

Multi-Purpose/Chemical Resistant Hose

NEW ! Electrical Resistivity of Hose is compliant with international standards.
You can eliminate static electricity when you transfer inflammable fluids.

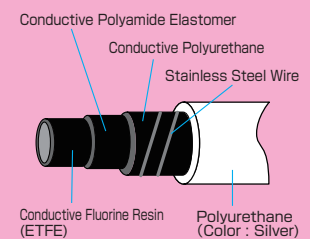
Flexible Fluorine (ETFE) Resin SUS Spring Wire Hose [Dissipative Type]

[Model Number: E-SJSD-(I.D.) × (O.D.)]

Applications • Fluids

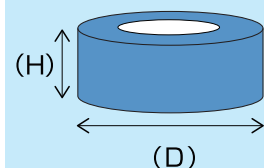


[Materials / Structure]



- Piping for Preventing Static Electricity
- For Transferring Inflammable Fluids at Chemical Factories
- For Transferring High Volatile Fluids such as Alcohol and Fragrance
- For Transferring Paints and Solvents

[Packing Dimension]



Point 1 New! Possible to transfer inflammable fluids. High Chemical Resistant Hose and Anti-Static Electricity Hose

This hose is compliant with Risk Management Guideline of Static Electricity [ISO 8031] and [IEC/TS 60079-32-1: 2013]. Regardless of the hose length, hose can achieve the electrical resistivity: Dissipativity (Conductiveness).

*ISO 8031:2009 stipulates electrical test methods for rubber and plastics hoses, tubing and hose assemblies to determine the resistance of conductive, antistatic and non-conductive hoses and the electrical continuity or discontinuity between metal end fittings.

*IEC stands for International Electrotechnical Commission. This commission is specialized in the fields of electrical engineering and electronics.

Point 2 in 2013, new guideline on the safety measurements of static electricity was took effect.

⇒ A new guideline [IEC/TS60079-32-1:2013] says that the length of the hose-end to hose-end including fittings should meet the requirements of dissipativity.

Dissipativity: End-to-end resistance R limits $1 \text{ k} \Omega \leq R < 1 \text{ M} \Omega$

Standard • Packing Information

型番	Inch (Inside Diameter) (*1)	I.D. × O.D. mm	Working Pressure MPa		End-to-end resistance R R/ ~ 20m	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-SJSD-12	1/4	12 × 18	-0.1 ~	-0.1 ~	1 k Ω ≤ R < 1 M Ω	85	-20 ~ 80	20	4.11	Silver	Cardboard Box	46	16	4.83	
E-SJSD-15	5/16	15 × 22	-0.5	-0.25		105						5.57	52	17	6.77
E-SJSD-19	3/4	19 × 26	-0.1 ~	-0.1 ~		135						6.80	52	17	8.00
E-SJSD-25	1	25 × 33	-0.4	-0.2		175						10.68	64	21	12.38

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

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

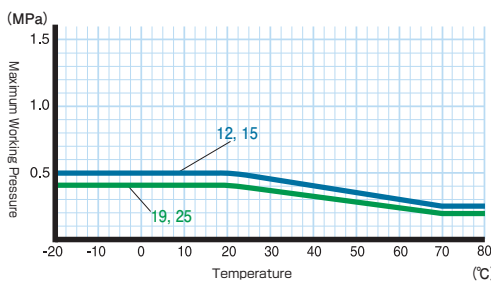
Characteristics and Functions

- Non-PVC
- Non-Adhesiveness
- Vacuum
- Chemical Resistance
- Solvent Resistance
- Low Odor
- Food-Sanitation
- UV Cut
- Oil-Proof
- Hard to Break
- Alcohol Resistant
- Cold Resistance
- Conductive

- **Chemical Resistance**...Since the inner layer is made of ETFE Fluorine Resin, E-SJSD stands proof against most of the chemical substances.
- **Dissipative**...Due to the use of conductive resin and metal fiber, no matter how long a hose is, we can achieve stable electrical resistivity (Conductive: Dissipative Grade)
- **Compliance with Guideline**...The value of electrical resistivity is compliant with ISO 8031 And IEC/TS 60079-32-1: 2013 (Explosive Atmosphere: Part 32-1: Guideline for Dangerous Static Electricity)
- **Non-Adhesiveness**...Since fluorine resin is superior in waterproofness and non-adhesiveness, you can wash out the fluids very easily.
- **Vacuum OK**...E-SJSD can be used in vacuum conditions, keeping high stability in its shape.
- **Plasticizer-free**...E-SJSD does not contain plasticizer (an elution material) at all. E-SJSD is an oil-free hose.
- **Green Procurement**...E-SJSD is compliant with RoHS2 requirements.
- **Safety**...By using our original fittings, you can avoid accidents which are caused by incorrect choices of hose and fittings.
- **Food Sanitation Standard Complied**...E-SJSD conforms to the Food Sanitation Standard No.370 (The Ministry of Health and Welfare for Food Sanitation, No.370, 1959). (Conformity to N-Heptane).

Technical Information

E-SJSD : Relationship between Working Temperature and Maximum Working Pressure



Electrical Properties on Major Flammable Liquid (Conductivity)

The following chart is extracted from TECHNICAL RECOMMENDATION, OF NATIONAL INSTITUTE, OF OCCUPATIONAL SAFETY AND HEALTH. New Version of "Recommendations for Requirements for Avoiding Electrostatic Hazards in Industry". JNIOHS-TR-NO.42 (2007) on Page 157 to Page 162 G5: Electrical Properties on Liquid.

Insulating Liquid (< 100pS/m)

Fluids	Conductivity pS/m	Fluids	Conductivity pS/m
Anisole (Methylphenyl Ether)	10	Turpentine	22
Ethylbenzene	30	Diesel Oil Light Oil	about 0.1
Gasoline (Straight Run)	about 0.1	Decaline	6
Gasoline (Lead Free)	< 50	Kerosene	1 ~ 50
Caprylic Acid (Octanoic Acid)	< 37	Toluene	< 1
Xylene	0.1	Carbon Disulfide (1°C)	7.8×10^{-4}
Cyclohexane	< 2	Hexamethyldisilazane	29
Diethyl Ether	30	Hexane	1×10^{-5}
Jet Fuel (A,A-1,B)	0.01 ~ 50	Heptane	3×10^{-2}
1,4-Dioxane	0.1	Benzene	5×10^{-3}
Styrene Monomer	10		

HAKKO Original Fittings

Model	Features	Model	Features
EIGHTLOCK FERRULE (E-ELF)	<ul style="list-style-type: none"> Material : Body, SCS16. Nut and Ring, SCS13 (Sleeve: POM) 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. You can make use of a wide range of usages such as pipes for chemicals, food, beverage, and alcohol. The nipple end is less likely to accumulate fluids, so you do not have to worry about contamination very much. 	EIGHTNIPPLE S (E-FTS)	<ul style="list-style-type: none"> Material : SUS316L SUS 316L is superior in corrosion resistance, so you can transfer a wide range of fluids. Two-stage flat nipple structure which maximizes hose pressure Our Original Barb Nipple Fittings
EIGHTLOCK S (E-ELS)	<ul style="list-style-type: none"> Material : SUS304 Our Nut Type Original Fittings 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. Since you do not need hose clamp and the controlling torque value, you can standardize how to install the fitting. 	EIGHTNIPPLE B (E-FTB)	<ul style="list-style-type: none"> Material : BSBM Compliant with RoHS2 requirement Two-stage flat nipple structure which maximizes hose pressure Our Original Barb Nipple Fittings
EIGHTLOCK B (E-ELB)	<ul style="list-style-type: none"> Material : BSBM Our Nut Type Original Fittings 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. Since you do not need hose clamp and the controlling torque value, you can standardize how to install the fitting. 	Protective Spring Guards (E-HSL)	<ul style="list-style-type: none"> Material : SUS304 (Band, Spring, Fastener) Spring guards prevent kinking, so you can transfer fluids safely. Prevent kinking even if the bending radius is small due to the space-saving piping. As a protection accessory for cleaning hose if its hose is easy to break at hand.

*For EIGHTNIPPLE, please fasten with two clamps.

- ⚠️ *Please use our HAKKO original fittings for [Flexible Fluorine (ETFE) Resin Hose Series (Dissipative Type)] . Unavoidably, if you use the joints other than HAKKO original fittings, please use the joints to seal an inner surface of the hose with dissipative materials. Please do not use the joints to seal an outer surface of the hose. Please do not use plastic fittings.
- *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-SJSD 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.
- *Flexible Fluorine (ETFE) Resin SUS Spring Wire Hose (Dissipative Type) do not have the function of getting rid of already charged fluids. Please take another approach to deal with.
- We do not owe any responsibility if any injuries or damages happen outside the range of Flexible Fluorine (ETFE) Resin SUS Spring Wire Hose (Dissipative Type).
- *For more information, please refer to the product specifications and precautions for use available on our corporate website.

Contact us if you have any inquiries about HAKKO products.

HAKKO
CORPORATION

HAKKO CORPORATION
HEAD OFFICE / SALES DEPARTMENT
 Unity Forum 5F, 42-18, 1-Chome, Itabashi, Itabashi-Ku, Tokyo 173-0004, Japan
 TEL (81) 3-3963-5381 FAX (81) 3-3961-4400

OSAKA OFFICE
 Akatsuki Building 7F, 13-45, Toyotsu-cho, Suita-shi, Osaka 564-0051, Japan
 TEL (81) 6-6310-6880

SAITAMA FACTORY · AKITA FACTORY
 URL: <https://eightron.co.jp/English>