

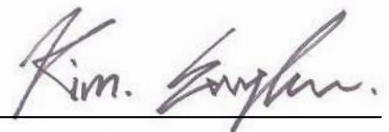
# SPECIFICATION

For

Heat shrinkable Modified fluoropolymer tubing (Shrinkage 2:1)  
used for 600V, 150°C.

(Type designation : LS-FK150)

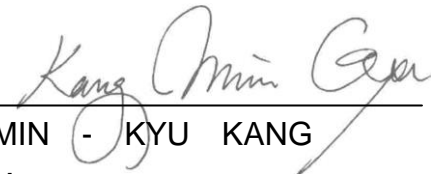
PREPARED BY



SANG - HEE KIM

Engineer

REVIEWED BY



MIN - KYU KANG

Manager

APPROVED BY



YOUNG - GOO KIM

General Manager

## 1.Scope

This specification covers the requirements for heat shrinkable PVdF (Shrinkage 2:1) tubing used for 600V, 150°C. (Type designation : LS-FK150)

## 2.Reference Standard

The following documents form a part of this specification to the extent specified herein.

UL 224 : Extruded insulating tubing

SAE AS23053/18 : Insulation sleeving, electrical, heat shrinkable,  
modified fluoropolymer, crosslinked

RoHS

## 3.Standard

The insulation shall be a irradiated cross-linked polyvinylidene fluoride complying with UL specification and SAE AS23053/18 Class II.

Expanded inside diameter and recovered thickness at any point of insulation shall be in the attached table 1. The standard color of insulation is natural and black.

## 4.Performance

The following item shall be carried out in accordance with SAE AS23053/18.

Test Item		Characteristics	Test condition
Supplied inside diameter		Attached table 1	-
Recovered inside diameter		Attached table 1	-
Recovered thickness		Attached table 1	-
Heat shock		No cracks, flowing or dripping	275°C/4hrs
Secant modulus		25,000 to 120,000 psi	2%, ASTM D882
Restricted shrinkage		No cracks	200°C
Voltage withstand		pass	2,000V/min
Color stability (Clarity stability)		pass	200°C/24hrs
Melting Point		Min. 284 °F	ASTM D 4951
Unaged	Tensile strength	Min. 2500 psi	Room Temp.
	Ultimate elongation	Min. 300 %	
	Dielectric strength	Min. 400 volts/mil	
Volume resistivity		Min. $10^{11}$ ohm-cm	ASTM D 876
Specific gravity		Max. 2.00	ASTM D 792
Water absorption		Max. 0.5 %	23°C/24hrs: ASTM D 570

Corrosion		No corrosion	160°C/16hrs
Low temperature flexibility		No cracks	-55°C/4rs
Flammability		Pass	ASTM D 2671 Procedure C
Heat resistance	Ultimate elongation	Min. 250%	225°C/168hrs
Fluid resistance	Tensile strength	Min. 2000 psi	* AS23503 Test fluid
	Ultimate elongation	Min. 250 %	
	Dielectric strength	Min. 400 volts/mil	
Fungus resistance	Tensile strength	Min. 2500 psi	ISO 846
	Ultimate elongation	Min. 300 %	
	Dielectric strength	Min. 400 volts/mil	

※ Test fluid

Fluid	Conforming to
Hydraulic fluid petroleum base	MIL-PRF-5606
JP-8	MIL-DTL-83133
Lubricating oil	MIL-PRF-7808
Lubricating oil	MIL-PRF-23699
5 percent NaCl	A-A-694
Deicing fluid	AMS1424

#### 6.Storage condition

Keep cool. Don't expose tubes to the direct rays of sun to prevent natural shrinkage and don't keep this package over 8 hours at temperature exceeding 40°C(104F)

Attached Table 1.

Standard Size (Inch size)	Expanded	Recovered	
	Min Inside Diameter [mm]	Max. Inside Diameter [mm]	Min. Thick. At any point [mm]
0.10T X 1/16"	1.6	0.8	0.203
0.12T X 3/32"	2.4	1.2	0.229
0.12T X 1/8"	3.2	1.6	0.229
0.12T X 3/16"	4.7	2.4	0.229
0.14T X 1/4"	6.4	3.2	0.279
0.14T X 3/8"	9.5	4.7	0.279
0.14T X 1/2"	12.7	6.4	0.279
0.18T X 3/4"	19.1	9.5	0.356
0.20T X 1"	25.4	12.7	0.406