

**UNIFORM STATUTORY DECLARATION FORM FOR THE REGISTRATION OF FITTING DESIGNS**

NEW BRUNSWICK  
NUNAVUT

NOVA SCOTIA  
YUKON

PRINCE EDWARD ISLAND  
NORTHWEST TERRITORIES

NEWFOUNDLAND AND LABRADOR

|  |  |
|--|--|
| MANUFACTURERS NAME: <u>Swagelok Company</u>  |  |
| MANUFACTURERS ADDRESS: <u>29500 Solon Road, Solon, Ohio 44139 USA</u>  |  |
| PLANT LOCATIONS: <u>Headquarters: 29500 Solon Road, Solon, Ohio 44139 USA (See Attachment A)</u>   |  |
| <p align="center"><b>CATEGORY OF FITTINGS TO BE REGISTERED. CIRCLE ONE CATEGORY ONLY</b></p> <p>A Pipe fittings, including couplings, tees, elbows, Ys, plugs, unions, pipe caps, or reducers<br/>                 B Flanges: all flanges<br/>                 C Valves: all line valves<br/> <input checked="" type="radio"/> D Expansion joints, flexible connections, and hose assemblies: all types<br/>                 E Strainers, filters, separators, and steam traps<br/>                 F Measuring devices, including pressure gauges, level gauges, sight glasses, levels, or pressure transmitters<br/>                 G Certified capacity-rated pressure relief devices acceptable as primary over pressure protection on boilers, pressure vessels, piping and fusible plugs<br/>                 H Pressure retaining components that do not fall into one of the above categories<br/>                 N Nuclear components: Class 1 <input type="checkbox"/> Class 2 <input type="checkbox"/> Class 3 <input type="checkbox"/> (Meeting AECB or ASME requirements)</p> | <p align="center"><b>TITLE OF THE STANDARD OF CONSTRUCTION</b></p> <p align="center">Rubber Products<br/>Manufacturers (ARPM)<br/>Hose Handbook</p>  |
| <p align="center"><b>SHOW MANUFACTURERS NAME, TRADEMARK, OR LOGO AS IT WILL APPEAR ON THE PRODUCT</b></p> <p align="center" style="font-size: 2em;"><i>Swagelok</i></p>  | <p align="center"><b>TYPE OF CONSTRUCTION</b></p> <p>FORGED <input type="checkbox"/> WELDED <input type="checkbox"/> WROUGHT <input type="checkbox"/><br/>                 CAST <input type="checkbox"/> OTHER <input checked="" type="checkbox"/><br/>                 DESCRIBE OTHER: <u>PTFE Core</u></p> |
| <p align="center"><b>LIST OF SUPPORTING DOCUMENTATION AND IDENTIFICATION OF THE ACTUAL ITEMS TO BE REGISTERED:</b></p> <p>ISO 9001:2015 Certificate, Attachment A, Attachment B, Catalog Information and other Support Documents</p>   |  |

**DECLARATION:**

I Joel Feldman, Vice President, Engineering (see note 3) employed by Swagelok Company and being the person having full authority and responsibility for the quality of the end product do solemnly declare that the information contained in this form is true and to the best of my knowledge represents the product for which registration is sought. The dimensions, materials of construction, pressure temperature ratings, and identification markings are in accordance with the herein named standards. I further declare that the manufacture of these fittings is regulated by a Quality Control Program which extends to each plant where fabrication occurs in whole or in part and has been verified by BSI as being suitable for that purpose and I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath.

Signature of Declarer: *Joel C. Feldman*

Declared before me at Unable to get a notary signature THIS SPACE FOR THE

This      day of      ~~seal due to COVID-19 situation~~ OFFICIAL SEAL

Commissioner of Oaths  
or Notary Public: (sign) - September 17, 2020

(Affix Official seal to the right)

|   |  |
|---|--|
| <p><small>This space for Regulatory Authority use</small></p> <p><small>This registration must be revalidated after ten (10) years from the date of assistance.</small></p>   |  |
| <p>CRN: <u>0D22735.5</u></p> <p>FID#: <u>1214</u></p> <p><b>Crimped Swagelok FC series PTFE hose assemblies. 1/4" to 3/4" hose sizes</b></p> <p><small>Notes:</small></p> <ol style="list-style-type: none"> <li>1. All fittings shall be registered in the name of the Manufacturer.</li> <li>2. Each category shall be supported with two Statutory Declaration forms and one copy of supporting documentation.</li> <li>3. The declaration shall be made by the person having full authority and responsibility for the quality of the end product.</li> <li>4. Quality control programs shall be resubmitted for validation at a maximum interval of five (5) years.</li> </ol> <p>CRN expires Oct. 14th, 2030 - DG</p> |  |



**THIS IS PART OF CRN**  
 0D22735.5  
 Technical Standards and Safety Authority  
 Boilers and Pressure Vessels Safety Program

Canadian Registration Number Submittal  
 Category D Crimped Swagelok FC series PTFE Hose

September 1, 2020  
 Page 1 of 2

## Attachment B: Scope of Registration for Crimped Swagelok FC series PTFE Hose Assemblies (Category D)

This document represents the scope of the Swagelok Coreflex FC series hose and crimped assemblies covered by this submission for CRN approval. These products have been evaluated in accordance with the Association for Rubber Products Manufacturers (ARPM) Hose Handbook.

### Summary Table

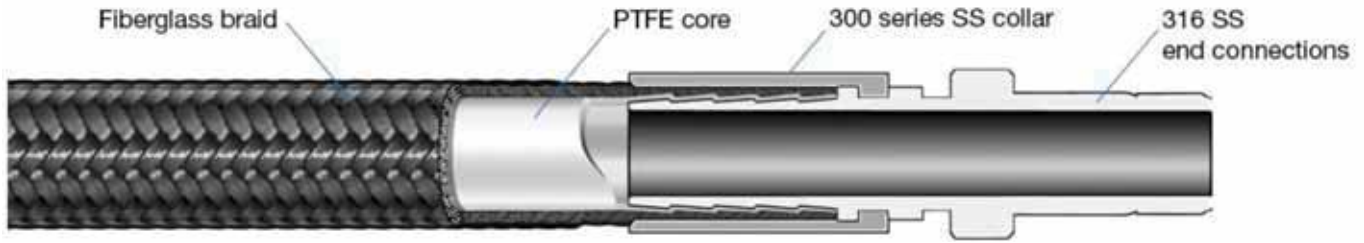
| FC series Hose Size | Maximum Pressure (psig)  |                             |                          | Pressure Retaining Material  | End Connections and Sizes  | Design Code of Construction  |
|---------------------|--------------------------|-----------------------------|--------------------------|--|--|--|
|                     | At Minimum Temp. (-65°F) | Room temperature (0°-100°F) | At Maximum Temp. (450°F) |  |  |  |
| 1/4"                | 455                      | 800                         | 160                      | <b>Core</b><br>Carbon Black filled virgin PTFE<br><br><b>Braid</b><br>Fiberglass Braid Reinforcement<br><br><b>End Connections</b><br>316 SS<br><br><b>Crimp on Collar</b><br>304 SS | Swagelok Tube Fitting <b>[SL, SM]</b><br>1/8" – 2" (3-50mm)  | Association for Rubber Products Manufacturers (ARPM) Hose Handbook |
| 3/8"                | 480                      | 650                         | 170                      |  | Male & Female NPT Tapered Pipe Fitting <b>[PM, PF]</b> 1/8" – 2"<br>Male & Female ISO/BSP Tapered (ISO 7) Pipe Threads <b>[MT, FT]</b> 1/4" – 1" |  |
| 1/2"                | 450                      | 450                         | 225                      |  | Male 37° JIC & Female 37° JIC with female swivel nut <b>[AN, AS]</b> 1/4" – 2"<br>Tube Butt Welds <b>[TB]</b> 1/2" – 1"                          |  |
| 3/4"                | 325                      | 325                         | 160                      |  | Male & Female VCO O-ring Face seal Fitting <b>[VF, VM]</b> 1/8" - 2"   |  |
|                     |                          |                             |                          |  | Male & Female VCR Metal Gasket Face seal Fitting <b>[RF, RM]</b> 1/8" – 2"<br>Female ISO/BSP Parallel Threads (ISO 228) <b>[FS]</b> 1/4" – 1"    |  |

## Product Description

Swagelok's FC series hose is a carbon black filled virgin PTFE liner with fiberglass braid reinforcement. All FC series hoses undergo production testing in accordance with ASTM D380 "Test Methods for Rubber Hose" (version current to hose production date).

## Configurations

All end connection inserts are crimped onto the hose using crimp collars.



## Product Options:

Additional options that do not affect pressure and/or temperature ratings may be made available and are within the scope of this approval. Examples of these would include, but not limited to, the following:

### Cover Options

- Armor guard - Interlocking, flexible 302 stainless steel.
- Fire jacket - Woven fiberglass coated with specially compounded aerospace-grade silicone rubber
- Spiral guard - Helical HDPE plastic

### Tag and Marking Options

- Mat tag - Polyester tag with customer-specified text
- Lanyard tag - Stainless steel tag with customer-specified text

### End Connection Seals or Sealants Options

- VCO – O-rings
- Pipe Thread ends – thread sealant

## Quality System

The Swagelok Company quality system complies with the requirements of ISO 9001:2015. The Swagelok Company maintains BSI Certificate of Registration Number FM 01729, which applies to all locations listed on the Certificate.

## References

The product catalog does not represent the full scope of the registration but rather details some of the most common options. Hose Assemblies, Bulk Hose, and End Connections Product Catalog MS-01-180.

## Attachment A. Swagelok Manufacturing Locations

This document lists the Swagelok locations where end item or component level manufacturing activities take place.

|   |  |
|---|--|
| Swagelok Company<br>29500 Solon Road<br>Solon, Ohio 44139<br>USA  | Swagelok Company (Falon 1)<br>348 Bishop Road<br>Highland Heights, Ohio 44143<br>USA |
| Swagelok Company (Highland)<br>318 Bishop Road<br>Highland Heights, Ohio 44143<br>USA   | Swagelok Company (Falon 2)<br>358 Bishop Road<br>Highland Heights, Ohio 44143<br>USA |
| Swagelok Company (OFC)<br>29495 F.A. Lennon Drive<br>Solon, Ohio 44139<br>USA   | Swagelok Company (HPF)<br>6050 Cochran Road<br>Solon, Ohio 44139<br>USA              |
| Swagelok Company (Atlantic)<br>26651 Curtiss Wright Parkway<br>Willoughby Hills, Ohio 44092<br>USA  | Swagelok Company (Snow Metal)<br>6060 Cochran Road<br>Solon, Ohio 44139<br>USA       |
| Swagelok Company (Micro)<br>26653 Curtiss Wright Parkway<br>Willoughby Hills, Ohio 44092<br>USA   | Swagelok Company (Alfred)<br>29500 Ambina Drive<br>Solon, Ohio 44139                 |
| Swagelok Hose Services Company (SHSC)<br>29900 Solon Industrial Parkway<br>Solon, Ohio 44139  | Swagelok Company (Strongsville)<br>15400 Foltz Road<br>Strongsville, Ohio 44119      |
| Swagelok (China) Fluid System Technologies Ltd.<br>Changshu Export Process Zone<br>Changshu Economic Development Zone<br>Changshu, Jiangshu<br>215513 China | Swagelok Limited<br>Ballafletcher Road<br>Tromode<br>IM4 4RA<br>Isle of Man          |