

# Maintenance instructions and guarantee

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**PRECONTRAIN<sup>®</sup> M2**



# Contents

## General information

Purpose ..... 3

Application field ..... 3

## Maintenance conditions

for the Précontraint<sup>®</sup> membranes ..... 4

Inspections ..... 4

Cleaning procedures ..... 5

## Cleaning agents and procedures

not permitted for Précontraint<sup>®</sup> membranes ..... 6

Guarantee application conditions ..... 7

Annexes ..... 8

# General information

## Purpose

The purpose of these instructions is to outline:

- maintenance procedures for the PRECONTRAI<sup>®</sup> M2 membranes,
- standard inspections,
- cleaning procedures that are not permitted.

## Application field

The Précontraint<sup>®</sup> M2 membranes, designed using the PRECONTRAI<sup>®</sup> technology, are subjected to detailed inspections, in adherence with the ISO 9002 quality assurance system. Like all high-performance materials, the PRECONTRAI<sup>®</sup> M2 membranes retain their properties if they are maintained in the fashion described in these instructions.

# Maintenance conditions for the Précontraint® M2 membranes

The composite structure of the PRECONTRAIT® M2 membranes (poly-ester, PVC, surface treatment) makes them extra resistant to climatic and atmospheric damage: wind, sun, rain, micro-organisms, dust and miscellaneous pollution.

Maintenance involves no more than:

- periodical or specific inspections,
- periodical or specific cleaning.

The frequency and the type of these inspections depends essentially on:

- the working position of the textile:
  - in a vertical position, deposits will be less damaging than in a horizontal position;
- the exposure of the textile to climatic precipitation (rain, wind, hail, snow etc) and organic deposits (leaves, pollen, dust etc);
- the type and the intensity of the deposits.

# Inspections

## Periodical inspections

The periodical inspections consist of visual checks of the membrane with regard to the following problems:

- tears on the edges and inside the panel,
- fur on the welded sections,
- thick deposits on the surface (dead leaves, insects, ash...).

When a problem is discovered, be sure to inform the manufacturer/installer, who will decide what action should be taken.

## Specific inspections

The specific inspections are similar to the periodical inspections... the difference being that they are used to assess damage caused by an exceptional accident or incident.

Such damage can be caused by the following events:

- heavy storm with winds at the top end of the zone's recommended scale (or off the end of the scale);
- snow or hail generating weight loads at the top end of the zone's recommended scale (or off the end of the scale);
- accidental impacts of large, sharp or corrosive foreign bodies.

# Cleaning procedures

## Periodical cleaning

The PRECONTRAI<sup>®</sup>NT M2 membranes are particularly resistant to polluting agents for two principal reasons:

- the smooth surface has very few micro-cavities that could hold deposits on a sustainable basis.
- in the case of the FLUOTOP T2 membranes, the PVDF surface treatment forms a protective non-stick coating across the entire surface area of the textile.

However, to prevent a sedimentation of the polluting agents, the textile should be cleaned regularly.

The cleaning procedure is as follows:

a) Use a soft brush (nylon) or a sponge.

b) Wash the textile with a FORMULA S detergent solution (see annex), respecting the following dosages:

Dirt	Concentration	Water temp.
Minor	5 %	20 °C
Medium	10 %	20 °C
Major	10 %	50 °C

c) Rinse with fresh, clean water

## Specific cleaning operations

Certain deposits can be difficult to remove using the cleaning process described above. Such deposits could be formed by the following substances:

- mineral deposits:  
fatty bodies, tar, limestone...
- plant-life deposits:  
leaves, pollen, resin...
- animal deposits:  
bird droppings, crushed insects...

These deposits can be too much for standard cleaning procedures. They may require the use of other products, which can be damaging to the membrane.

Before proceeding with the use of any such product, it is important to evaluate the necessity of such an action and to call on the services of a professional.

# Procedures and cleaning agents not permitted for the Précontraint® M2 membranes

The resistance of the PRECONTRAIINT® M2 membranes to chemical damage depends on numerous factors such as:

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

In certain cases, a mix of agents can have a damaging impact, whereas the chemical agents may be inoffensive on their own.

## In view of this:

The following cleaning procedures are not permitted under any circumstances:

- abrasives of any type:  
powders, pastes, liquids, abrasive sponges etc...
- pressurised steam raising units
- Non high-pressure water boilers

## The following organic chemical products:

acetone, petrol, benzene, fuel oil, kerosine, perchlorethylene, turpentine, toluol, trichloroethane, oil, THF, ethyl acetate, hydrogen peroxide.

## The following inorganic chemical products:

ammonia, nitric acid, sulphuric acid, acetic acid, hydrochloric acid, soda, caustic soda, bleach...

# FERRARI



## 5-year guarantee

**PRECONTRAIT®**  
**502**

**PRECONTRAIT®**  
**542**

**PRECONTRAIT®**  
*Color Design*

**For the usage of fixed or mobile textile buildings,  
structures and tents**

### 1) Guarantees

The guarantee covers:

- Tensile strength  $\leq 70\%$  of the original value i.e. the value provided in the technical instructions.
- The fire rating (permanently).
- 100% waterproofing.
- The retention of the textile's flexibility: in normal climatic exposure conditions and normal handling conditions, we guarantee a loss of weight (through de-plastification) equal to or less than 10%. This guarantee becomes null and void if the textile is folded and stored when damp.
- Any major change in the colouring of the bulk of the textile, inside a specific cover, and uniform colour changes throughout complete strips of the textile.

### 2) Exclusions

- Faults resulting from the design, manufacture and installation of assembled textiles and structures, and notably accelerated ageing due to pockets of water on the roof.
- Accidents during handling (tears, wear & tear, friction, scratches, holes).
- Consequences of damage caused when washing or using detergents not previously agreed by Ferrari.
- External chemical damage: major atmospheric pollution or the usage of damaging cleaning medium.
- Localised stains that do not represent a major and uniform change of colour throughout complete strips of the textile.
- Vandalism.

### 3) Guarantee application conditions

- Declaration by recorded delivery with acknowledgement of receipt 30 days maximum after the appearance of the problem.
- Guarantee start-date: the delivery date of the textile to the manufacturer.
- Application of the guarantee:
  - . in application of the guarantees described in paragraph 1 (taking into account the exclusion clauses in paragraph II) only the replacement of the textile will be covered.
- Obsolescence:
  - . 1st year: 100% of the costs mentioned above are covered
  - . 2nd year: 80% of the costs mentioned above are covered
  - . 3rd year: 60% of the costs mentioned above are covered
  - . 4th year: 40% of the costs mentioned above are covered
  - . 5th year: 20% of the costs mentioned above are covered

**FERRARI**

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# FERRARI

## 5-year guarantee

### PRECONTRAIN<sup>®</sup> 502S

**For the usage of fixed or mobile textile buildings,  
structures and tents**

#### 1) Guarantees

The guarantee covers:

- Tensile strength  $\leq 70\%$  of the original value i.e. the value provided in the technical instructions.
- The fire rating (permanently).
- 100% waterproofing.
- The retention of the textile's flexibility: in normal climatic exposure conditions and normal handling conditions, we guarantee a loss of weight (through de-plastification) equal to or less than 10%. This guarantee becomes null and void if the textile is folded and stored when damp.
- Any major change in the colouring of the bulk of the textile, inside a specific cover, and uniform colour changes throughout complete strips of the textile.

#### 2) Exclusions

- Faults resulting from the design, manufacture and installation of assembled textiles and structures, and notably accelerated ageing due to pockets of water on the roof.
- Accidents during handling (tears, wear & tear, friction, scratches, holes).
- Consequences of damage caused when washing or using detergents not previously agreed by Ferrari.
- External chemical damage: major atmospheric pollution or the usage of damaging cleaning medium.
- Localised stains that do not represent a major and uniform change of colour throughout complete strips of the textile.
- Vandalism.

#### 3) Guarantee application conditions

- Declaration by recorded delivery with acknowledgement of receipt 30 days maximum after the appearance of the problem.
- Guarantee start-date: the delivery date of the textile to the manufacturer.
- Application of the guarantee:
  - . in application of the guarantees described in paragraph 1 (taking into account the exclusion clauses in paragraph II) only the replacement of the textile will be covered.
- Obsolescence:
  - . 1st year: 100% of the costs mentioned above are covered
  - . 2nd year: 80% of the costs mentioned above are covered
  - . 3rd year: 60% of the costs mentioned above are covered
  - . 4th year: 40% of the costs mentioned above are covered
  - . 5th year: 20% of the costs mentioned above are covered

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# FERRARI

## 7-year guarantee

### PRECONTRAIN<sup>®</sup> 702S

**For the usage of fixed or mobile textile buildings,  
structures and tents**

#### 1) Guarantees

**The guarantee covers:**

- **Tensile strength  $\leq$  70% of the original value i.e. the value provided in the technical instructions.**
- **The fire rating (permanently).**
- **100% waterproofing.**
- **The retention of the textile's flexibility: in normal climatic exposure conditions and normal handling conditions, we guarantee a loss of weight (through de-plastification) equal to or less than 10%. This guarantee becomes null and void if the textile is folded and stored when damp.**
- **Any major change in the colouring of the bulk of the textile, inside a specific cover, and uniform colour changes throughout complete strips of the textile.**

#### 2) Exclusions

- Faults resulting from the design, manufacture and installation of assembled textiles and structures, and notably accelerated ageing due to pockets of water on the roof.
- Accidents during handling (tears, wear & tear, friction, scratches, holes).
- Consequences of damage caused when washing or using detergents not previously agreed by Ferrari.
- External chemical damage: major atmospheric pollution or the usage of damaging cleaning medium.
- Localised stains that do not represent a major and uniform change of colour throughout complete strips of the textile.
- Vandalism.

#### 3) Guarantee application conditions

- Declaration by recorded delivery with acknowledgement of receipt 30 days maximum after the appearance of the problem.
- Guarantee start-date: the delivery date of the textile to the manufacturer.
- Application of the guarantee:
  - . in application of the guarantees described in paragraph 1 (taking into account the exclusion clauses in paragraph II) only the replacement of the textile will be covered.
- Obsolescence:
  - . 1st year: 100% of the costs mentioned above are covered
  - . 2nd year: 85% of the costs mentioned above are covered
  - . 3rd year: 70% of the costs mentioned above are covered
  - . 4th year: 55% of the costs mentioned above are covered
  - . 5th year: 40% of the costs mentioned above are covered
  - . 6th year: 25% of the costs mentioned above are covered
  - . 7th year: 10% of the costs mentioned above are covered

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# FERRARI

## 5-year guarantee

### PRECONTRAIN<sup>®</sup> 702ALU

**For the usage of fixed or mobile textile buildings,  
structures and tents**

#### 1) Guarantees

The guarantee covers:

- Tensile strength  $\leq 70\%$  of the original value i.e. the value provided in the technical instructions.
- The fire rating (permanently).
- 100% waterproofing.
- The retention of the textile's flexibility: in normal climatic exposure conditions and normal handling conditions, we guarantee a loss of weight (through de-plastification) equal to or less than 10%. This guarantee becomes null and void if the textile is folded and stored when damp.
- Any major change in the colouring of the bulk of the textile, inside a specific cover, and uniform colour changes throughout complete strips of the textile.

#### 2) Exclusions

- Faults resulting from the design, manufacture and installation of assembled textiles and structures, and notably accelerated ageing due to pockets of water on the roof.
- Accidents during handling (tears, wear & tear, friction, scratches, holes).
- Consequences of damage caused when washing or using detergents not previously agreed by Ferrari.
- External chemical damage: major atmospheric pollution or the usage of damaging cleaning medium.
- Localised stains that do not represent a major and uniform change of colour throughout complete strips of the textile.
- Vandalism.

#### 3) Guarantee application conditions

- Declaration by recorded delivery with acknowledgement of receipt 30 days maximum after the appearance of the problem.
- Guarantee start-date: the delivery date of the textile to the manufacturer.
- Application of the guarantee:
  - . in application of the guarantees described in paragraph 1 (taking into account the exclusion clauses in paragraph II) only the replacement of the textile will be covered.
- Obsolescence:
  - . 1st year: 100% of the costs mentioned above are covered
  - . 2nd year: 80% of the costs mentioned above are covered
  - . 3rd year: 60% of the costs mentioned above are covered
  - . 4th year: 40% of the costs mentioned above are covered
  - . 5th year: 20% of the costs mentioned above are covered

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# Annexe

## FORMULA S

### Detergent

#### METHOD OF USE

Manual :

- concentration: up to 10% Formula S
- temperature: 20 to 50°C

Machine :

- concentration: up to 5% Formula S

#### DESCRIPTION

Slightly alkaline product without soda or potash. Hypoallergenic formula. Wearing of gloves recommended in the event of intensive use.

#### RECOMMANDATION FOR USE

Wash with water and dry if product comes into contact with skin.  
Can be used manually.  
Use of gloves recommended.  
Wash the fabric thoroughly after use.

#### PACKAGING

20 kg - ref. 0101  
220 kg - ref. 0102

#### STORAGE

Do not store below freezing point.

MADE IN FRANCE

Biodegradable: more than 90%. Bio-accumulation in the ground or in the atmosphere.



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