JAMES BAROUD

Seam Waterproofing

TECHNICAL INFORMATION

11/2026

1. Introduction

James Baroud rooftop tents are designed and manufactured using high-quality technical materials, carefully selected to provide protection from weather conditions, strength, durability, and comfort.

The waterproof performance of fabrics and seams is a primary concern throughout the development and manufacturing of our products.

For this reason, James Baroud uses sewing threads specifically developed for outdoor applications and supplements this protection with an additional manual water-repellent treatment applied to all seams exposed to weather conditions.

Despite these precautions, during the first few uses of a new tent, especially when it is exposed to rain for the first time, small amounts of water may occasionally pass through certain points along the seams.

This may be related to the inherent characteristics of the sewing process and the initial settling of the materials, and does not necessarily indicate a manufacturing defect.

2. The Sewing Process and the Formation of Microperforations

To join two or more fabrics by sewing, a needle must repeatedly pass through the different layers of material, allowing the thread to pass through them.

Each pass of the needle creates a small perforation in the fabric.

Although these perforations are sized for the thread being used, microscopic gaps may remain between the thread and the fabric.

These gaps may allow small amounts of water to pass through, especially when the seam is exposed to prolonged rain, wind, or standing water.

This phenomenon is inherent in the process of sewing textile materials and may occur even when highly waterproof fabrics and specially water-repellent threads are used.

It is important to distinguish the waterproof performance of the fabric itself from the watertightness of its seams, since the seams are areas where the material's original structure has been mechanically pierced.

3. AMANN Outdoor WRe Technical Thread

James Baroud uses AMANN Outdoor WRe technical thread, developed for outdoor applications, in all of its seams.

This thread has a specific water-repellent treatment designed to reduce moisture absorption and its migration along the filaments.

In conventional thread, water can travel through the filament structure through a phenomenon known as capillary action.

The water-repellent treatment is intended to reduce this possibility, helping improve seam performance when exposed to rain.

However, there is a fundamental difference between preventing water from traveling through the thread itself and preventing it from passing through the small gaps between the thread and the fabric.

Even a thread with excellent water-repellent properties cannot, by itself, ensure that every perforation created by the needle remains completely watertight under all conditions of use.

Protection therefore results from the combination of the thread and fabric characteristics, seam construction, and the additional treatments applied.

4. Preventive STIMEX Waterproof Treatment

As an additional protective measure, James Baroud manually applies a STIMEX Waterproof water-repellent solution to all tent seams exposed to outdoor conditions.

This treatment is applied to both sides of the seams: the exterior and the interior of the tent.

This preventive step is performed during the manufacturing process to reinforce protection in the sewn areas.

Manual application makes it possible to treat the seams directly, helping reduce the possibility of moisture penetrating through the points where the fabrics are joined.

It is important, however, to distinguish water repellency from complete sealing.

A water-repellent treatment makes it more difficult for materials to become wet and for water to penetrate, but it does not necessarily mean that every microperforation is physically filled or hermetically sealed.

Therefore, even with this additional treatment, there may be circumstances in which small amounts of water can pass through isolated points along a seam.

5. Natural Settling of the Materials

When a tent has just been manufactured, its fabrics and threads are in a newly assembled condition.

During sewing, the materials are subjected to mechanical stresses caused by the passage of the needle, insertion of the thread, and joining of the different layers.

Later, during normal use of the tent, these materials undergo minor dimensional and mechanical changes.

These changes result from several factors, including:

- Temperature variations between day and night.
- Exposure to heat and cold.
- Moisture and drying cycles.
- Repeated opening and closing.
- Natural movement and tension of the fabric during use.
- Minor deformation caused by wind.

Over the course of use, stresses in the seams may be redistributed and the different components may gradually settle into place.

This settling may help improve the fit between the thread and fabric and, under certain circumstances, reduce small gaps in the perforations.

As a result, minor initial water penetration may decrease after the first few cycles of use.

It is important to emphasize that this behavior depends on the characteristics of the materials and seam construction and does not guarantee that any leakage will disappear naturally.

6. The Effect of the First Rains

A new tent may be exposed to heavy rain before it has undergone repeated cycles of opening, closing, temperature variation, and humidity.

Under these circumstances, the seams may still be in the initial settling phase.

When rain strikes the tent, especially for prolonged periods, water may remain in contact with certain sewn areas for some time.

If a microscopic gap exists between the thread and the fabric, a small amount of localized water penetration may occur.

This may be more noticeable during the first exposures to rain, particularly when the rain is heavy or accompanied by wind.

With use, the mechanical settling of the materials may help reduce this minor water penetration.

For this reason, minor initial leakage localized at a seam does not necessarily mean that the tent has a permanent waterproofing problem.

7. The Influence of Temperature and Humidity Variations

Textile materials undergo physical changes when exposed to different environmental conditions.

Temperature variations can cause minor dimensional changes in fabrics and threads.

In turn, moisture and drying cycles may temporarily alter the mechanical behavior of certain materials.

These effects, combined with the tent's natural movements during use, may contribute to the settling of the seams.

However, the water-repellent technical thread used by James Baroud does not necessarily rely on a significant increase in volume through water absorption to perform its function.

Its protection results primarily from the material's characteristics and the water-repellent treatment applied during manufacturing.

Therefore, seam performance should be understood as the result of the interaction among different materials, rather than simply as a consequence of the thread swelling when wet.

8. The Influence of Rain and Wind Intensity, Force, and Direction

The intensity of the rain, the force of the wind, and particularly the direction of both in relation to the tent's position can significantly affect seam performance and protection against water entry.

Because rooftop tents are elevated above the vehicle, they are naturally more exposed to wind than conventional tents installed at ground level.

It is important to understand that an open rooftop tent presents a considerable surface area to the wind and, under certain conditions, may behave similarly to a boat sail.

When wind strikes the tent walls and roof, it exerts forces that can be significant, especially during strong gusts. These forces are transferred to the fabrics, seams, structural components, and mounting systems.

Depending on the wind's intensity and direction, temporary changes in fabric and seam tension may occur, along with minor natural deformation of the materials.

At the same time, when rain is driven by the wind, water may strike certain areas of the tent from the side with greater pressure, increasing the possibility of minor water penetration through seams, openings, or other more vulnerable points.

For this reason, the orientation of the vehicle, and consequently the tent, in relation to the prevailing direction of the wind and rain is especially important.

Whenever possible, James Baroud recommends positioning the vehicle to protect the tent's most vulnerable areas from direct wind and rain, thereby reducing seam exposure and promoting natural water runoff.

Proper orientation can help not only improve protection against water entry, but also reduce the mechanical loads exerted by the wind on the tent structure.

It is also important to consider that wind direction may change during the night, altering which areas of the tent are most exposed.

In very strong winds or storms, the choice of parking location and the vehicle's orientation are especially important.

Avoid parking in elevated locations, on ridgelines, in open areas, or in places excessively exposed to wind. Whenever possible, choose naturally sheltered locations where the terrain itself helps reduce the intensity and impact of gusts on the tent.

It is also important to avoid parking near trees, branches, unstable structures, or other objects that may pose a hazard in adverse weather, as well as areas prone to flooding or falling debris.

James Baroud recognizes that its customers are often travelers and adventurers exploring remote regions where immediate alternative overnight accommodations may not always be available.

For this reason, rather than generally avoiding use of the tent, it is essential to take preventive measures to reduce exposure to wind and rain by carefully selecting the parking location and orienting the vehicle to protect the tent's most vulnerable areas.

The large surface area of an open rooftop tent can create considerable wind resistance, similar to a boat sail. These precautions therefore help reduce loads on the structure and improve occupant safety and comfort.

In situations of imminent danger, including extreme gusts or signs of tent instability, occupant safety must take priority, and a safer alternative should be sought whenever possible.

9. Distinguishing an Initial Condition from Abnormal Leakage

Although minor water penetration may occur during the initial period of use, it is important to distinguish this from a condition that requires technical evaluation.

Minor initial water penetration is normally localized, limited in intensity, and associated with specific points along a seam.

In some cases, it may decrease after repeated cycles of use and exposure to moisture.

On the other hand, the following conditions should not be considered normal:

- Continuous or significant water entry.
- Persistent dripping that does not decrease with use.
- Water passing through the fabric itself, outside the seam areas.
- Visibly damaged or deformed seams.
- Leakage that significantly compromises comfort or use of the tent.

These conditions should be reported to James Baroud or an authorized representative for evaluation.

The existence of a natural material-settling period does not mean that all leakage should be considered normal or acceptable.

10. Recommendations for Initial Use

To promote proper material performance and help identify any potential issues, we recommend taking a few simple precautions during initial use.

Whenever possible, before beginning an extended trip, open the tent and expose it to water under controlled conditions to simulate normal rainfall.

This procedure makes it possible to observe seam performance and check for any localized moisture penetration.

After this exposure, allow the tent to dry completely before closing it for extended storage.

Normal opening and closing of the tent, as well as natural cycles of exposure to temperature and humidity, may contribute to the settling of the different components.

If minor water penetration is observed at a seam, identify the exact location and check whether it recurs or decreases during subsequent use.

We do not recommend the indiscriminate application of commercial waterproofing products, since some may be incompatible with the treatments, coatings, or materials used to manufacture the tent.

Whenever additional treatment is required, use a suitable product recommended by James Baroud.

11. James Baroud's Commitment to Quality

James Baroud pays particular attention to seam protection, using technical materials specifically designed for outdoor applications.

The combination of AMANN Outdoor WRe thread and the manual application of STIMEX Waterproof treatment to both sides of exposed seams is a preventive measure intended to reinforce protection against water entry.

Despite these precautions, it is important to understand that a seam is created by mechanically joining different materials and that its performance may vary during initial use.

Minor initial water penetration may be associated with the natural settling of these materials and does not necessarily represent a permanent deficiency in the tent.

Nevertheless, James Baroud remains committed to evaluating any situation in which waterproof performance does not meet expectations.

CONCLUSION

A small, isolated amount of water passing through a seam during the initial use of a new tent does not necessarily indicate a manufacturing defect.

The sewing process itself creates microperforations in the fabric, and the performance of these areas depends on the interaction among the thread, fabric, water-repellent treatments, and conditions of use.

James Baroud uses water-repellent technical threads and reinforces seam protection through an additional manual treatment applied to both the exterior and interior of the tent.

Even so, small amounts of localized water penetration may occasionally occur during the first exposures to rain.

With use, the natural settling of the materials may help improve seam performance and reduce these occurrences.

Proper vehicle orientation and the selection of parking locations protected from wind and rain are also important factors in optimizing tent performance under adverse weather conditions.

This condition must be distinguished from persistent or significant leakage, which should always be evaluated by a qualified technician.

James Baroud remains committed to providing its customers with rooftop tents that meet high standards of quality, protection, and durability, and to addressing any situation that may compromise the expected performance of its products.