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TECHNICAL STANDARDS & SAFETY AUTHORITY 14TH FLOOR CENTRE TOWER-3300 BLOOR STREE TORONTO ON M8X 2X4 Date: August 26, 2015

Account #: 35231 Journal #: 63418 Our File #: 5550973

Attn: TANYA FRANCIS

Re: Application for Design Registration

The design, as detailed in your, TSSA SR# 1692324, for a Fitting is accepted for registration as follows:

Registered To: SWAGELOK COMPANY CRN: 0A6054.51

Drawing #: MS-01-05 (Product Catalog) Drawing Revision: R8

Conditions Of Registration:

Registration of PFA Tube Fittings as per Scope of Registration Sheets (Attachment A & B - 3 pages). This design was registered based on a technical review performed by the province of initial registration in accordance with the Association of Chief Inspectors policy on reciprocal recognition of design review.

Reviewer's Notes:

As required by CSA B51 4.2.1, this registration expires on July 13, 2025. This CRN is valid until the expiry date as long as the Manufacturer maintains a valid quality control program verified by an acceptable third-party agency until that date. Should the certification of the quality control program lapse before the expiry date, this registration shall become void.

Contact me if you have any questions. The invoice for registration will be forwarded under separate cover.

SHARON PETERS

boiler.designregistration@safetyauthority.ca Design Administration

cc:

Attachment A. Swagelok Manufacturing Locations

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

Swagelok Company	Swagelok Company (Falon 1)		
29500 Solon Road	348 Bishop Road		
Solon, Ohio 44139	Highland Heights, Ohio 44143		
USA	USA		
Swagelok Company (Highland)	Swagelok Company (Falon 2)		
318 Bishop Road	358 Bishop Road		
Highland Heights, Ohio 44143	Highland Heights, Ohio 44143		
USA	USA		
Swagelok Company (OFC)	Swagelok Company (HPF)		
29495 F.A. Lennon Drive	6050 Cochran Road		
Solon, Ohio 44139	Solon, Ohio 44139		
USA	USA		
Swagelok Company (Atlantic)	Swagelok Company (Snow Metal)		
26651 Curtiss Wright Parkway	6060 Cochran Road		
Willoughby Hills, Ohio 44092	Solon, Ohio 44139		
USA	USA		
Swagelok Company (Micro) 26653 Curtiss Wright Parkway Willoughby Hills, Ohio 44092 USA	Swagelok Company (Alfred) 29500 Ambina Drive Solon, Ohio 44139		
Swagelok Hose Services Company (SHSC)	Swagelok Company (Strongsville)		
29900 Solon Industrial Parkway	15400 Foltz Road		
Solon, Ohio 44139	Strongsville, Ohio 44119		
Swagelok Company (Strongsville) 21693 Drake Road Strongsville, Ohio 44149	Swagelok Company A.G. (European Technology Center) St. GallerstraBe 84 Lachen, Switzerland 8853 Switzerland		
Swagelok Limited Tromode IM4 4RA Isle of Man	Swagelok BV Markweg 21 2153 PG, Nieuw-Vennep Netherlands		
Swagelok (China) Fluid System Technologies Ltd. Changshu Export Process Zone Changshu Economic Development Zone Changshu, Jiangshu 215513 China	0A 6054.5R2		

Attachment B. Scope for Swagelok PFA Tube Fittings (Category A)

Product Scope

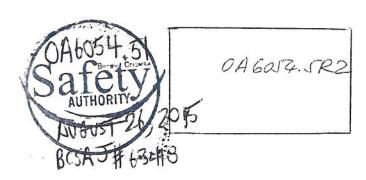
This document represents the scope of the PFA Tube Fittings covered by this submission for CRN approval. The Swagelok PFA Tube Fittings were designed and evaluated in accordance with ASME B31.1 for unlisted components and ASME B31.3 for unlisted components.

Summary Table

The following table outlines key technical data for the products in scope of this application. Also included are standards for the materials of construction of the PFA Fittings.

Series Series Bearing Bearing	Main	re Port Connections and Sizes	Maximum Rated Pressure			
	Pressure Bearing Material		Ambient Temperature (70°F)	Maximum Temperature (140°F)	Design Code of Construction	
PFA-220	Body	PFA (ASTM D3307)	PFA Tube Fitting 1/8"	150 psi	150 psi	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)
PFA-420	Body	PFA (ASTM D3307)	PFA Tube Fitting 1/4"	150 psi	150 psi	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)
PFA-620	Body	PFA (ASTM D3307)	PFA Tube Fitting 3/8"	125 psi	109 psi	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)
PFA-820	Body	PFA (ASTM D3307)	PFA Tube Fitting ½"	80 psi	74 psi	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)

ASME B31.1 Section 105.3 limits the product ratings in non-metallic piping systems to a maximum pressure of 150 psi (10.3 bar) and a maximum temperature of 140 °F (60 °C).



Product Illustration



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:

Caps and Plugs

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 PFA Tube Fittings are manufactured at Swagelok Company locations in Solon, Ohio and Tromode, Isle of Man, British Isles.

References

The product catalog does not represent the full scope of registration, but rather details some of the most common options.

PFA Tube Fitting Catalog MS-01-05, R8

