

Features/Applications

FRS222 is a flexible, flame retardant, irradiated polyolefin heat shrink tubing that has excellent insulation properties and meets the most stringent industrial, military and railway requirements.

FRS222 is suitable for electrical insulation, strain relief, bonding of cables and connectors and is widely used for interconnections or terminations.

Various

Operating temperature: -55°C to 135°C

Minimum shrink temperature: 70°C. Minimum fully recovery temperature: 100°C.

Standard colours: Black, White, Red, Blue, Yellow, Green, Yellow/Green, Clear.

Special sizes and colours available on request.

Specifications

Railway approved NF F 00-608, SNCF approved.

UL 224, File n°E328344: VW-1, 600V, 125°C (except clear products).

MIL-I-23053/5 Class 1 and 3 (coloured products), Class 2 (clear), 600V, 135°C.

RoHS and REACH compliant.

Dimensions



Size (inch)	As supplied		After recovery (mm)		Standard Length (m/spool)
	Inside Diameter (D) Mini. (mm)	Inside Diameter (d) Maxi.	Wall Thickness (t) Mini.		
3/64	1,2	0,60	0,33	200	
1/16	1,6	0,80	0,36	200	
3/32	2,4	1,20	0,43	200	
1/8	3,2	1,60	0,43	200	
3/16	4,8	2,40	0,43	100	
1/4	6,4	3,20	0,56	100	
5/16	8,0	4,00	0,56	100	
3/8	9,5	4,80	0,56	100	
1/2	12,7	6,40	0,56	50	
5/8	15,9	8,00	0,68	50	
3/4	19,1	9,50	0,69	50	
1	25,4	12,70	0,76	50	
1 1/4	31,8	15,9	0,86	50	
1 1/2	38,1	19,00	0,86	50	
2	50,8	25,40	0,97	50	
3	76,2	38,10	1,17	30	
4	101,6	50,80	1,17	30	
5	127,0	63,50	1,17	15	
6	150,0	76,00	1,50	15	

*Spools as standard, cut pieces available on request

Technical properties		Values	Test methods	
Physical	Working temperature	-55 to +135°C	-	
	Longitudinal change	±10%	-	
	Density @ 23°C	≤ 1,40g/cm ³	ASTM D 792	
	Tensile strength	Unaged	≥1,1 kgf/mm ²	ASTM D 638
	Elongation		≥200%	MIL-I-23053
	Tensile strength	Aged(168h @ 175°C)	≥0,8 kgf/mm ²	ASTM D 638
	Elongation		≥100%	MIL-I-23053
	Heat shock (4h @ 250°C)	Pass	MIL-I-23053	
	Low temperature flexibility (4h @ -55°C)	No crack	MIL-I-23053	
	Secant modulus	≤173MPa	ASTM D 882	
Electrical	Dielectric strength	≥19,7 kV/mm	ASTM D 2671	
	Volume resistivity	≥1x10 ¹⁴ Ω-cm	ASTM D 876	
Chemical	Fluid resistance (24h @ 24°C)	Tensile strength	≥0,7 kgf/mm ²	MIL-I-23053
		Dielectric strength	≥15,8 kV/mm	
	Corrosion (16h @ 175°C)	Copper	No corrosion	MIL-I-23053
		Copper mirror	No corrosion	
	Flammability	Pass	UL 224	
Fungus resistance	No growth	ASTM G 21		