

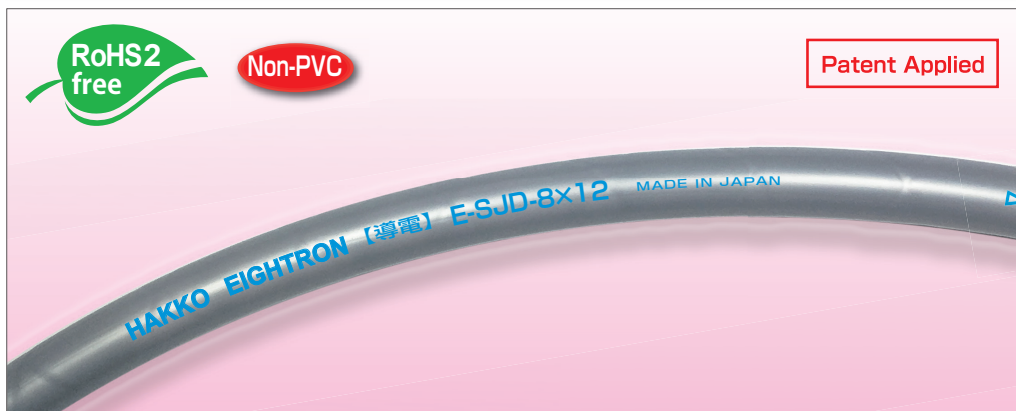
Multi-Purpose/Chemical Resistant Hose

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

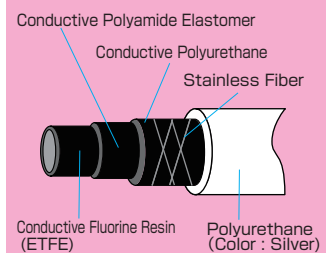
Flexible Fluorine (ETFE) Resin Tubing (Dissipative Type)

[Model Number: E-SJD-(I.D.) × (O.D.)]

Applications • Fluids

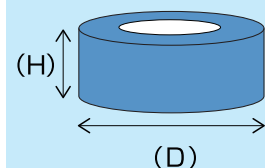


[Materials / Structure]



- 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.		Working Pressure MPa		End-to-end resistance R	Minimum Bend Radius at 20°C	Temperature Range	Standard Length	Product Weight	Color	Packing Dimension(*2)		
		mm	mm	at 20°C	at 80°C							Packing	Diameter (D) cm	Height (H) cm
E-SJD-6×9	1/4	6 × 9	0 ~ 0.6	0 ~ 0.2	1 k Ω ≤ R < 1 M Ω	45	-20 ~ 80	20	0.91	Silver	Cardboard Box	38.5	5.5	1.16
E-SJD-8×12	5/16	8 × 12				60						40	8.5	1.88

*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)."

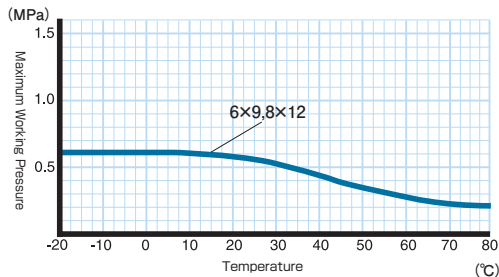
Characteristics and Functions

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

- Chemical Resistance**...Since the inner layer is made of ETFE Fluorine Resin, E-SJD 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.
- Plasticizer-free**...E-SJD does not contain plasticizer (an elution material) at all. E-SJD is an oil-free hose.
- Green Procurement**...E-SJD 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-SJD 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-SJD : Relationship between Working Temperature and Maximum Working Pressure



Electrical Properties on Major Flammable Liquid (Conductivity)

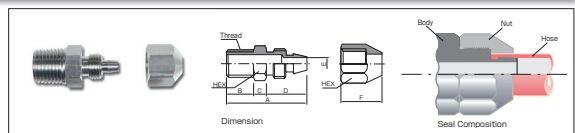
The following chart is extracted from TECHNICAL RECOMMENDATION, OF NATIONAL INSTITUTE, OF OCCUPATIONAL SAFETY AND HEALTH, New Version of "Recommendations for Requirements for Avoiding Electrostatic Hazards in Industry". JN10SH-TR-NO.42 (2007) on Page 157 to Page 162 G5. Electrical Properties on Liquid.

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	Kerosine	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 Number	Body						Nut		Product Weight g/Piece	Applicable Hose	
	A	B	C	D	E	Thread	HEX	F			HEX
E-FTS-6 × 9-R1/4	35.5	12	5	18.5	5.5	R1/4	17	18.5	17	41	E-SJD-6 × 9
E-FTS-8 × 12-R3/8	41	13	7	21	7	R3/8	19	21	19	61	E-SJD-8 × 12



Material: 316 L Steel Use Stainless (Body) and 304 Steel Use Stainless (Nut)

- ⚠ *Due to the laminated structure tubing, 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-SJD 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 Tubing (Dissipative Type) do not have the function of getting rid of already charged fluids. Please take an 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 Tubing (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.

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