

Subject: Swagelok Products in Compliance with the Material Restrictions of European Directive 2015/863/EU
Revision: AF (September 2022)

Table 1 on the following pages lists Swagelok® products by catalog that, with few exceptions, have been determined to be in compliance with the material restrictions of European Directive 2015/863/EU. On their own, most Swagelok components do not qualify as electrical or electronic equipment (EEE) requiring compliance under the RoHS Directive. However, OEMs that manufacture EEE might require RoHS certification for non-EEE Swagelok components to certify their equipment to RoHS.

This document addresses standard catalog items- it does not address products with suffix codes, boxcar numbers, etc. This is not an exhaustive list, and it should not be assumed that the information shown in the right-hand column of Table 1 represents a complete listing of non-compliant Swagelok products. Questions regarding products not shown in the table, and requests for certification of specific part numbers, should be directed to the Certification Department.

The RoHS status of the Swagelok products is based on information provided by our suppliers, our own detailed review, and in some instances 3rd party testing. A product is designated as in compliance with the material restrictions of the RoHS Directive by meeting one of the following criteria:

- The product does not contain any of the restricted substances referred to in Annex II of the RoHS Directive.
- The product contains restricted substances at levels below the allowable maximum concentration values.
- The product contains restricted substances at levels above the allowable maximum concentration values but falls under one of the exemptions as listed in the Annex III to the RoHS Directive.

For the above definition, the maximum concentration values of the restricted substances by weight in homogenous materials are as follows:

Lead	0.1%
Mercury	0.1%
Hexavalent Chromium	0.1%
Polybrominated Biphenyls (PBB)	0.1%
Polybrominated Diphenyl Ethers (PBDE)	0.1%
Cadmium	0.01%
Bis(2-ethylhexyl) phthalate (DEHP)	0.1%
Butyl benzyl phthalate (BBP)	0.1%
Dibutyl phthalate (DBP)	0.1%
Diisobutyl phthalate (DIBP)	0.1%

Regarding the products listed in the table as “non-compliant”, Swagelok is in the process of considering changes or alternative products that will provide RoHS compliant options. Accessory products such as gap gauges and hand tools are listed as “out of scope” since there is no chance of them being incorporated into electrical or electronic equipment.

The list of Swagelok products in compliance with the material restrictions of the RoHS Directive is based upon information obtained from sources which Swagelok believes are reliable, and the information provided in Table 1 is accurate to the best of our knowledge.

Please contact us for further assistance.

Sincerely,



Steven Volcansek
Product Compliance Manager

Using this Document

Compliance status to the material restrictions of the RoHS Directive for most standard Swagelok products can be determined using the information in Table 1 below.

- Example 1: Part Number – B-810-1-8
 - MS-01-140 notes in Table 1: Non-Compliant: Hexavalent Chromium and Cadmium in aluminum components, Out of Scope: Tools, Note: Lead in carbon steel is to Exemption 6(a) and lead in brass is to Exemption 6(c)
 - This fitting is made entirely from brass and does not contain any aluminum, therefore it is exempt from the material restrictions of the RoHS Directive per Exemption 6(c).
- Example 2: Part Number – SS-1RF2
 - MS-01-164 notes in Table 1: Non-Compliant: Cadmium plating on 1, 18, and 20 series steel fasteners, Note: Lead in carbon steel is to Exemption 6(a) and lead in brass is to Exemption 6(c)
 - This valve has a stainless steel body and uses 1b Component, 1⊕ Series handle materials. Refer to the Materials of Construction table in catalog MS-01-164.
 - This valve does not contain any carbon steel and does not use a nickel cadmium-plated set screw. The lead in the brass insert in the phenolic handle is exempt from the material restrictions of the RoHS Directive per Exemption 6(c). This valve is therefore compliant to the material restrictions of the RoHS Directive with Exemption 6(c).
- Example 3: Part Number – SS-43S6MM-31C
 - MS-02-331 notes in Table 1: Note: Lead in brass components is to Exemption 6(c). Brass 40 series handle insert does not contain lead. See MS-02-343 for actuated options.
 - MS-02-343 notes in Table 1: Non-Compliant: Cadmium plating on internal screws, cap screws, and retaining rings. Note: Lead in brass mounting bracket kit components and bronze components is to Exemption 6(c). Lead in carbon steel mounting bracket kit components is to Exemption 6(a).
 - This valve has a stainless steel body and a 31 model pneumatic actuator. Refer to the Materials of Construction table in catalogs MS-02-331 and MS-02-343.
 - This actuated valve assembly is not compliant to the material restrictions of the RoHS Directive due to the cadmium-plated steel internal screw, the cadmium-plated cap screw, and the cadmium-plated retaining ring actuator components. The bronze shaft bushing is exempt from the material restrictions of the RoHS Directive per Exemption 6(c). The brass insert in the 43 series nylon handle does not contain lead, so this valve without the actuator (SS-43S6MM) would be compliant to the material restrictions of the RoHS Directive without any exemptions.

Table 1

All products in the listed catalogs are compliant with the material restrictions of the RoHS Directive (2015/863/EU) unless otherwise indicated in this table.		
Catalog Description	Catalog #	Products non-compliant or out of scope
PFA Tube Fittings	MS-01-05	None present
Industrial Excess Flow Valves, XS Series	MS-01-110	None present
Quick-Connects	MS-01-138	Note: Lead in brass components is to Exemption 6(c)
Gaugeable Tube Fittings and Adapter Fittings	MS-01-140	Non-Compliant: Hexavalent Chromium and Cadmium in aluminum components Out of Scope: Tools Note: Lead in carbon steel is to Exemption 6(a) and lead in brass is to Exemption 6(c)
Proportional Relief Valves, R Series	MS-01-141	Non-Compliant: DEHP in bonded poppet for components SS-3AS-R4-BN, SS-3AS-R4-EP, and SS-3AS-R4-NE. Lead lock wire crimp shipped with spring kits does not meet any exemptions.
Metering Valves, S, M, L, and 31 Series	MS-01-142	Note: Lead in carbon steel is to Exemption 6(a) and lead in brass is to Exemption 6(c)
Ball Valves, General Purpose and Special Application, 60 Series	MS-01-146	Non-Compliant: Cadmium plating on steel fasteners See MS-02-343 notes for actuated options Note: Lead in brass components is to Exemption 6(c)
Pipe Fittings	MS-01-147	Note: Lead in carbon steel is to Exemption 6(a) and lead in brass is to Exemption 6(c)
Weld Fittings, Ultrahigh-Purity and Industrial	MS-01-149	None present
Compact, High-Flow Gas Regulators, HF Series	MS-01-156	None present
Stainless Steel Titanium Alloyed Tubing (Metric)	MS-01-158-SCS	None present
Integral-Bonnet Needle Valves, O, 1, 18, 20, and 26 Series	MS-01-164	Non-Compliant: Cadmium plating on 1, 18, and 20 series steel fasteners Note: Lead in carbon steel is to Exemption 6(a) and lead in brass is to Exemption 6(c)
Springless Diaphragm Valves for High Performance, DP Series	MS-01-165	Non-Compliant: Actuated options: DEHP in BN-90-8-009-GR, submit Flowan with Swagelok part numbers to Compliance for assessment
Trunnion Ball Valves, 83 Series and H83 Series	MS-01-166	None present See MS-02-343 notes for actuated options Note: Brass 83 series handle insert does not contain lead
Severe-Service Union-Bonnet Needle Valves, N Series and HN Series	MS-01-168	Non-Compliant: Cadmium plating on handle pin and steel fasteners Note: Lead in N series phenolic handle options is to Exemption 6(c)
Diaphragm Valves, LD Series	MS-01-172	Note: Lead in carbon steel is to Exemption 6(a) and lead in brass and bronze is to Exemption 6(c)
SAF 2507 Super Duplex Weld Fittings	MS-01-173	None present
Swagelok Gaugeable SAF 2507 Super Duplex Tube Fittings	MS-01-174	None present
Check Valves, C, CA, CH, CP, and CPA Series	MS-01-176	Non-Compliant: DEHP in BN-60-OR-009, submit Flowan with Swagelok part number to Compliance for assessment Note: Lead in brass is to Exemption 6(c)
Sample Cylinders, Accessories, and Outage Tubes	MS-01-177	Non-Compliant: Cadmium plating on end caps and neck rings
Tubing Tools and Accessories	MS-01-179	Out of Scope: Tools and accessories
Hose and Flexible Tubing	MS-01-180	Non-Compliant: Hexavalent Chromium in lanyard tag crimp Out of Scope: Tools and accessories Note: Lead in brass components is to Exemption 6(c)
Stainless Steel Seamless Tubing and Tube Support Systems	MS-01-181	None present
Ultrahigh-Purity (UHP) and High-Purity Stainless Steel Tubing	MS-01-182	None present
Bellows-Sealed Valves, B Series	MS-01-22	Non-Compliant: DEHP in indicator switch used with actuator Note: Lead in brass components is to Exemption 6(c)
Bellows-Sealed Metering Valves, BM Series	MS-01-23	Note: Lead in brass components is to Exemption 6(c)

All products in the listed catalogs are compliant with the material restrictions of the RoHS Directive (2015/863/EU) unless otherwise indicated in this table.		
Catalog Description	Catalog #	Products non-compliant or out of scope
VCR® Metal Gasket Face Seal Fittings	MS-01-24	Out of Scope: Installation tool and tray
VCO® O-Ring Face Seal Fittings	MS-01-28	None present
Ultra-Torr® Vacuum Fittings	MS-01-32	None present
Electric Actuators	MS-01-35	None present
Bellows-Sealed Valves, H Series	MS-01-36	None present
Bellows-Sealed Valves, U Series	MS-01-38	None present
Nonrotating-Stem Needle Valves, D Series	MS-01-42	Non-Compliant: Cadmium plating on steel fasteners Note: Lead in brass components is to Exemption 6(c)
Rising Plug Valves, 4P and 5P Series	MS-01-49	None present
Gauge Valves	MS-01-52	None present
Toggle Valves	MS-01-54	Note: Lead in brass components is to Exemption 6(c)
PFA Plug Valves, 43 Series	MS-01-56	None present
Plug Valves, P4T and P6T Series	MS-01-59	Note: Lead in brass components is to Exemption 6(c)
Bleed Valves and Purge Valves	MS-01-62	Non-Compliant: Cadmium plated cap on carbon steel purge valve Note: Lead in carbon steel is to Exemption 6(a) and lead in brass is to Exemption 6(c)
PFA Needle Valves, 4RP Series	MS-01-69	None present
Diaphragm Valves, DL and DS Series	MS-01-73	Note: Lead in brass components, including brass actuator button, is to Exemption 6(c)
High-Pressure, Pneumatically Actuated Bellows-Sealed Valves, HB Series	MS-01-76	Note: Lead in bronze components is to Exemption 6(c)
Screwed-Bonnet Needle Valves, JB Series	MS-01-84	None present
Screwed-Bonnet Needle Valves, JN Series	MS-01-85	Note: Lead in brass components is to Exemption 6(c)
Leak Detectors, Lubricants, and Sealants	MS-01-91	None present
Filters, FW, TF, and F Series	MS-01-92	Note: Lead in brass components is to Exemption 6(c)
Heat Exchanger Tube Plugs	MS-01-93	Note: Lead in carbon steel is to Exemption 6(a) and lead in brass is to Exemption 6(c)
Bellows-Sealed Valves, BN Series	MS-01-94	Note: Lead in bronze is to Exemption 6(c)
Lift Check Valves, 50 Series	MS-01-98	None present
D60 Series Distribution Block Valves	MS-02-02	None present
Bellows-Sealed 3-Valve Manifold	MS-02-07	None present
Instrumentation Blowdown Valves, 6DB Series	MS-02-118	Non-Compliant: Cadmium plating on steel fasteners
Stainless Steel Tubular Fittings, Ultrahigh-Purity and Chemically Cleaned and Passivated	MS-02-125-SCS	None present
Swagelok SAF 2507 Super Duplex Tubing	MS-02-151	None present
Ultra-High Purity Gas Filters, SCF Series	MS-02-156	None present
High-Flow, Manual Gas Pressure Regulators, HF Series	MS-02-157	Note: Lead in brass components is to Exemption 6(c)
Pressure Transducers, Ultrahigh-Purity, PTU Series	MS-02-162	Not evaluated
Pressure Gauges, Ultrahigh-Purity and Clean Dry Air	MS-02-163	None present
Pressure Gauges, Industrial and Process, PGI Series	MS-02-170	None present
Ultrahigh-Purity Fluoropolymer Diaphragm Valves, DRP Series	MS-02-171	None present
Gaugeable Chromatograph and Column End Fittings	MS-02-173	None present
T2, TT2 Series Stream Select, Switching, and Shutoff Valve Assemblies	MS-02-174	None present
Valve Lockout Accessory	MS-02-18	None present
Modular Platform Components (MPC)	MS-02-185	Non-Compliant: Hexavalent chromium present in aluminum substrate components
Multi-Jacketed Tubing, Single-Jacketed Tubing, and Insulated Tubing	MS-02-188	Not evaluated

All products in the listed catalogs are compliant with the material restrictions of the RoHS Directive (2015/863/EU) unless otherwise indicated in this table.		
Catalog Description	Catalog #	Products non-compliant or out of scope
Swagelok Products Compliant With The Transportable Pressure Equipment Directive (TPED)	MS-02-193	Non-Compliant: Cadmium plating on steel fasteners. Cadmium plating on end caps and neck rings
High-Purity PFA Fine Thread Flare Fittings	MS-02-195	None present
Ultrahigh-Purity Fluoropolymer Tubing	MS-02-196	Tools have not been evaluated
Flange Adapters	MS-02-200	None present
Distribution Manifold, J6 Series	MS-02-214	None present
Forged-Body Needle Valves, 10 000 psig (689 bar), F10 Series	MS-02-215	None present
Steam Trap Test Station with Universal Mount	MS-02-221	Non-Compliant: Cadmium plating on steel fasteners
Industrial Pressure Transducers, S Model, E Model, T Model	MS-02-225	PENDING supplier response
Pressure Regulators, K Series	MS-02-230	Note: Lead in brass and bronze components is to Exemption 6(c) See Appendix A for additional exceptions
High-Flow Springless Diaphragm Valve, DF Series	MS-02-24	None present
60 Series Ball Valve Vent Options	MS-02-28	None present
Ultrahigh-Purity Valves for Atomic Layer Processing	MS-02-301	Non-Compliant: Lead in Optical Position Sensors and Optical Sensor Amplifiers Note: Lead in Solenoid Pilot Valve brass components is to Exemption 6(c)
Swagelok Alternative Fuel Service (AFS) Ball Valves for High-Pressure, High-Flow Applications	MS-02-303	None present See MS-02-343 notes for actuated options
General Utility Service Needle Valves, GU Series	MS-02-312	None present
Pre-Insulated Tubing Bundles, Light, Heavy, and Electric Traced	MS-02-316	Not evaluated
Ultrahigh-Purity Fluoropolymer O-Ring Free Check Valve	MS-02-320	Out of Scope: Tube Flaring System
DP Series Springless Diaphragm Valves (1.125 in.)	MS-02-325	None present
Stream Selector System for Process Analyzer Applications, SSV Series	MS-02-326	None present
One-Piece Instrumentation Ball Valves, 40G Series and 40 Series	MS-02-331	Note: Lead in brass components is to Exemption 6(c). Brass 40 series handle insert does not contain lead. See MS-02-343 for actuated options
Gaugeable Alloy 400 Mechanically Attached Pipe and Tube Fittings	MS-02-332	Out of Scope: Tools
Pressure Gauges for Panel Buildings, PBG Series	MS-02-333-E	None present
Process Interface Valves, Kenmac Series Process Interface Valves and Process and Instrument Monoflanges	MS-02-340	None present
Swagelok Welding System, M200 Power Supply	MS-02-342	None present
Swagelok Ball Valve Actuation Options	MS-02-343	Non-Compliant: Cadmium plating on internal screws, cap screws, and retaining rings. Note: Lead in brass mounting bracket kit components and bronze components is to Exemption 6(c). Lead in carbon steel mounting bracket kit components is to Exemption 6(a).
Multipurpose Ball Valves, SK Series	MS-02-345	None present See MS-02-343 notes for actuated options
Variable Area Flowmeters, G Series and M Series	MS-02-346	Note: Lead in carbon steel is to Exemption 6(a) and lead in brass is to Exemption 6(c)
Temperature Measurement Devices, Bimetal Thermometers and Thermowells	MS-02-353	Not evaluated
Compact Gauge Valves for Gauge Isolation and Venting	MS-02-355	Non-Compliant: Cadmium plating on steel fasteners Note: Lead in carbon steel is to Exemption 6(a) and lead in brass is to Exemption 6(c)
Bleed Valves, Special Alloy Materials, BV Series	MS-02-356	None present

All products in the listed catalogs are compliant with the material restrictions of the RoHS Directive (2015/863/EU) unless otherwise indicated in the table.

Catalog Description	Catalog #	Out of scope or non-compliant products
Trunnion Ball Valves, Special Alloy Materials, 83 Series	MS-02-357	None present See MS-02-343 notes for actuated options Note: Brass 83 series handle insert does not contain lead
Fluid Distribution Header, FDH	MS-02-358	FDH header is compliant. Reference individual product series for valves.
Dielectric Fittings	MS-02-36	None present
Pressure Gauges, General Purpose Gauge with ECE R110 Approval, PGN Series	MS-02-363	None present
Positionable Pressure Gauges, PPG Series, Models B, P, and S	MS-02-364	None present
Severe-Service Union Bonnet Needle Valves, Special Alloy Materials, N Series and HN Series	MS-02-365	Non-Compliant: Cadmium plating on steel fasteners
Springless Diaphragm Valves (1.125 in.) for Modular Gas Systems, DE Series	MS-02-366	Actuated options: DEHP in visual indicators (BN-90-8-009-GR)
Automatic ID Purge Control	MS-02-367	None present
B Type VCO L-Ring Face Seal Fittings	MS-02-40	None present
Tube Facing Tools	MS-02-426	Note: Lead in carbon steel components is to Exemption 6(a)
Pressure Regulators, RHPS Series	MS-02-430	Non-Compliant: Antitamper and factory set options contain lead. DEHP in BN-90-OR-009-BG, submit Flowan with Swagelok part numbers to Compliance for assessment
Tank Blanketing Pressure Regulators, RHPS Series	MS-02-431	Non-Compliant: Antitamper and factory set options contain lead
Proportional Safety Relief Valves, PRV Series	MS-02-432	Non-Compliant: Lead in lock wire crimp
Digital Pressure and Temperature Transducers, PTX Series	MS-02-434	None present
Digital Valve Control Module (VCM)	MS-02-435	None present
Sanitary Pressure Regulators, RHPS Series	MS-02-436	Non-Compliant: Antitamper and factory set options contain lead
Jacketed Tube Connector (JTC)	MS-02-438	None present
Special Alloy Ball Valves, 60 Series	MS-02-439	None present See MS-02-343 notes for actuated options
Check Valves, Special Alloy Materials, CH Series	MS-02-440	None present
High-Volume Swaging Unit (HVSU)	MS-02-441	None present
Instrument Manifolds Systems--Instrument, Direct, and Remote-Mount Manifolds and Modular Systems	MS-02-445	Mounting kits and accessories have not been evaluated
Medium- and High-Pressure Fittings, Tubing, Valves, and Accessories catalog	MS-02-472	Out of Scope: Tools Non-Compliant: Cadmium plating on steel fasteners. Lead in factory set options Note: Lead in carbon steel is to Exemption 6(a) and lead in bronze is to Exemption 6(c)
Medium- and High-Pressure Fittings and Adapters—Alloy Materials	MS-02-474	Out of Scope: Tools
Intrinsically Safe Pressure and Temperature Transducers, PTX Series	MS-02-475	None present
Intrinsically Safe Intelligent Control Module™ (ICM™) Product	MS-02-476	None present
6-Moly Seamless Tubing	MS-02-478	None present
Fire Series Ball Valves, A60T Series	MS-02-47-E	Note: Lead in carbon steel is to Exemption 6(a) See MS-02-343 notes for actuated options
Low Pressure Header	MS-02-480	LPH header is compliant. Reference individual product series for valves.
Subsea Weld Fittings	MS-02-481	Out of Scope: Tools
General Service Ball Valves, GB	MS-02-484	None Present See MS-02-343 notes for actuated options

Table 1 (cont.)

All products in the listed catalogs are compliant with the material restrictions of the RoHS Directive (2015/863/EU) unless otherwise indicated in the table.		
Catalog Description	Catalog #	Out of scope or non-compliant products
Bellows-Sealed Valves for Switching Service, BY Series	MS-02-58	None present
Vertical Flow Sensor, FV4 Series	MS-02-60-SCS	None present
Solenoid Valves for Electropneumatically Actuated Bellows and Diaphragm Valves	MS-02-70	None present
Coaxial Closure Fittings	MS-02-71	None present
Gas Filters, FC Series	MS-02-82	None present
All-Welded Check Valves, CW Series	MS-02-89	None present
Pressure Gauges for the Sanitary Industries, PSD and PSF Series	MS-03-10	None present
Biopharm Fittings, TS Series	MS-03-13	None present
Vacuum Fittings, Adapter Fittings	MS-03-18	None present
Swagelok KCA Series Continuous Gas Delivery System	MS-18-01-E	Mounting plate is compliant. Reference individual product series.



Appendix A- Non-Compliant Pressure Regulators

Pressure regulators with the series, control range, inlet pressure, and Cv (as shown in the table below) do not comply with the material requirements of the RoHS Directive due to the presence of Hexavalent Chromium

Series	Control Range	Inlet Pressure	Cv
KPR, KEV, KSV, KCY, KCM	0-500	6000	0.20
		3600 to 6000	0.50
KLF	0-250	All	All
KHF / KFB	0-250	All	1.00
KPP, KEV	0-2000	6000	0.06
			0.20
	0-3000	4000 to 6000	All
0-3600	All		
KPF	0-3000	6000	1.00
	0-4000	6000	0.06
			0.20
			1.00
KPB	3000	6000	.06
			.20
	4000	6000	.06
			.20
			1.00