

MANUAL FOR THE HANDLING OF PVC-COATED POLYESTER FABRICS



CHAPTER 1

CLEANING AND CARE

1.1 Introduction

Dickson, Heytex, Mehler Technologies, Sattler PRO-TEX GmbH, Sedo, Sioen and Verseidag are leading suppliers of PVC-coated polyester fabrics throughout the world. PVC-coated polyester fabrics can be used e.g. for halls and tents, truck tarpaulins, printing materials like banners or material for booths, sun covers, architectural membranes for soccer stadiums or biogas membranes.

This manual has been prepared to show you how to handle, clean and store your PVC coated polyester fabric in order to achieve the longest possible life time of your membrane.

1.2 Inspection

Membrane materials made of PVC-coated polyester fabrics generally offer high levels of protection against environmental influences, such as wind, sun, rain, micro-organisms, dust and other pollutants. If you inspect and clean your material on a regular basis, it will keep it longer aesthetic and assure the functionality of your product.

Which factors determine the frequency of cleaning, maintenance and control of your membrane material?

- Positioning of fabric - membranes that are mounted in a strongly sloping position are less likely to accumulate dirt than those in a horizontal position.
- Weathering - to which extent is the membrane exposed to weathering (UV rays, rain, hail, wind, or snow)?
- Type of soiling - to which extent is the membrane affected by organic materials (e.g. leaves, pollen, dust) or dirt?
- Intensity of soiling – how large is the environmental impact of pollution, harmful substances or dirt at the point at which the membrane is employed

1.2.1 Periodic checks:

We recommend visual checks of the membrane at least every 6 months. In case the following phenomena or other abnormalities are found, please immediately contact your confectioner or your assembler who will be able to assess the need for further action:

- Peeling or delamination near fused joints
- Strong soiling on surface

1.2.2 Extraordinary checks:

Same procedure as described in Chapter 1.2.1 - Periodic Checks.

Additionally extraordinary checks are obligatory after remarkable events, for example:

- Heavy storms with wind speeds reaching or exceeding the maximum admitted in the area.
- Heavy snowfall or hailstorms with quantities of snow or hail reaching or exceeding the maximum admitted in the area.
- Objects falling on the membrane which due to their weight or corrosion might damage the membrane material.

1.3 Cleaning:

The care instructions herein are intended to support users in the adequate cleaning of lacquer-coated, PVC-coated polyester fabrics.

Note: This cleaning recommendation does not cover

- Printed products and
- Products like truck tarpaulins, banners etc. that are top-coated with a print protection varnish!

Please refer to your supplier of these products (e.g. inks, top coat varnish).

Cleaning should be carried out with the utmost care. In individual cases – depending on the type of soiling – other cleaning measures than those described herein may be necessary.

To prevent soiling, membranes should be cleaned on a regular basis. In case dirt is not removed, cleaning may become impossible due to the partial migration of dirt into the membrane. Generally, matt or matt-finished surfaces are more likely to absorb dirt and to show a more critical cleaning behavior.

In any case, the PVC-coated polyester fabric must always be clean and must be completely dry before storage.

1.3.1 Cleaning instructions:

Before starting to clean your PVC-coated polyester fabrics, make sure that you wear proper clothing and shoes and that you are able to reach the product in a safe way.

If you have to put your product on the floor for cleaning, make sure the membrane is lying **flat** on a **clean** and **smooth** surface and avoid damaging the fabric by walking on it with inappropriate footwear.

In general, the following procedure guarantees the best cleaning results:

- Rinse away any dirt attached at the surface using clean cold or warm water.
- Apply the cleaning agent to the surface by either spraying or applying it with an appropriate soft and non-abrasive tool (e.g. sponge or cloth), in a concentration corresponding to the level of soiling (in doing so, follow the instructions issued by the manufacturer of the cleaning agent).
- Allow the cleaning system to remain on the surface (in accordance with the usage instructions of the manufacturer of the cleaning agent) for a maximum of 5 min. After this time, wipe off with a cloth or soft sponge.
- Clean any strongly soiled surfaces using brushes with soft hairs.
- Rinse off dirt and cleaning agent using clear (cold or warm) water in order to remove the entire cleaning agent. Always stick to the recommendations issued by the manufacturer of the cleaning agent.

- **It is very important to dry the surface after cleaning!**

- When storing the membrane material do it in a clean and absolutely dry place (see Chapter 2 – Storage Recommendations).

1.3.2 Cleaning agents

The resistance of PVC-coated polyester fabrics against the cleaning agent depends on a number of different factors:

- The form of the cleaning agent (solid, liquid or gaseous)
- Temperature
- Concentration of the cleaning agent
- Duration of contact between the cleaning agent and the membrane being cleaned
- Chemical composition of the cleaning agent

For recommendations please refer to your supplier.

In any case, make sure to comply with the recommendations and material safety data sheets issued by the manufacturer of the cleaning agent.

In particular the liability for the quality of cleaning agents and for any damage occurring under their use is restricted to the manufacturer having issued the recommendations for such cleaning agents to be used on PVC-coated polyester fabrics that are either lacquered or not.

1.3.3 Which cleaning agents or processes could be harmful to your product?

Generally it is preferable to use non-ionic cleaning agents.

The following agents, chemicals or processes are to be strictly avoided because especially the lacquer or the coating could be damaged:

Type of cleaning processes / cleaning tools:

- High-pressure cleaners
- Hard brushes
- Intense scrubbing
- Sponges that scratch the surface

Type of cleaning agents:

- Abrasive powders, pastes, liquids that scratch the surface
- Home-made cleaning agents

Organic chemicals:

- Solvents like acetone, dimethylformamide (DMF), furans (e.g. 2,5-dimethylfuran (DMF) compounds), aldehydes, ketones (e.g. methyl ethyl ketone (MEK), cyclohexanone), ethers, esters, white spirit/cleaner's naphtha, hydrocarbons, fuel, gasoline, kerosene, turpentine, oil, toluene, benzene, trichloroethylene, perchloroethylene, cationic surfactants.

Inorganic chemicals:

- Strongly acidic or alkaline products like ammonia, nitric acid, sulfuric acid, acetic acid, hydrochloric acid, caustic soda lye, caustic soda, soda...
- Strong oxidants such as bleaching agents (based on sodium hypochlorite, hydrogen peroxide, chlorine dioxide, sodium dithionite...)



In some cases, mixing cleaning agents may lead to negative results, even when every individual cleaning agent is harmless when used on its own

1.3.5. Liability

This information reflects the current state of our knowledge as PVC-coated fabric producers as of October 2012 and is in no way legally binding.

The manufacturer of the membrane material deny any warranty and/or liability for the success of the various measures and also for any damage occurring during the cleaning process, in combination with the cleaning and stain removal procedures or the cleaning agents as described herein.

CHAPTER 2

STORAGE

2.1 Preparation for storage:

Rolled-up or folded PVC-coated polyester fabrics as well as products incorporated in them, such as ropes and lining strips, must be stored in a dry place, and in a clean condition. This will help to largely avoid staining from moisture.

Avoid unnecessary bending. If possible, always store in a rolled-up state, if possible horizontal, on a flat surface.

Drying time: PVC-coated polyester fabrics and other products included, such as ropes and lining strips, must be completely dry before storing!

2.2 Storage conditions:

- Recommended storage temperature +10°C to +30°C.
 - In case of lower temperatures, the increasing stiffness of the membrane material may lead to stronger creasing and wrinkling and in extreme cases to breaking at the creases.
 - Higher temperatures may result in accelerated plasticizer migration, making the roll difficult to unroll and the material stick together. Depending on the level of stickiness, matt patches may occur, and in extreme cases, parts of the coating may come off.
- Store indoors or in weather-proof outdoor areas (protected from rain, snow, hail, direct sunlight), and in a dry place.
- Ensure that the environment is totally free of condensation (e.g. no condensation caused by temperature drops between day and night and / or high humidity).
- Avoid unnecessary bending; if possible, always store in a rolled-up state, horizontal, on a flat surface.
- Avoid stressing the folded material with additional “weights”, e.g. avoid piling up rented tents.
- Store on a dry, smooth and clean floor.

2.3 Storage time:

- Maximum storage time: 6 months in a row, if correct storage conditions are kept.
- After 6 months e.g. dark yellowing or other effects can occur. In case of longer storage times, intermediary inspections are recommended. The owner may then take the necessary steps at his own discretion.