

Anti-Static X ETFE Fluorine Tubing / For those who use a Fluorine tubing, but have a problem of the generation of the static electricity

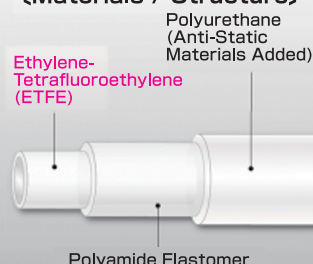
Flexible Fluorine (ETFE) Resin Tubing (Anti-Static Type)

Model Number: E-SJAST-(I.D.×O.D.)

Applications • Fluids

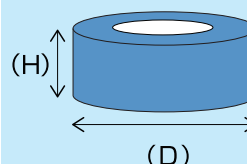


(Materials / Structure)



- As a countermeasure against clogging during powder transfer
- For dealing with the static electricity (noise) in chromatography, biochemical analytical instruments, and precision instruments
- For the transfer of organic solvents and paints from painting equipment and printing equipment
- For the transfer of chemical fluids such as laboratory equipment
- For the transfer of chemicals in semiconductor-related equipment and flat panel manufacturing equipment
- For the transfer of chemical effluents from industrial wastes
- For the transfer of alcohols, cosmetics, and chemicals
- For the transfer of chemicals and pure water from fuel cell manufacturing facilities
- As a filling line for paints and adhesives

(Packing Dimension)



Standard • Packing Information

| Model Number | I.D.×O.D. | Inch (*1) | Working Pressure (MPa) | | Minimum Bend Radius | Temperature Range | Surface Resistance | Standard Length | Product Weight | Color | Packing Dimension (*2) | | | |
|--------------|-----------|--------------|------------------------|--------|---------------------|-------------------|------------------------------------|-----------------|----------------|-------|------------------------|----------|--------|------------|
| | mm | | at 20℃ | at 80℃ | at 20℃(mm) | ℃ | (Ω) | m | kg/Roll | | Packing | Diameter | Height | Weight/Box |
| | | | | | | | | | | | | cm | cm | Kg/Box |
| E-SJAST-4×6 | 4×6 | 5/32" | 0~0.6 | 0~0.2 | 25 | -20~80 | 10 ¹⁰ ~10 ¹¹ | 20 | 0.42 | Clear | Cardboard Box | 38.5 | 5.5 | 0.66 |
| E-SJAST-6×8 | 6×8 | 1/4" | 0~0.4 | | 50 | | | | 0.59 | | | | | 0.83 |
| E-SJAST-8×10 | 8×10 | 5/16" | | | 0~0.15 | | | | 90 | | | | | 0.76 |

※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)."

※The surface resistance value is a reference value of the material manufacturer and is not a guaranteed value.

Characteristics・Functions

Anti-Static

Non-PVC

Non-Adhesiveness

Chemical Resistance

Solvent Resistance

Low Elution

Transparency

Flexibility

Oil-Proof

Alcohol Resistance

- **Anti-static**...E-SJAST provides the anti-static feature to the outer layer of E-SJAST. ※Surface resistance (Ω) : $10^{10} \sim 10^{11}$
※The surface resistance value is a reference value of the material manufacturer and is not a guaranteed value.
- **Transparency**...The ability to visualize fluids enables us to check air chewing in the tubing, plugging of fluids and powder, and the occurrence of pinholes, enabling us to identify the location of trouble at an early stage.
- **Chemical Resistance**...Since the inner layer is made of ETFE Fluorine, E-SJAST also has excellent resistance to organic solvents (polar solvents) such as amines and ketones.
- **Flexibility**...Thanks to the multi-layer structure, E-SJAST is more flexible, which improves workability compared to a single-layer fluorine tubing.
- **Hard to Break**...Unlike a single-layer fluorine tubing, E-SJAST is less likely to break. (Even if it breaks, you can restore its shape to some extent.)
- **Non-Adhesiveness**...Since ETFE fluorine resin is superior in terms of water-proof, you can wash out the fluids very easily.
- **Abrasion Resistance**...Fluorine resin (inner layer) shows high levels of abrasion resistance. Thus, you can even transfer chemical slurry.
- **Plasticizer-Free**...E-SJAST does not contain plasticizer (an elution material) at all. E-SJAST is an oil-free tubing.
- **Non-PVC**...E-SJAST is made of non-PVC materials.
- **High Purity**...Fluorine resin does not contain any additives such as plasticizer, so E-SJAST is suitable for transferring high purity chemical fluids.
- **Green Procurement**...E-SJAST is compliant with RoHS2 requirements (directive 2011/65/EU:RoHS 2).

Technical Information

(Beads Adsorption Test)

- Test Method: Cut a 10 cm test sample in the longitudinal direction and heat it up to form a plate (for 1 hour at 60°C). Apply the test pin on the + terminal of the insulation resistivity meter to the outer layer of the sample. After applying the voltage for 125V×30 seconds, bring the outer layer of the sample closer so that the distance between the outer layer of the sample and the foam beads is 1mm. Finally, we check the adhesion amount of the beads. ※Plastic tweezers are used when handling the sample after voltage is applied.
- Test Sample: E-SJAST-6×8・E-SJ-6×8 (Standard Type)
- Results: We have confirmed that the adhered quantity of the beads of E-SJAST-6×8 is smaller than that of E-SJ-6×8.



E-SJAST-6×8



E-SJ-6×8 (Standard Type)

(Test on Surface Electrical Resistance Value)

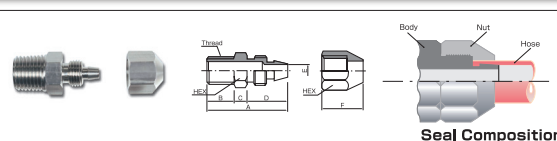
- Test Method: Measure the Surface Electrical Resistance Value
※Applied Voltage: 500V, for 1 minute
Test Temperature: 20°C, Sample Length: 100mm
- Test Sample: E-SJAST-6×8・E-SJ-6×8 (Standard Type)
- Results

| Test Sample | Surface Electrical Resistance Value (Ω) |
|-------------|--|
| E-SJAST-6×8 | 7.69×10^{11} |
| E-SJ-6×8 | 5.56×10^{12} |

※This is only a test value and not a guaranteed value.

HAKKO Original Fittings

| Model Number | Body | | | | | | | Nut | | Weight | Applicable Hose |
|------------------|------|----|---|----|-----|--------|-----|-----|-----|--------|-----------------|
| | A | B | C | D | E | Thread | HEX | F | HEX | | |
| E-FTS-4 × 6-R1/4 | 31 | 12 | 5 | 14 | 3.5 | R1/4 | 14 | 14 | 14 | 29 | E-SJAST-4×6 |
| E-FTS-6 × 8-R1/4 | 33 | 12 | 5 | 16 | 5.5 | R1/4 | 17 | 16 | 14 | 32 | E-SJAST-6×8 |



※We do not have our original fittings for E-SJAST-8×10.

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

- E-SJAST does not have the function to neutralize charged fluids. Please take separate measures for charged fluids. We are not responsible for any human or physical damage that might occur before or after both ends of E-SJAST.
- E-SJAST does not necessarily guarantee the prevention of disasters. Any safety control (such as flow velocity limitation for flammable, explosive, and low-conductivity substances, and lowering of spray concentration) should be managed by the user.
- The anti-static material bleeds onto the surface of the tubing, providing an anti-static effect. Washing the surface by water or wiping off the surface may decrease the anti-static effect. In addition, the anti-static material contained in the tubing decreases over time.
- 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 tubing. This may result in the bursting or coming off from the tubing.
- When you use our products, please refer to "Precautions for Use" in our website and product catalog.
- In terms of chemical resistance, please refer to "Chemical Resistance Data" in our website and product catalog.
- Although the inner layer is made of ETFE fluorine, please make sure whether or not E-SJAST is usable for high purity fluids before you use.
- Although the inner layer is resistant to fluids, 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.
- Please do not use this product in food applications.

Contact us if you have any inquiries about HAKKO products.

HAKKO

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