

# TECHNICAL STANDARDS & SAFETY AUTHORITY

14th Floor, Centre Tower 3300 Bloor Street West Toronto, Ontario Canada M8X 2X4 Show facsimile of manufacturer's logo or trademark, as it will appear on the fitting, in the space below

Swagelok

# STATUTORY DECLARATION **Registration of Fittings** David H. Peace, Vice President of Engineering (Name and Position, e.g. President, Plant Manager, Chief Engineer) of Swagelok Company (Name of Manufacturer) Located at 29500 Solon Road, Solon, Ohio 44139-3492 (440) 248-4600 440-519-7384 (Plant Address) (Telephone No.) (Fax No.) obsolemnly declare that the fittings listed hereunder, which are subject to the Technical Standards and Safety Act, Boilers and Pressure Vessels Regulation, comply with all of the requirements of The RMA Handbook (Title of recognized North American Standard) which specifies the dimensions, materials of construction, pressure/temperature ratings, identification marking the fittings and service; or are not covered by the provisions of a recognized North American standard and are therefore manufactured to comply with as supported by the attached data which identifies the dimensions, material of construction, pressure/temperature ratings and the basis for such ratings, the marking of the fitting for identification and service. I further declare that the manufacture of these fittings is controlled by a quality system meeting the requirements of ISO 9001:2008 which has been verified by the following authority, The British Standards Institution The items covered by this declaration, for which I seek registration, are category D \_ type fittings. In support of this application, the following information and/or test data are attached as follows: ISO 9001:2008 Certificate, Catalog Information, Support Documents, Attachments A, B, C, D, E (drawings, calculations, test reports, etc.) Declared before me at Commissioner for Oaths: Lori A. Sarver, Notary Public State of Ohlo, Summit County My Commission Expires April 13, 2015 (Signature) (Signature of Declarer) FOR OFFICE USE ONLY To the best of my knowledge and belief, the application meets the requirements of the Technical Standards and Safety Act, Boilers and Pressure Vessels Regulation, and CSA Standard B51 and is accepted for registration in Category REGISTERED CSA-OD14205.56R1 CRN: A BANWATT Registered by: MARCH . 16. 2016 Dated: 178 Rexdale Boulevard, Toronto, ON Canada M9W 1R3

DEC . 21-202

NOTE: This registration expires on:

# Attachment B. Scope of Registration for Swagelok Coreflex PTFE (WC) Hose Assemblies (Category D)

# Product Scope

This document represents the scope of Swagelok Coreflex WC PTFE Hose Assemblies covered by this submission for CRN approval. These Swagelok Coreflex WC PTFE Hose Assemblies have been evaluated in accordance with the Rubber Manufacturer's Association (RMA) Handbook and ASTM D380 Test Methods for Rubber Hose.

# Summary Table

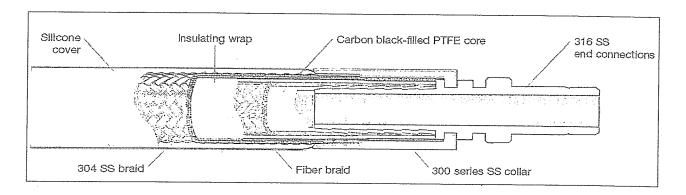
| Product<br>Description<br>or<br>Series | Pressure Retaining<br>Material  | End Connection & Sizes  | Nom.<br>Hose<br>Size<br>(in.) | Maximum Working Pressure in (Psig) |                               | Design Code<br>of                                  |
|--|---|---|-------------------------------|------------------------------------|-------------------------------|--|
|  |   |   |                               | @ Min65°F                          | @ Max.<br>450°F               | Construction                                       |
| ·                                      | Core: Carbon Black-filled (PTFE) [WC]  Covered by: Fiber Braid & Insulating Wrap & 304 Series Stainless Steel Braid & Silicon Cover   | Swagelok Tube Fitting: 1/8" to 2" & 3, 6,10,12,18,25,38,50 mm  Swagelok Tube Adapters:1/8" to 2" & 3, 6,10,12,18,25,38,50 mm  Female Pipe Threads NPT:1/8" to 2"  Male Pipe Threads NPT: 1/8" to 2"  Tube Stubs: 1/8" to 2" & 3, 6,8,10,12,18,25, 38, 50 mm  *Sanitary Kwik –Clamps: 1/2" to 2"  Tube Butt Welds: 1/2" to 2"  Female VCO O-ring Face Seal Fitting: 1/8" to 2" | C.R.Né<br>Signed:             | 0/2-1                              | 750<br>750<br>4205.56<br>xeat | 205.521  |
| W<br>Series                            | With:  Annealed 316 Stainless Steel End Connections OR 316 Strain Hardened End Connections OR 316L Stain Hardened Stainless Steel End | Female VCR Metal Gasket Face seal Fitting: 1/8" to 2"  *TS series Sanitary Clamps: 1/2" to 1"  Male Pipe threads, ISO/BSP Tapered (ISO 7): 1/4" to 1"  Male ISO/BSP Parallel Threads W/ 60° Male cone (ISO 228): 1/4" to 1"  Female Pipe Threads, ISO/BSP   | 1/2"                          | 750                                | 750                           | Rubber<br>Manufacturers<br>Association<br>Handbook |
|  | Connections & 300 Stainless Steel Crimp on Collar   | Tapered (ISO 7): 1/4" to 1"  Female ISO/BSP Parallel Threads (ISO 228): 1/4" to 1"  Female Swivel ISO/BSP Parallel Threads W/ 30° Cone: 1/4" to 1/2"  Female Swivel ISO/BSP Parallel Threads W/ 60° Cone:1/4" to 1/2"  *ANSI 150 LB Lap Joint Flange: 1/2" to 2"  | 3/4"                          | 75<br>@ Room Te                    |                               |  |

<sup>\*</sup> All sanitary clamps including Kwik clams and ANSI 150 Lb flanges have pressure rating lower than the bulk hose. For exact rating of these fitting see Swagelok hose and flexible tubing catalog.

|              | Working Pressure for W       | Series PTFE H | łose (WC            | Series) |     |     |  |  |  |
|--------------|------------------------------|---------------|---------------------|---------|-----|-----|--|--|--|
| Hose         |                              |               | Temperature in (°F) |         |     |     |  |  |  |
| Size<br>(in) |                              | -65 to<br>100 | 200                 | 300     | 400 | 450 |  |  |  |
| 3/8"         | Max. Working Pressure (PSIG) | 750           | 750                 | 750     | 750 | 750 |  |  |  |
| 1/2"         | Max. Working Pressure (PSIG) | 750           | 750                 | 750     | 750 | 750 |  |  |  |
| 3/4"         | Max. Working Pressure (PSIG) | NA            | NA                  | NA      | NA  | NA  |  |  |  |

# Product Illustration

WC series is standard Swagelok virgin PTFE-lined hose with fiber braid reinforcement, ceramic wrap insulation, 304 stainless steel reinforcement, and a silicone cover. All end connection inserts are crimped onto the hose using crimp collars.



# Typical Product Characteristics

Some of the product options listed below do not affect the pressure-temperature ratings shown in the Summary Table. All of the following options are within the scope of this registration:

#### **Cover Options**

- Armor guard Interlocking, flexible 304 stainless steel.
- Fire jacket Woven fiberglass coated with specially compounded aerospace-grade silicone rubber
- Spiral guard Helical HDPE plastic

# Tag and Marking Options

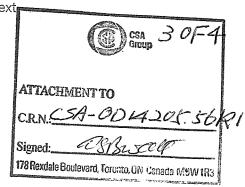
- Mat tag. Polyester tag with customer-specified text
- Perma tag Polyester tag encapsulated in platinum-cured silicone with customer-specified text

Lanyard tag - Stainless steel tag with customer-specified text

# End Connection Seals or Sealants Options

- VCO O-rings
- Pipe Thread ends thread sealant
- Flange and Sanitary Ends gaskets

All of the above options are within the scope of this approval.



#### **Quality System**

The Swagelok Company quality system complies with the requirements of BS EN ISO 9001:2008. The Swagelok Company maintains British Standards Institution Certificate of Registration Number FM 01729, which applies to all locations listed on the Certificate. The Swagelok Coreflex PTFE Hose Assemblies (WC) are manufactured at a Swagelok Company location in Solon, Ohio.

#### 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 TO

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330 - 1855 Victorin Avenue
Region, Sarkulcheway
848-347

787-4509

April 23, 1998

## Re: Fittings Registration

The Province of Saskatchewan will be participating with Quebec, Manitoba and the Canadian Standards Association (CSA) in a pilot project for the registration of fittings. We will recognize registrations done by CSA and accept such fittings for use in Saskatchewan.

The letters CSA will be applied as a prefix to the CRN to indicate which fittings have been registered in this manner. I would appreciate if you could inform your clients of this additional marking requirement.

You may also inform your clients that fittings registered by CSA are accepted for use in Saskatchewan.

N. Surtege, P. Eng.

Yours truly

Executive Director