SecurityLINK Fingertight Fittings

Tips for Care and Use

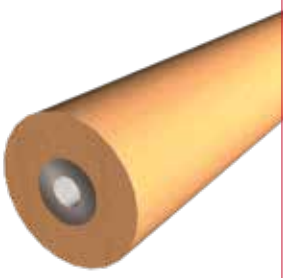
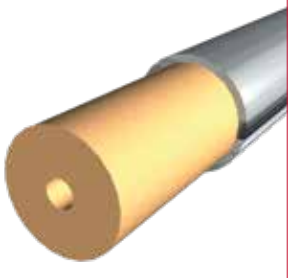
Thank you for purchasing SecurityLINK Fittings. Below are recommended instructions for the care and use of this product.

General Information

Each SecurityLINK Fitting is developed, produced and distributed according to a Quality Management System that is certified for compliance with ISO 9001:2015. This product has passed all Phenomenex test requirements and thus meets quality control standards.

Inspection

Upon receipt of SecurityLINK, please verify the product you received is the one that was ordered (i.e. length, ID, Tubing material). Additionally, remove the red fitting tips and inspect both fittings and tubing for any physical damage potentially caused during shipment.

Specifications	Tubing Options		
	PEEKsil™	**PEEK-Lined Stainless Steel**	**Stainless Steel**
				
Description	• Polymer-sheathed fused silica tubing • Excellent chemical compatibility • Low adsorption • Fused silica core provides a consistent pathway with very tight tolerances • Flexible, making connections easier • Compatible with most organic solvents • Resistant to strong acids (except hydrofluoric acid) • Lower carry over between samples improved reproducibility • Recommended for hydrophobic samples	• Chemically inert to most commonly used solvents • Smooth ID surface finish	• Seamless 316 stainless steel • Capable of tight bend radii to facilitate routing in the instrument
Direct Replacement for	PEEK-Lined Stainless Steel	Stainless Steel	
pH Range	0–10	1–14	1–14
Autoclavable	Yes	Yes	Yes
Fitting Size	1/16"	1/16"	1/16"
ID Range	25 µm to 100 µm	25 µm to 100 µm	100 µm to 254 µm
Pressure Rating	19,000 psi	19,000 psi	19,000 psi
Temperature Limit	120 °C	120 °C	120 °C
Biocompatible	Yes	Yes	No
Tubing Bend Radius Limit	1.00" (~25 mm)	0.25" (~6.3 mm)	0.25" (~6.3 mm)
Solvent Compatibility	There is a small piece of PEEK at the end of each SecurityLINK fittings. Therefore solvents known to impact PEEK may impact the overall lifetime. See page 2 for more details.		

Solvent Compatibility

All three SecurityLINK tubing types contain a small piece of PEEK at the end of each fitting. PEEK exhibits excellent resistance to a wide range of organic and inorganic chemicals. PEEK is compatible with almost any of the solvents used in HPLC. The only solvent which will attack PEEK are concentrated nitric acid and sulphuric acids. Examples of commonly used solvents known to impact PEEK are: DMSO, THF, Methylenechloride and solutions containing above 20-30% nitric acid. Therefore the use of these solvents may impact the overall lifetime of SecurityLINK fittings.

PEEK Chemical Resistance Chart

A = Suitable, B = Marginal-dependent on application, C = Not recommended

Chemical	Rating
Acetaldehyde	A
Acetic acid (20%)	A
Acetic acid (80%)	A
Acetic acid (glacial)	A
Acetone	A
Acetonitrile	A
Acrylic acid	A
Ammonia, anhydrous	A
Ammonia (10%)	A
Ammonia (Liquid)	B
Ammonium hydroxide	A
Aqua regia	C
Aromatic hydrocarbons	A
Benzene	A
Benzoic acid	A
Benzaldehyde	A
Bromine/dibromoethane	C
Bromine (dry)	C
Bromine (wet)	C
Boric acid	A

Chemical	Rating
Butanol	A
Calcium hydroxide	A
Carbon tetrachloride	A
Chlorine (gas)	A
Chlorine (liquid)	C
Chloroacetic acid	A
Chlorobenzene	A
Chloroform	A
Cyclohexane	A
Cyclohexanone	A
Diethylamine	A
Diethylether	A
Diethylformamide	A
Dioxane	A
Ethanol	A
Ether	A
Ethyl acetate	A
Ethylene glycol	A
Heptane	A
Hexane	A

Chemical	Rating
Hydrobromic acid (100%)	C
Hydrobromic acid (20%)	C
Hydrochloric acid (100%)	A
Hydrochloric acid (20%)	A
Hydrofluoric acid (100%)	C
Hydrogen peroxide (100%)	A
Hydrogen peroxide (50%)	A
Hydrogen peroxide (10%)	A
Iso-octane	A
Isopropanol	A
Ketones	A
Methanol	A
Methyl ethylketone	A
Methylene chloride	B
Nitric acid (100%)	C
Nitric acid (20%)	A
Pentane	A
Perchloric acid	A
Phenol (dilute)	A
Phenol (conc.)	C

Chemical	Rating
Phosphoric acid (100%)	A
Phosphoric acid (40%)	A
Potassium hydroxide (dilute)	A
Potassium hydroxide (70%)	A
Propanol	A
Pyridine	A
Sodium hydroxide (80%)	A
Sodium hydroxide (20%)	A
Sulphuric acid (100%)	C
Sulphuric acid (75%)	C
Sulphuric acid (40%)	A
Tetrahydrofuran	B
Toluene	A
Trichloroacetic acid	A
Trichloroethane	A
Trichloroethylene	A
Water	A
Water (distilled)	A
Xylene	A

The chemical resistance of PEEK at high temperature

Chemical	Temperature	Rating
Acetic acid	200 °C (420 °F)	B
Ethylene glycol	200 °C (420 °F)	B
Ethylene glycol (50%)	140 °C (284 °F)	A
Methylethylketone	200 °C (420 °F)	C
Nitrobenzene	200 °C (420 °F)	C
Phosphoric acid (50%)	200 °C (420 °F)	A
Sulphuric acid (50%)	200 °C (420 °F)	B

Chemical	Temperature	Rating
Sodium hydroxide solution	200 °C (420 °F)	A
Liquid ammonia	200 °C (420 °F)	B
Sulphur dioxide gas	200 °C (420 °F)	A
Hydrogen sulphide gas	200 °C (420 °F)	A
Carbon monoxide gas	200 °C (420 °F)	A
Ammonia gas	200 °C (420 °F)	A
Methane	200 °C (420 °F)	A

Fitting Installation Instructions

1 Insert SecurityLINK into column port or system.

2 Fingertighten until first “CLICK” feedback is received.

Installation Considerations

SecurityLINK is guaranteed up to 100 leak-free connections with a single click. ***Just one click is needed to achieve a leak-free connection. Remember to stop tightening after the initial click.*** A connection is defined as a single click of SecurityLINK to a column, system port, or union. It is suggested to keep count of how many connections the SecurityLINK achieves on a specific system and method when initially installed. This will give a benchmark on when to proactively replace a SecurityLINK before any tubing failure is observed. *The use of pliers to achieve the ‘click’ may damage the torque mechanism and the tubing underneath.*

Do not Bend or remove SecurityLINK while under pressure as it can cause damage to the tubing material and/or fitting material of your SecurityLINK, leading to leaking.

The bend radius limit of SecurityLINK differs by the type of tubing. ***SecurityLINK PEEKsil has a minimum bend radius of 1.00” (25 mm) while the SecurityLINK Stainless Steel and PeekLined Stainless Steal have a minimum bend radius of 0.25” (6.33 mm).*** One method to approximate the 1.00” bend radius of the SecurityLINK PEEKsil is to create a circle with your thumb and index fingers which is ~1.00”. This bend should be safe for the tubing and reduce the likelihood of an accidental weak spot or break in the tubing where leaking can occur.

The SecurityLINK Fitting cannot be removed from the tubing. If the fitting head is too large for the system port we recommend the single-sided SecurityLINK.

Fitting Cleaning

If contamination of the SecurityLINK is suspected, the tubing can be cleaning by removing the end-fitting in the down direction of the flow. If this includes the column in the path, first remove the column and put an appropriate union in place as to not harm the column. Place the open fitting tip in a clean beaker and flush with HPLC grade water followed by Methanol or Acetonitrile. This can be followed by Isopropanol if contaminate is thought to be highly hydrophobic in nature. If backpressure and peak shape do not improve, the SecurityLINK can be removed from the system and sonicated in methanol. If these steps do not improve the backpressure and peak shape, then replacement of the SecurityLINK should be considered.

Fitting Compatibility

Unions and Ports

SecurityLINK is compatible with unions that have a thru hole ≤ 0.020" (~0.4 mm). Zero-Dead Volume Unions are NOT compatible with SecurityLINK.

Phenomenex unions AQ0-8507 and AQ0-1674 are recommended for SecurityLINK. Please note, that AQ0-1674 is only pressure rated to 5K psi.

Columns and Systems

SecurityLINK incorporates 10-32 Fittings and designed for 1/16 in. ports with a thru hole ≤ 0.020" (~0.4 mm).

Fitting Storage

When storing SecurityLINK, be sure to flush and store the product in organic mobile phase (<35% water) to remove the possibility of microbial growth inside the tubing. Once SecurityLINK is flushed, add the original red fitting protection caps that were shipped with the product to each end of the SecurityLINK fitting and put back into the original packaging container for safe storage.

Product Warranties

Phenomenex products are warranted to be free of defects in material and workmanship. If you are unsatisfied for any reason, please give your Phenomenex Technical Representative a call. We'll do our best to solve the problem to your satisfaction. Should it become necessary to return the product, a Return Authorization Number must be obtained from Phenomenex first.

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