



345 Carlingview Drive
Toronto, Ontario M9W 6N9
Tel.: 416.734.3300
Fax: 416.231.1626
Toll Free: 1.877.682.8772

www.tssa.org

July 22, 2025

ROUND ENGINEERING INC
10 SEGWUN RD
WATERDOWN ON L8B 0K6

Workorder Type: Registration - Fitting(Conventional)
Workorder No: 14380011
Your Reference No.: R-1319B
Registered to: AFLEX HOSE LTD.

Dear SCOTT ISLIP,

Technical Standards and Safety Authority (TSSA) is pleased to inform you that your submission has been reviewed and registered as follows:

CRN : 0D26004.5
Main Design No.: Biopure Flexible Hose Assembly See Scope of Registration
Expiry Date: Jul 22, 2035

Please be advised that a valid quality control system must be maintained for the fitting registration to remain valid until the expiry date.

Design Code: ASME B31.3, ASME BPE

The stamped copy of the approved registration and the invoice are mailed separately (There will be no hard copies for electronic submissions). Should you have any questions or require further assistance, please contact a Customer Service Advisor at 1.877.682.TSSA (8772) or e-mail customerservices@tssa.org. We will be happy to assist you. When contacting TSSA regarding this file, please refer to the Service Request number provided above.

Yours truly,

Selina Di P. ENG
Engineer, BPV
Tel. : +1 416-734-3531
Email : sdi@tssa.org



Technical Standards and Safety Authority
345 Carlingview Drive
Toronto, Ontario M9W 6N9
www.tssa.org

Show facsimile of manufacturer's logo or trademark, as it will appear on the fitting, in the space below



AFLEX HOSE or "AFLEX"

STATUTORY DECLARATION Registration of Fittings

I, Dr. Leigh Mulvaney-Johnson PHD CENG (MIMECHE), Technical Manager

(Name and Position, e.g. President, Plant Manager, Chief Engineer)

of AFLEX Hose Ltd.

(Name of Manufacturer)

Located at Bradley Business Park, Dyson Wood Way, Bradley, Huddersfield, HD2 1GZ, United Kingdom

(Plant Address)

(Telephone No.)

(Fax No.)

☒ do solemnly 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
ASME B31.3, ASME BPE, ARPM IP-2

(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 9001:2015
which has been verified by the following authority, bsi, TUV, LRQA

The items covered by this declaration, for which I seek registration, are category D - Flexible Hose Assemblies type fittings. In support of this application, the following information and/or test data are attached as follows:

SCOPE OF CRN REGISTRATION, REPORTS, DRAWINGS, CALCULATIONS

(drawings, calculations, test reports, etc.)

Declared before me at Hebden Bridge in the County of West Yorkshire
the 12th day of June AD 2024
Mary Maillon
SOLICITOR

TEL: 01422 844997 FAX: 01422 844797

EMAIL: mary@marymahonsolicitor.co.uk

8 WRAGLEY HOUSE, VALLEY ROAD

HEBDEN BRIDGE, WEST YORKSHIRE HX7 7BN

Commissioner for Oaths:

MARY MAILLON

(Printed name)

[Signature]

(Signature)

L. Mulvaney-Johnson

(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 D

CRN: _____

Registered by: _____

Dated: _____

NOTE: This registration expires on: Jul 22, 2035

Technical
Standards
and Safety
Authority

Boilers and
Pressure Vessels
Safety Program

REGISTERED

C.R.N.: 0D26004.5

Signed: SDi

Date: July 22, 2025.

Design Code: ASME B31.3, ASME BPE.
See attachment for scope of registration.

*Information provided in this application is releasable under the Freedom of Information and Privacy Protection Act and may be disclosed upon request.

PV 09553 (04/17)

AFLEX HOSE LTD.

BRADLEY BUSINESS PARK
DYSON WOOD WAY
BRADLEY, HUDDERSFIELD
HD2 1GZ, UNITED KINGDOM



July 21, 2025

**THIS IS PART OF CRN
0D26004.5**

Technical Standards and Safety Authority

Boilers and Pressure Vessels Safety
Program

SCOPE OF CRN REGISTRATION

PAGE 1 OF 2

Hose Type(s) Biopure Platinum-Cured Silicone Hose Assemblies

Important: The CRN Pressure-Temperature Ratings listed in this document are the hose maximum CRN ratings. Consult hose product literature for recommended hose maximum operating conditions.

The maximum CRN ratings are applicable to the following Service Types:

Service Type **Group 1**: Water and all other liquids, solid materials suspended in liquids or air, compressed air and other gases.

Service Type **Group 2**: Liquid media that immediately changes into gas under standard atmospheric conditions.

Service Type **Group 3**: Steam

Product Description	Design Code	Material Specifications	MDMT	Report Number
Biopure Flexible Hose Assemblies	ASME B31.3, ASME BPE	ASTM A479-304/304L, ASTM A479-316/316L Platinum-Cured Silicone	- 65°C / -85°F	R-1319B Rev. 0

PRESSURE - TEMPERATURE RATINGS

Process Connections		ASME BPE Ferrule Sizes 3/8", 1/2", 3/4", 1", 1-1/2"				
Service Type	Group 1		Group 2		Group 3	
Hose Bore	MAWP at 38°C (barg)	MAWP at 100°F (psig)	MAWP at 38°C (barg)	MAWP at 100°F (psig)	MAWP at 204°C (barg)	MAWP at 400°F (psig)
3/8"	4.0	58	4.0	58	1.9	28
1/2"	3.5	51	3.5	51	1.7	25
3/4"	3.1	45	3.1	45	1.5	22
1"	2.1	30	2.1	30	1.0	15
Hose Bore	MAWP at 204°C (barg)	MAWP at 400°F (psig)	MAWP at 204°C (barg)	MAWP at 400°F (psig)	"Not suitable for continuous steam service"	
3/8"	1.9	28	1.9	28		
1/2"	1.7	25	1.7	25		
3/4"	1.5	22	1.5	22		
1"	1.0	15	1.0	15		

AFLEX HOSE LTD.

BRADLEY BUSINESS PARK
DYSON WOOD WAY
BRADLEY, HUDDERSFIELD
HD2 1GZ, UNITED KINGDOM



July 21, 2025

SCOPE OF CRN REGISTRATION

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Note 1: MAWP = Maximum Allowable Working Pressure, MAWT = Maximum Allowable Working Temperature, MDMT = Minimum Design Metal Temperature.

Note 2: For low temperature operation the products shall conform to the rules of the applicable codes under which they are used.

Note 3: The ASME BPE Ferrule connection shall be used with a clamp, however the assembly clamp is not part of this CRN. Pressure-Temperature ratings may be limited by the clamp type used in the joint assembly. The clamp used to complete the joint shall have its own CRN and shall have pressure-temperature ratings the same or higher than the product ratings.

Note 4: The following ASME BPE process connections can be supplied based on the Hose Bore size

Hose Bore	Available ASME BPE Ferrule Table DT-7-1 Process Connection
3/8"	3/8" Type A, 1/2" Type A, 3/4" Type A
1/2"	1/2" Type A, 3/4" Type A, 1" Type A, 1" Type B
3/4"	3/4" Type A, 1" Type A, 1" Type B
1"	1" Type A, 1" Type B, 1-1/2" Type B

Note 5: The Biopure Platinum-Cured Silicone Hose Assemblies are not suitable for vacuum service.

Note 6: The conditions of design and service shall be within the limitations of the hose assembly as recommended by the manufacturer. Precautions of ASME B31.3 Appendix F, paras. F323 and para FA323, as applicable, shall be considered by the end user for selection of hoses.

Note 7: See attached Worldwide Locations Appendix for the manufacturing locations applicable to this CRN.



WORLDWIDE LOCATIONS APPENDIX

AFLEX HOSE MANUFACTURING LOCATIONS & CERTIFYING AUTHORITIES

(rev. November 24, 2024)

Aflex Hose Ltd.

Bradley Business Park
Dyson Wood Way
Bradley
Huddersfield
HD2 1GZ
United Kingdom

ISO 9001 Certified by bsi

In addition, in accordance with CSA B51 paragraph 4.2.5 Aflex Hose Ltd. is taking responsibility for the product covered under this CRN that is manufactured at:

Watson-Marlow, Inc.

37 Upton Technology Park
Wilmington, MA, 01887
USA

ISO 9001 Certified by TUV

Watson-Marlow America Manufacturing Inc.

16 Bulge Road
Devens MA 01434
USA

ISO 9001 Certified by TUV

Bio Pure Technology Ltd.

Unit 5, Dunsbury Park,
Fitzwygram Way,
Havant, Portsmouth,
PO9 4EE, Hampshire, United Kingdom

ISO 9001 Certified by LRQA