

Multi-Purpose/Chemical Resistant Hose | Possible to vacuum, Solvent Resistance, High Transparency, Great Flexibility,

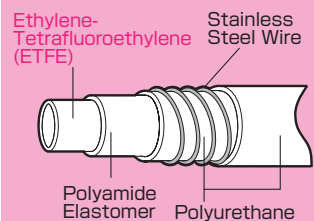
# Flexible Fluorine (ETFE) Resin SUS Spring Wire Hose

[Model Number: E-SJSP-(I.D.)]

## Applications • Fluids

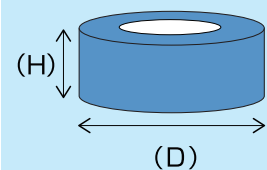


## [Materials / Structure]



- For Transferring Organic Solvents of the Painting Equipment and Paints
- For Transferring Chemicals used in Laboratory Equipment
- For Transferring Chemicals used in Semiconductor-Related Devices and Flat-Panel Display (FPD) Manufacturing Devices
- For Transferring Beverage and Food
- For Transferring Fatty Acid Ester such as Biofuel (BDF)
- For Transferring Chemical and Industrial Wastes
- For Transferring Alcohol, Cosmetics, and Chemicals
- For Transferring Chemicals used in Medical Equipment, Endoscope, and so on
- For Transferring Chemicals used in Manufacturing Fuel Cell and Pure Water
- For Filling Line of Paints and Adhesives
- For Filling Line of Fragrance, Colorant, and Additive
- For Air Supplying Pipes at Clean Room
- For Transferring Screw, Metal Powder, and Solids

## [Packing Dimension]



## Standard • Packing Information

Model Number	Inch (Inside Diameter) (*1)	I.D. × O.D. mm	Working Pressure MPa		Minimum Bend Radius at 20°C mm	Temperature Range °C	Standard Length m	Product Weight kg/roll	Color	Packing Dimension(*2)			
			at 20°C	at 80°C						Packing	Diameter (D) cm	Height (H) cm	Weight/roll kg/roll
E-SJSP-12	1/2	12 × 18	-0.1 ~ 0.5	-0.1 ~ 0.25	50				Clear	Cardboard Box	46	16	4.91
E-SJSP-15	5/8	15 × 22			60		5.72	52			17	6.92	
E-SJSP-19	3/4	19 × 26			75		6.88	52			17	8.08	
E-SJSP-25	1	25 × 33	-0.1 ~ 0.4	-0.1 ~ 0.2	100	-20 ~ 80	20	10.83			64	21	12.53
E-SJSP-32	1 1/4	32 × 41			130			14.25			83	24	16.98
E-SJSP-38	1 1/2	38 × 48	-0.1 ~ 0.3	-0.1 ~ 0.15	150			18.08			83	24	20.81

\*1: Please note that inch size is approximate, which is not equal to millimeter.

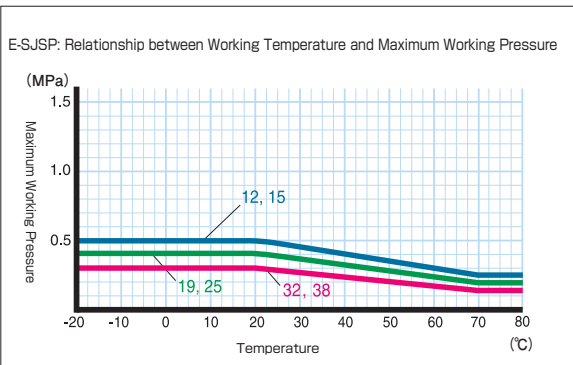
\*2: "Diameter (D)" × "Height (H)" means "External Dimensions of Cardboard Box (D)" × "Height (H)."

## Characteristics and Functions

- Non-PVC
- Non Adhesiveness
- Vacuum
- Chemical Resistance
- Solvent Resistance
- Low Elution
- Low Odor
- Food-Sanitation
- Transparency

- **Chemical Resistance**...Since the inner layer is made of ETFE fluorine resin, E-SJSP is resistant to most of the chemical substances. For more information on chemical resistance data, please refer to our corporate website.
- **Bending**...Rust-proof SUS Steel Wire makes it difficult to be crushed or kinked, leading to high stability in its shape.
- **Vacuum**...E-SJSP stands proof against negative pressure (can be used in vacuum condition).
- **Non-Adhesiveness**...Since fluorine resin is superior in water-proof and non-adhesiveness, you can wash out the fluids very easily.
- **Abrasion Resistance**...Fluorine resin (inner layer) shows higher levels of abrasion resistance. Thus, you can transfer chemical slurry.
- **Plasticizer-Free**...E-SJSP does not contain plasticizer (an elution material) at all. E-SJSP is an oil-free hose.
- **Non-PVC**...E-SJSP is made of a non-PVC material.
- **Original Fittings**...By using our original fittings, you can avoid accidents which are caused by incorrect choices of hose and fittings.
- **High Purity**...Fluorine resin does not contain any additives such as plasticizer, so E-SJSP is suitable for transferring high purity chemical fluids.
- **Easy to Cut**...Since we print the cut mark on the hose every meter, it is easy to cut the length you would like to
- **High Transparency**...You can check the fluid very easily.
- **Green Procurement**...E-SJSP is compliant with RoHS2 requirements.
- **Food Sanitation Law Certified**...E-SJSP conforms to the Food Sanitation Law No. 370 (No. 370 of the Ministry of Health and Welfare for Food Sanitation). (Conformity to N-Heptane).
- **Hose Cap**...Hose cap at both ends of the hose prevents contamination (only packed in standard length).

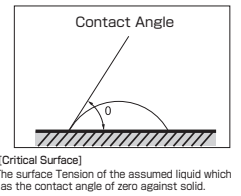
## Technical Information



### Non-Adhesiveness Comparison Data

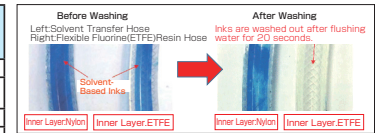
Non-adhesiveness and smoothness, which are peculiar to fluorine resin, make it easier to wash out the fluid. You can check the data about critical surface tension and contact angle against water.

Resins	Critical Surface Tension (dyne/cm)	Contact Angle for Water (θ)
Ethylene-Tetrafluoroethylene (ETFE)	22	95
Polyvinylidene Fluoride (PVDF)	25	82
High Density Polyethylene	31	73
Hard Vinyl Chloride	39	68
PET	43	-
Nylon	46	54



**Washing out the inks (by organic solvents) stuck inside the hose**  
 Test Piece 1 : Inner Layer: Nylon - Solvent Transfer Hose (E-SV)  
 Test Piece 2 : Inner Layer: Ethylene-Tetrafluoroethylene - Flexible Fluorine (ETFE) Resin Yarn Reinforced Hose (E-S-B)

Test Conditions	Kind of Ink	Solvent-Based Inks
Ink Inclusion Period	7 Days (at Room Temperature)	
Washing Methods	Cleaning Solution	Ethyl Acetate
	Cleaning Period	20 Seconds
	Pressure	Less than 0.01MPa



Flexible Fluorine (ETFE) Resin Hose is excellent in non-adhesiveness of the inner layer, so you can reduce washing time and save cleaning solutions and labor costs.

## HAKKO Original Fittings

Model	Features	Model	Features
<b>EIGHTLOCK FERRULE (E-ELF)</b>	<ul style="list-style-type: none"> <li>Material : Body: SCS16, Nut and Ring: SCS13 (Sleeve: POM)</li> <li>You can replace a hose even though the hose needs replacement, since EIGHTLOCK Ferrule Fitting is a nut ferrule fitting. You can install and detach the fitting on site.</li> <li>You can make use of a wide range of usages such as pipes for chemicals, food, beverage, and alcohol.</li> <li>The nipple end is less likely to accumulate fluids, so you do not have to worry about contamination very much.</li> </ul>	<b>Ferrule Fitting</b>	<ul style="list-style-type: none"> <li>Material: SUS 316L (Body) - SUS304 (Fitting Cover)</li> <li>Due to the relatively flat structure between hose and nipple, it is possible to transfer fluids in a sanitary way.</li> <li>You can make use of a wide range of usages such as pipes for chemicals, food, beverage, and alcohol.</li> <li>The hose end is less likely to accumulate fluids, so you do not have to worry about contamination and the quantity of washing very much.</li> </ul>
<b>EIGHTLOCK S (E-ELS)</b>	<ul style="list-style-type: none"> <li>Material : SUS304</li> <li>Our Nut Type Original Fittings</li> <li>Since the inner layer of the fitting is flat and does not use the rubber packing, fluid accumulation is unlikely to occur. Thus, it is easy to wash out.</li> <li>Since you do not need hose clamp and the controlling torque value, you can standardize how to install the fitting.</li> </ul>	<b>EIGHTNIPPLE S (E-FTS)</b>	<ul style="list-style-type: none"> <li>Material : SUS316L</li> <li>SUS 316L is superior in corrosion resistance, so you can transfer a wide range of fluids.</li> <li>Two-stage flat nipple structure which maximizes hose pressure</li> <li>Our Original Barb Nipple Fittings</li> </ul>
<b>EIGHTLOCK B (E-ELB)</b>	<ul style="list-style-type: none"> <li>Material : BSBM (Brass Cadmium Less than 75ppm)</li> <li>Our Nut Type Original Fittings</li> <li>Since the inner layer of the fitting is flat and does not use the rubber packing, fluid accumulation is unlikely to occur. Thus, it is easy to wash out.</li> <li>Since you do not need hose clamp and the controlling torque value, you can standardize how to install the fitting.</li> </ul>	<b>EIGHTNIPPLE B (E-FTB)</b>	<ul style="list-style-type: none"> <li>Material : BSBM (Brass Cadmium Less than 75ppm)</li> <li>Compliant with RoHS2 requirement</li> <li>Two-stage flat nipple structure which maximizes hose pressure</li> <li>Our Original Barb Nipple Fittings</li> </ul>
		<b>Protective Spring Guards (E-HSL)</b>	<ul style="list-style-type: none"> <li>Material : SUS304 (Band, Spring, Fastener)</li> <li>Spring guards prevent kinking, so you can transfer fluids safely.</li> <li>Prevent kinking even if the bending radius is small due to the space-saving piping.</li> <li>As a protection accessory for cleaning hose if its hose is easy to break at hand.</li> </ul>

- \*For EIGHTNIPPLE, please fasten with two clamps.
- ⚠️ \*Due to the yarn-reinforced hose, please use the joints to seal an inner surface of the hose.
- \*Please do not use the joints to seal an outer surface of the hose. This may result in the bursting or coming off from the hose.
- \*When you use our products, please refer to "Precautions for Use" available on our webpage and product catalog.
- \*In terms of chemical resistance, please refer to "Chemical Resistance Data" available on our webpage and product catalog.
- \*Although the inner layer is made of fluorine, please make sure whether or not E-SJSP is usable for high purity fluids before you use.
- \*Although the inner layer is resistance to fluids, but depending on working environments, the fluids would be permeated through the inner layer, resulting in the danger of swelling and degradation of the middle or outer layer.

Contact us if you have any inquiries about HAKKO products.

# HAKKO

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