAVY PRECIPITATION</i>	
	Light deposits	Heavy build-up	Light deposits	Heavy build-up
Vertical	36 months	24 months	24 months	12 months
Horizontal	24 months	12 months	12 months	6 months

Checks

Regular checks:

Regular checking involves visual inspection of membranes in order to ensure conformity:

- absence of tearing on the sides, and inside the panel,
- absence of peeling at welded joints,
- absence of thick deposits of dead leaves, insects, ashes, etc. on the surface.

When a sign of abnormality is noticed, the manufacturer or installer should be informed so that appropriate professional steps may be taken.

Spot checks:

Spot checks involve the same type of inspection as in regular checks, but a diagnosis is carried out immediately after an exceptional incident, whether accidental or chance.

Such incidents may occur when the following events happen:

- strong storm with extreme wind conditions reaching or exceeding acceptable limits for the locality,
- snowfall or hail producing or exceeding maximum acceptable loads for the locality,
- accidental falls of sharp or corrosive heavy objects.

Cleaning practices

Regular cleaning:

Cleaning schedules are set out in the section “**Maintenance Conditions for SOLTIS® Textiles**”.

A textile is considered dirty when it has visible long-lasting traces. These traces are often the result of a progressive accumulation of small quantities of particles carried by such atmospheric agents as wind, rain and dripping or seeping water.

There are two essential reasons why SOLTIS® textiles resist pollution so well:

- their very smooth surface texture has few micro-cavities able to house deposits for a long time.
- their surface treatment contains an anti-grip agent.

To avoid sedimentation of polluting agents however, cleaning must be carried out regularly.

Cleaning procedures:

Ferrari® suggests and recommends two cleaning procedures, depending on whether **FERRARI® CLEAN** detergent or **FERRARI® FORMULE S** detergent is to be used.

1> **FERRARI® CLEAN** detergent

FERRARI® CLEAN detergent has been specially designed for cleaning SOLTIS® textiles. It is pre-diluted and comes ready-to-use in 500-ml spray bottles that make for easy regular essential cleaning of all textiles that are exposed to pollution and weather.

For detailed information about this detergent see Specifications on page 11.

How to use:

- a) Ensure the textile is rolled out
- b) For Directions see back of bottle:
 1. Spray the product.
 2. According to the severity of the dirt or stain, leave for 2 to 3 minutes.



3. Rub with a soft brush or a white cloth.
4. Rinse with clean water or wipe with a wet sponge.
5. In case of deep staining, repeat the above procedure.
6. If product is applied to other materials, rinse immediately with clean water. (except electrical machine).

- c) Leave the textile to dry, spread out in the open air if weather conditions allow.



2> **FERRARI® FORMULE S** detergent

FERRARI® FORMULE S detergent is concentrated and is available in 20 kg and 220 kg containers.

For detailed information about this detergent, see Specifications on page 11.

How to use:

- a) Ensure the textile is rolled out

b) Use a soft non-metallic brush to clean off the textile while washing it with clean water on both surfaces, starting with the side most exposed to dirt and pollution.

- c) Wash with the detergent:

Dirt level	Concentration	Water temp.
Slight	5 %	20 °C
Average	10 %	20 °C
Stubborn	10 %	20 °C

All these operations must be carried out according to the directions for use of the detergent.

- d) Rinse thoroughly with clean water.

- e) Leave the textile to dry, spread out in the open air if weather conditions allow.



Case-by-case cleaning:

Dirt build-ups are sometimes difficult to remove using the cleaning procedure described above. This may be due to :

- build-ups of mineral origin:
fats, tars, sediments, etc

- build-ups of vegetable origin:
leaves, pollen, resins, etc

- build-ups of animal origin:
bird droppings, dead insects, etc

The nature of these deposits may lead to the failure of traditional cleaning methods and require the use of other procedures liable to damage the membrane.

Before undertaking any such work, it might therefore be prudent to assess the need for such an operation, and to seek advice from a specialist.

Procedures and cleaning agents not to be used with SOLTIS® textiles

The chemical resistance of Soltis® textiles to aggressions depends on a number of factors, including:

- state of the chemical agents (solid, liquid or gas),
- temperature,
- concentration,
- duration of contact.

In some cases a mixture of agents may trigger a negative result even though each agent is harmless.

This is why:

. the following cleaning methods are strictly forbidden:

- all types of abrasives: powders, pastes, liquids, abrasive sponges, etc,
- generators of pressurized steam,
- water generators without high pressure.

. the following organic chemical products are strictly forbidden:

- acetone, gasoline, benzene, fuel oil, kerosene, perchlorethylene, turpentine, toluene, trichlorethylene, petroleum, tetrahydrofuran (THF), ethyl acetate, hydrogen peroxide, etc

. the following inorganic chemical products are strictly forbidden:

- ammonia, nitric acid, sulfuric acid, acetic acid, hydrochloric acid, soda, caustic soda, bleach, etc

Conditions of application of the guarantee

FERRARI



5 YEARS TEXTILE GUARANTEE

SOLTIS®

Soltis® solar protection technical textiles are manufactured using Précontraint® ISO 9001-certified technology and are guaranteed for a period of five years.

1) Guarantees

Soltis® textiles are guaranteed in normal use against any abnormal deterioration of their essential characteristics:

- tensile strength equal to at least 85% of its original value,
- regular aging of colors subjected to the action of ultraviolet rays,
- fire resistance in conformance with M1 or M2 classification (France), B1 for Germany.

2) Exclusions

The guarantee is void in the case of defects due to:

- transportation, storage and handling conditions,
- faulty design, assembly, installation and fitting that do not respect good working practices, notably in conditions of strong wind,
- the effects of chemical or abrasive attacks resulting from unsuitable cleaning processes, atmospheric pollution or accidental splashing or spraying.

3) Conditions of Application of the Guarantee

This guarantee shall take effect upon the delivery of Soltis® textiles to the client.

The right to guarantee shall only apply if defects are reported by registered letter with acknowledgement of receipt within 30 days maximum after their appearance. Furthermore, the invoice relative to the goods must have been fully paid.

After investigation and agreement, any pieces of fabric recognized as defective by **FERRARI®** shall be purely and simply exchanged under the terms of this guarantee. Labor costs are therefore not covered, neither are costs resulting from dismantling, reinstallation and transport. Moreover, no compensation is included in this guarantee.

FERRARI



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Appendix

Detergent specifications and instructions

FERRARI® CLEAN

Detergent

HOW TO USE

1. Spray the product.
2. According to the severity of the dirt or stain, leave for 2 to 3 minutes.
3. Rub with a soft brush or a white cloth.
4. Rinse with clean water or wipe with a wet sponge.
5. In case of deep staining, repeat the above procedure.
6. If product is applied to other materials, rinse immediately with clean water.

PRECAUTIONS

S02: Keep out of the reach of children.

S62: In case of swallowing do not induce vomiting; consult a physician at once and show the bottle label.

S26: In case of contact with eyes, wash immediately and thoroughly with clean water and consult a physician.

More than 90% biodegradable.
Not dangerous for the environment.

PACKAGING

Carton of 12 plastic 500 ml bottles, ref 106

STORAGE

In a sheltered frost-free location.

SHELF-LIFE

Several years in original unopened packaging.

FORMULE S

Detergent

HOW TO USE

Manual:

- concentration: 1% to 10% of **FERRARI® FORMULE S**
- temperature: 20°C to 50°C

Brushing machine:

- concentration: 1% to 5%

DESCRIPTION

This product is slightly alkaline; without soda or potash. The formula is hypoallergenic.

PRECAUTIONS FOR USE

Gloves should be worn for prolonged use. After contact with the skin wash with water and wipe.

Can be used manually.

Always rinse after use.

Biodegradable. No bioaccumulation in earth or air.

PACKAGING

20 kg, ref. 0101

220 kg, ref. 0102

STORAGE

In a sheltered frost-free location.

Our responsibility shall not be engaged in case of non-respect of the present instructions.

PRECONTRAIT
GARANTIE
GARANTIE
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