# Flexible Fluorine (ETFE) Resin Tubing Clear (Ultra Soft) [Model Number: E-SJUS]

## **Precautions for Use**

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Before using HAKKO EIGHTRON products, please make sure to read following instructions in order to use HAKKO EIGHTRON products safely. HAKKO is not liable for personal injury or property damages if you do not follow the cautionary instructions below. We strongly urge you to follow these instructions.

#### 1) Cautions in Use

- OThe inner layer of E-SJUS is made of ETFE. Thus, E-SJUS shows higher levels of chemical resistance. However,
- depending on the kinds of chemicals, concentration, and temperature,
- E-SJUS might swell or deteriorate. Please check the chemical resistance data listed on our product catalog and corporate website. ODepending on the kinds of fluids, temperature, and detention time, the odor of the tubing might transfer to the fluid.
- OThis is a multi-layer tubing. In terms of chemical resistance, the outer layer (urethane elastomer) is inferior to the inner layer (ETFE), so please do not soak E-SJUS into chemicals and contact with chemicals for a long time.
- Also, depending on working environments, the fluids would be permeated through inner layer, resulting in the danger of swelling and degradation of the middle or outer layer.
- ○E-SJUS is designed for positive pressure. Please do not use E-SJUS for negative pressure (in vacuum conditions).
- OPlease comply with the use conditions mentioned in our catalog such as working pressure, temperature, and minimum bend radius. OSince hoses contract or extend due to the inner pressure, hoses should be installed with adequate space.
- OWhen pressure is applied, operate the valve slowly in order not to develop impact pressure, which might cause the rupture of the hose. OHoses should not be used below the minimum bend radius. If you use the hoses below the minimum bend radius,
- hoses may be folded or the pressure resistance might go down.
- $\bigcirc \mathsf{P}\mathsf{lease}$  do not bend extremely near the fittings. This leads to the damage of the hose.
- OPlease do not apply unreasonable force such as kinking and pulling to the hoses.
- This results in the bursting of the hose or coming off from the fittings.
- OPlease do not pull or drag the hoses. This damages the surface of the hose, leading to having a hole onto the hose and bursting.
- OPlease do not bring the hoses close to fire or heat sources.
- $\bigcirc \mathsf{P}\mathsf{lease}$  do not place heavy weight on hoses. Hoses should not be running over by vehicles.
- OPlease do not make scratches on the hoses with cutters or knives. OHoses should be selected and used in accordance with what kind of fluids and atmospheres are flown in the hose. Also,
- make sure you check the chemical resistance data in our catalog before selecting particular hoses.
- If you have any questions or need more information, please feel free to contact us.

## OPlease do not use HAKKO EIGHTRON products for applications of medical or medical treatment.

#### ② Cautionary Instructions on How to Cut Tube/Hose and Assemble with Fittings

- Oln cutting the hose, the cross-section of the hose must be perpendicular.
- ○For fittings, please use fittings to seal on the inside of the hose.Do not use fittings to seal on the outer surface of the tube. Please use fitting nipple mountain part with R attached. Do not use fittings with scratches or rust on the surface of the fitting nipple. It may damage the inner surface of the tube, resulting in tube rupture or leakage.
- OWhen the nipple of the fitting is inserted into the hose, do not apply oil on the hose and nipple or do not warm them with fire.
- It may cause the hose to come off or change its shape.
- Olnsert the nipple of the fitting into the end of the hose until it seals against the thread base.
- If the nipple is not inserted adequately, the hose may come off.
- $\bigcirc \mathsf{P}\mathsf{lease}$  do not use the fittings which have scratches or rust on the surface of the nipple.
- Inner surfaces of the hose may be damaged and it may cause the hose to rupture or leak.
- Please use the flat hose clamps required for the hose specifications.
- Please do not use wires or do not tighten excessively with wires. It may cause the hoses to rupture or leak.
- OPlease choose the hose nipples which are suitable for hose sizes.

#### 3 Cautions in Maintenance and Inspection

Tubings are greatly affected by use conditions and environments. In case hoses are used outdoor,

the surface of the hoses will be damaged and the quality will deteriorate quickly, compared with ones used indoor. The conditions of the hoses and fittings should be inspected regularly. If something unusual things listed below occur, stop using the hoses immediately and replace them with new ones:

Appearance Abnormality... Tear, Scratches, Swelling, Crack, Curve, Deformation.

The Bursting of Inner or/and Outer Layers of the Hoses, Hardening, Dramatic Change in Color, and Leaking Fluids
Cautions in Storing

#### ④ Cautions in Storing

OPlease do not directly contact with rubber products such as rubber hose and rubber board.

- This causes the hose to change in color, transfer the components, and swell the hoses.
- Oln case the hoses are stored, get rid of remaining fluids inside the hoses,
- clean up any dusts on the surface of the hose and avoid twisting/holding the hoses.
- OPlease do not store the hose under the extremely bended conditions.
- OPlease store the hose on the flat, smooth surfaces; otherwise, hoses may change its shape.
- OPlease do not expose the hose to direct sunshine, wind, or rain. Store the hose in the low humid, well-ventilated, cold, and dark places. OPlease store the hose without having foreign matters and dusts inside the hose.
- OPlease do not pile up the hoses in large quantity.

#### **(5)** About the Numerical Value of Working Pressure

ODepending on the specifications of the fittings, working pressure might go down.

#### In case of Disposing

 $\bigcirc$ In case of disposing, follow the local governmental regulations.

### For Your Inquiries and/or Questions -



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