

XOREL FOR UPHOLSTERY

CLEANING AND FABRICATION BEST PRACTICES

Carnegie

XOREL CLEANING INSTRUCTIONS

Xorel yarns are non-absorbent; dust and stains cannot penetrate them. Regular maintenance will keep the fabric looking new for many years. Periodic cleaning is suggested with a soft bristle upholstery brush to remove any dirt contamination buildup. Periodic vacuuming will remove dust that may settle between the yarns.

Most stains that dry between the yarns or on the surface can be eliminated by wiping the fabric with a cloth moistened with hot tap water. Stains can also be cleaned with a variety of water or solvent based cleaners. Residue from these cleaners must be removed with hot water and a clean sponge, after cleaning, towel dry to remove all residue.

Hospital grade disinfectant cleaners can be safely used on Xorel fabrics. Always follow the cleaner manufacturer's instructions for use as contact times may vary.

Diluted bleach solution (up to 40%) can also be used on Xorel for disinfecting purposes.

Best practices & recommendations:

1. Clean stains and spills immediately.
The less time residue ages on the fabric the better the cleaning results.
2. Brush off excess dirt before wetting fabric.
Any dried, caked-on stain should be removed before scrubbing to ensure it isn't ground further into the fabric.
3. Dip cloth, sponge, or soft bristle scrub brush into your cleaning solution.
4. Do not pour cleaning solution onto the fabric.
Applying a cleaning solution on a soft cloth or brush versus directly on the fabric controls excess moisture soaking into the cushion itself.
5. Scrub with a soft-bristled brush. Small, circular motions will help to loosen stains that cling to fabric fibers. Avoid scrubbing too hard to avoid wear and tear on the fabric. NEVER USE abrasive powders or products like steel wool, Comet, etc.
6. Rinse with plain water after washing. No matter what cleaning solution is used to remove a stain, it's important to make sure to rinse the fabric thoroughly. Any soap, bleach, or cleaning product residue left behind has the potential to attract dirt, cause streaking or discoloration.
7. Be sure to give furniture ample airflow while it dries.



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MOLD & MILDEW

(Fabric that remains damp for long periods of time is more likely to suffer from mold and mildew) Stand loose cushions on their side while they dry and turn them as necessary to allow them to dry out evenly and completely.

To Disinfect:

10% diluted bleach solution can be used for surface disinfecting.

Common medical grade disinfectants can safely be used on Outdoor Xorel fabric. Always follow the cleaner manufacturer's instructions for use.

If mold and mildew are a problem, spray the affected fabric areas with a cleaner such as X-14 Instant Mold and Mildew Remover or equivalent. Following the manufacturer's instructions provided on the container to ensure correct usage.

Additional Method:

- Wash the material with a solution of: 1 cup of household bleach + ¼ cup mild liquid detergent per gallon of clean water
- Rinse with clear water to remove all soap residue
- Allow fabric to air dry, or towel dry

If stains and/or mildew are severe, bleach quantity can be increased to up 20%.

Caution: Never store Xorel cushions that are wet, and do not store them in tightly sealed, humid containers as these conditions can lead to rapid mildew growth. Also, never use power or pressure washing equipment to clean Xorel fabric.

SUGGESTED UPHOLSTERY PROCEDURES

Furniture upholsterers use a variety of techniques to sew fabrics for use in upholstery. The construction details will vary depending on the individual chair design. Below are general suggestions. They are not considered absolute methods for upholstery fabrication. These best practices are derived from feedback from key manufacturing partners. It is still advisable for the fabricator to evaluate this material for its suitability on a specific chair design:

XOREL KNIT CONSTRUCTION

Due to its construction, Xorel Knit may appear too open/transparent for the application of contact adhesives. However, its thick structure keeps the glue on the back surface. As such, there is no penetration of the glue through to the face of the material. An optional backing is available: **X-Protect moisture barrier backing** can be applied upon request.

The complex inter-looping structure of Xorel Knit fabrics can result in small areas that are more open than others. Due to the double cylinder knitting process, these gaps are secure, do not compromise the knit integrity and will not become worse over time.

Recommendations:

- A minimum ½ inch seam allowance with a Plain Lockstitch conforming to Type 301 of ASTM D 6193 (formerly Federal Standard No. 751a.), but additional stitch types can be used at the discretion of the fabricator.
- Needles are # 16, #18 or 22 ball point 1 maximum or equivalent and 100% nylon or polyester bonded monocord thread.
- A minimum of 8 stitches per inch is recommended to insure adequate seam strength.
- Take appropriate measures to minimize needle heat during sewing. Spun polyester thread is recommended in this type of operation, but nylon is an acceptable option for sewing this product.
- Steam can be used to finish / shape the fabric around more contoured elements of a chair. A hand-held commercial upholstery steamer is fine for this purpose.
- Xorel Knit is recommended for tight seating. We do not recommend Xorel for use on foams larger than 3". When foam is used, the foam should be a firm foam with a minimum Indentation Load Deflection (I.L.D) of at least 55 lbs with a density of 2.5 lb/ft³ or greater.

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SUGGESTED UPHOLSTERY PROCEDURES

XOREL KNIT CONSTRUCTION (contd)

- Due to its construction, you may see a slight distortion of the pattern when fabricating more contoured sections of the chair unit, but this can be minimized by adjustments in handling and the natural recovery of this material.
- We do not recommend Xorel Knit or Woven construction be used for any type of sling or hammock style seating. Or any seating where the Xorel Knit would be the main architectural element of the support structure.

XOREL WOVEN CONSTRUCTION

Slower Upholstery Shop Environments

- a minimum 1/2 inch seam allowance with a Plain Lockstitch conforming to Type 301 of ASTM D 6193 (formerly Federal Standard No. 751a.)
- The recommended needles are # 16, #18 or 22 light ball point or Schmetz NM 140 light ball point or equivalent and 100% nylon or Polyester bonded monocord thread.
- A minimum of 8 stitches per inch is recommended to insure adequate seam strength

Faster Upholstery Shop Environments

- Take appropriate measures to minimize needle heat during sewing.
- The fabric should be overlapped twice using a sewing machine with two or three needles of type union 35800 DQ + 35800 DN or 51900 H+J. Lap Seam (LSa) using Chainstitch conforming to type 401 of ASTM D 6193 (formerly Federal Standard No. 751a.)
- Spun Polyester thread is recommended in this type of operation. To help shape the fabric to the contour of the furniture, you may apply heat from an upholstery steamer or hair dryer on the curved seams – not more than 1100 watts at a distance no closer than 6 inches from the fabric.
- Xorel is recommended for tight seating. We do not recommend Xorel for use on foams larger than 3". When foam is used the foam should be a firm foam with a minimum Indentation Load Deflection (I.L.D) of at least 55 lbs with a density of 2.5 lb/ft or greater.

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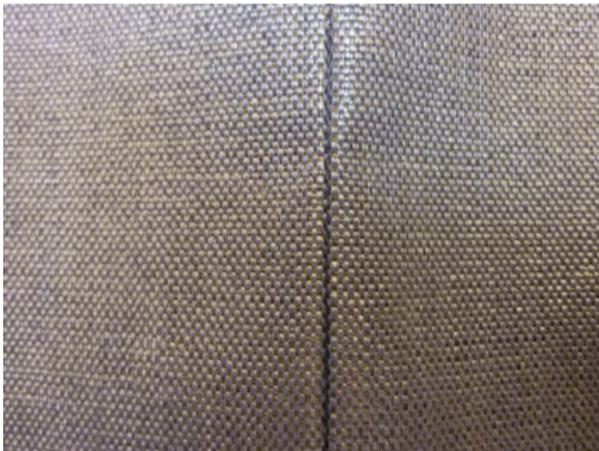
SUGGESTED UPHOLSTERY PROCEDURES

- For ease of cutting Xorel, "Hot Knife" can be used. This device is commonly used to cut heavier synthetic fabrics. Additionally, it fuses the ends of the fabric which minimizes raveling.
- We do not recommend Xorel Knit or Woven construction be used for any type of sling or hammock style seating. Or any seating where the Xorel Knit would be the main architectural element of the support structure.

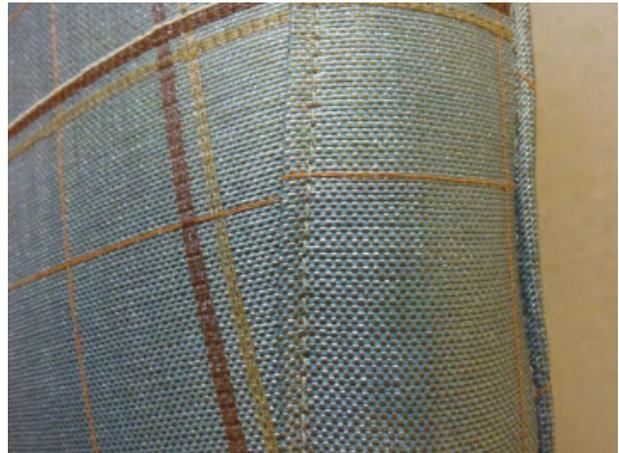
For more information see Technical Bulletin:

Minimizing Needle Heat; http://www.amefird.com/minimizing_needle_heat.htm

Examples of Seams Sewn on Woven Xorel



Single Needle Plain Stitch



Single Needle Top Stitch