



Capital Safety • 3833 SALA Way • Red Wing, MN 55066-5005 • Ph: 651-388-8282 • Fax: 651-388-5065

Technical Bulletin

No. MISC005, Rev. A

Subject: Cleaning of Web Personal Fall Protection Products

Personal Fall Protection Products manufactured from webbing can, and should be, cleaned periodically to help extend the life expectancy of the product and maintain an acceptable level of performance for the product. Because of the wide variation of cleaning processes available and the potential effect on performance, specific procedures have been established by DBI/SALA for DBI/SALA products, to help assure acceptable results.

Justification Analysis of the product's cost vs. cleaning cost should be performed before proceeding with the process. Considerations include age of product, cost of cleaning and the estimated effectiveness of the cleaning process. As an estimate, the commercial laundering will cost approximately \$2.50 to \$5.00 per unit. The overall condition of the product should also be considered.

Scope The cleaning processes and procedures specified in this bulletin typically apply to DBI/SALA's nylon and polyester webbing products used in Personal Fall Arrest Systems (PFAS). Synthetic rope products, such as lifelines or lanyards, can be cleaned using similar processes. Rope type lanyards are typically more economical to purchase than most other fall protection products and, therefore, the justification to clean these items is difficult. The potential damage (i.e., wear, cuts, etc.) to rope lanyards in many applications also makes cleaning difficult to justify.

Specialized web materials (Kevlar, elastic types, and reflective elements) and hardware materials/coating must be analyzed prior to cleaning to determine effectiveness and potential damage from the cleaning process.

Frequency Testing performed indicates that laundering itself does not contribute to strength loss, although it was observed that commercial washing could cause abrasion between metal hardware elements and webbing straps, as well as cause degradation of product markings. **Laundered products must be inspected prior to use, to determine if the product is acceptable for use.** The specific length of time between laundering is solely dependent on the cleanliness of the product. Some applications may require weekly cleaning; other applications may require the product to be cleaned on an annual basis.



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Effectiveness Laundering will be effective on the typical dirt and grease found in many industrial settings. Many paints, tar, and industrial chemicals cannot be completely removed from webbing. It is recommended that samples be laundered and inspected before a large quantity is processed to determine the effectiveness of laundering. Post laundering sample destructive testing may be appropriate if questions exist regarding the product's ability to perform as designed.

Contact DBI/SALA for post laundering evaluation and testing.

Laundering Procedure

Various procedures can be effective in cleaning web products. High-pressure power type washers and steam cleaners should be avoided when cleaning web products, because of potential harm to the web fibers. Two acceptable procedures are detailed below.

- 1. Hand Scrubbing: This procedure is effective for low volumes of equipment and can be performed internally at an economical price. The product can be soaked in water/cleaner solution before hand scrubbing. The scrubbing action will help break down the dirt, grease, or other material on the webbing. Once cleaned, the product should be rinsed in clean water and hung to air dry in a well-ventilated area out of direct sunlight. Never exceed 200° F. when drying.
- 2. Machine Wash: A top or side loading agitating style washing machine (commercial or consumer type) is acceptable for cleaning web products. The product should be placed in a mesh bag to prevent entanglement. A full wash and rinse cycle should be performed. Once cleaned, the product should be hung up to air dry in a well-ventilated area, out of direct sunlight. Never exceed 200° F. when drying.

Cleaning Agents

A variety of cleaning agents is available. A mild detergent (bleach free) such as one used for laundering clothing is acceptable. For added cleaning power, a commercial/industrial strength-cleaning agent can be used.

Recommended cleaning agents include:

By Pas 1500 Series
(Commercial laundry detergent)
By Pas International Corp.
P.O. Box 14
Hudsonville, MI 49426
Phone: (616) 875-7234

Citra-Scrub
(For scrubbing by hand)
Inland Chemical Co., Inc.
401 E. 27th St.
Tacoma, WA 98421
Phone: (800) 552-3100

Choice
(Commercial laundry detergent)
WSI
1865 Summit Rd.
Cincinnati, OH 45237
Phone: (513) 821-8333





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Flo-Class
(Commercial laundry detergent)
U.N.X. Incorporated
707 Arlington Blvd.
Greenville, NC 27858
Phone: (252) 756-8616

Innovator Plus
(Commercial laundry detergent)
EcoLab
Attn: Textile Care Division
370 N. Wabasha
St. Paul, MN 55102
Phone: (800) 553-8683

The cleaning agent supplier should be asked to supply appropriate information on the amount of cleaning agent to use and disposal instruction based on your procedure and the degree of cleaning required. Also, if consumer type washing machine is to be used, consult cleaning agent supplier for compatibility. Several of other cleaning agents is available on the market that may produce acceptable results. The cleaning agents listed have been reviewed and approved for use. DBI/SALA recommends cleaning agents not listed be reviewed by DBI/SALA for approval.

Cleaning Agent Specifications

The pH. level (acidity or alkalinity) of the cleaning solution should be no higher than 11 or 12. A pH. level higher than 12 may harm the webbing and effect the performance of the products.

The water temperature, when laundering, should not exceed 160° F. Generally a wash temperature between 140° F. and 160° F. is recommended for safe, effective cleaning.

Product Life

For information on product life of DBI/SALA products, please request "Technical Bulletin No. MISC002".