



## **STEDAIR Moisture Barriers**

## **NFPA 1851 Repair Guidelines**

## **Product Information**

### ***Stedair 3000***

This moisture barrier, certified to NFPA 1971 (2007 edition), is comprised of Dupont's E89 substrate laminated to a Teflon bicomponent membrane.

### ***Stedair 4000***

This moisture barrier, certified to NFPA 1971 (2007 edition), is comprised of a woven Nomex substrate laminated to a Teflon bicomponent membrane.

### ***Stedair Seam Tape***

This seam tape works on all Stedair moisture barriers and is available in three widths: 7/8", 1", 1.5". If a different width would better suit your needs, please contact Brian Barton ([bbarton@stedfast.com](mailto:bbarton@stedfast.com)).

## **CARE**

Follow the guidelines outlined in NFPA 1851 (2008 ed.) when caring for NFPA 1971 (2007 ed.) compliant turnout gear. As far as Stedair moisture barriers are concerned, no deviations from this standard shall be made.

Stedfast recommends (i) keeping pH within recommended range of 6.0-10.5, (ii) keeping g-force less than 100, (iii) keeping maximum water temperature below 105F and (iv) avoiding diaphragm water extraction.

When the outer material requires a solvent to remove petroleum based stains, it is recommended that the moisture barrier is separated from the outer prior to pre-wash cleaning or soaking. Solvents that remove petroleum may dissolve adhesives.

## **INSPECTION**

Follow the guidelines outlined in NFPA 1851 (2008 ed.) for routine and advanced inspections for the first 36 months of the garment's life. After 3 years, a complete liner inspection must be conducted as per NFPA 1851 (2008 ed.).

A change in the moisture barrier's natural color, from white to brown, is a signal that the garment may have been exposed to unusually high temperatures and that a complete liner inspection should be performed.

## REPAIR

Our settings were verified using a Digital Combo Model CD-8 by Geo Knight. If you already have this heat press and it is pre-programmed, you may have difficulty changing the settings. Contact Geo Knight directly to obtain a Control Board. Once this is installed, you can preset all the required settings for all of the moisture barriers that you repair. The table below provides a starting point for setting your press to repair Stedair Barriers.

### *\*Recommended Settings using Stedair Seam Tape:*

Product	Temperature (F)	Pressure Setting	Time (seconds)
Stedair 3000	275 +/- 25	0.02	15 (+/- 3) seconds
Stedair 4000	300 +/- 25	0.02	15 (+/- 3) seconds

Remember to avoid direct contact between heat plate and seam tape as excess adhesive may squeeze out and damage plate.

The adhesive on the seam tape will melt between 200-230F, so a lower temperature (e.g. 210F) may be used, if desired. The pressure application time may need to be adjusted to compensate for the lower temperature.

You may check the quality of your repair using a Hydrostat Tester and through liquid penetration testing.

Hydrostat: Apply 1psi pressure for 15 seconds (maximum). You should not see any water droplets on the surface.

Liquid Penetration Testing: Stedfast will test samples for Liquid Penetration Testing, according to NFPA 1851 (2008 ed). Contact Brian Barton ([bbarton@stedfast.com](mailto:bbarton@stedfast.com)).

Please keep in mind that temperatures and pressures can vary from one heat press to another. Thus, the recommended settings are to be used as “starting points” for Care & Repair professionals who should be prepared for some trial and error. Coupling your expertise with regular heat press calibration and maintenance will ensure settings, suitable for your specific heat press, are confirmed and NFPA 1851 Verification can be obtained.

*NB: Stedair 2000 is not certified to NFPA 1971 (2007 ed). If repairs need to be performed on turnout gear made with this barrier: (a) use Stedair 3000's lowest settings as a starting point when applying the seam tape and (b) use Stedair 3000 when replacing Stedair 2000 barrier.*

\*These settings were confirmed by an independent Care & Repair facility using a DC-8 Geo Knight Press with Stedair materials and seam tape. All samples passed liquid penetration resistance tests in Stedfast's laboratory.

## ACQUIRING STEDAIR PRODUCTS

Stedair moisture barriers and seam tapes may be acquired by contacting Louise Choiniere, Internal Sales and Customer Service Manager.

[lchoiniere@stedfast.com](mailto:lchoiniere@stedfast.com)

☎ 450.378.8441

Products:

Stedair 3000 (5 yard minimum)

Stedair 4000 (5 yard minimum)

Stedair Seam Tape 7/8" width (200 yards/roll)

Stedair Seam Tape 1" width (200 yards/roll)

Stedair Seam Tape 1.5" width (200 yards/roll)

**\* Identify yourself as a Care & Repair Facility.**

**\*\* Be prepared to provide your TaxID number if shipment will be made to a US address.**

**For other enquiries, please contact:**

Brian Barton

[bbarton@stedfast.com](mailto:bbarton@stedfast.com)

☎ 603.435.7024