XP98 Special Product Cleaning

Scope
SSP Fittings Company guidelines used to ensure compliance with product cleanliness requirements for wetted components per ASTM G93 Level C and CGA G4.1. Application of the document is limited to wetted system components. ASTM G93 Level C specifies that nonvolatile residues must be removed to a level of 6 mg/ft² (66 mg/m²) or less. This document must be used in conjunction with product catalogs, technical bulletins, and reports.

Requirements
Assembly, lubrication, testing, and packaging shall be according to the practices described in this document.
- Prior to processing, all components shall meet the requirements of SSP Standard Product Cleaning.
- Nonhydrocarbon lubricants shall be used to lubricate wetted surfaces in assembled products.
- Finished products shall be individually packaged in a sealed plastic bag and labeled:

  Special Cleaning (XP98)

ASTM G93 Standard Practice for Cleaning Methods and Cleanliness Levels for Material and Equipment Used in Oxygen-Enriched Environments, Level C / CGA G4.1 Cleaning Equipment for Oxygen Service

  Do not open until ready for installation.

- Finish products shall be boxed for protection from contamination and damage during shipment and storage.
- Handles, actuators, tags, and other nonwetted accessories will be cleaned and lubricated according to the standard product catalog requirements.

Cleaning Process
Multistep processes ensure that components are thoroughly cleaned, rinsed, drained, and dried. These processes include:
- Heated aqueous cleaning with cleaning agents selected in accordance with ASTM G127.
- Ultrasonic agitation techniques based on ASTM G131.
- Distilled water rinsing for complete removal of cleaning agent.
- Noncombustive drying for the removal of rinse waters from components without depositing residues.
- Visual inspection performed with the aid of bright illumination or ultraviolet light as indicated in ASTM G93 or CGA-G4.1.

Assembly and Testing
- Cleaned components are protected from damage and contamination.
- Cleaned components are assembled in a clean, well-lighted work area. Assembly work areas, equipment, and methods are designed and maintained to protect cleaned components from contamination.
- Nonhydrocarbon lubricant is applied to threads, mating surfaces, O-rings, and seals to prevent galling, reduce friction, and promote proper sealing.
- Assembled products are tested using clean, dry nitrogen or helium.
Packaging and Identification

- Clean caps and plugs are used as needed to protect threads and other critical surfaces from damage and to maintain cleanliness.
- Finished products are packaged to protect them from contamination and damage.
  - Each product is packaged individually in a sealed plastic bag.
  - Bagged products are packed in boxes with suitable protective material.
  - Boxes are identified with the part number and quantity.

Referenced Documents

- ASTM G93, Practice for Cleaning Methods and Cleanliness Levels for Material and Equipment Used in Oxygen-Enriched Environments
- CGA G-4.1 (2009), Cleaning Equipment for Oxygen Service