

B Identification Products

For Wire & Cable



A comprehensive line of heat shrinkable sleeves, labels, tie-on cable markers to meet a broad range of needs including UL, CSA and Mil-Spec requirements, for a variety of Applications. WOER's identification sleeves are Heat shrinkable marking sleeves for wire and cable identification. Made from permanent, flame retarded, radiation crosslinked heat shrinkable polyolefin. This identification sleeves are permanent immediately after printing and remain legible even when exposed to abrasion, aggressive cleaning solvents.

CONTENTS

Part No.	Item	Pages
RSFR	Heat Shrink Identification Sleeves	B01
AMS	Military Identification Sleeves	B04
PSFR	High-temperature, Heat Shrinkable Identification Sleeves	B06
HMS	Diesel Resistant Identification Sleeves	B08
HNF	Halogen Free Low Smoke Low hazard Identification Sleeves	B10
PUR	Identification Tags	B12
RSFR/AMS/HMS/HNF	Identification Tags "Ladder Type" Thermal transfer	B14
WO-80500BK	Ribbon Data Sheet	B16
SOFTWARE	WOLABEL-1/3 Software for Wire Marker and Label Printing	B18



RSFR

Heat Shrinkable Identification Sleeves

Description: RSFR marker sleeve is a flattened, heat-shrinkable tubing intended for wire and cable harness identification. It can also be used for applications where limited fire hazard characteristics are necessary. When RSFR is printed with Woer recommended printers and ink ribbons, the marks remain legible, durable, even when exposed to abrasion, aggressive cleaning solvents, and industrial fluids.

Standard: SAE-AS 81531, MIL-STD-202F/Method 215J, UL224, RoHS

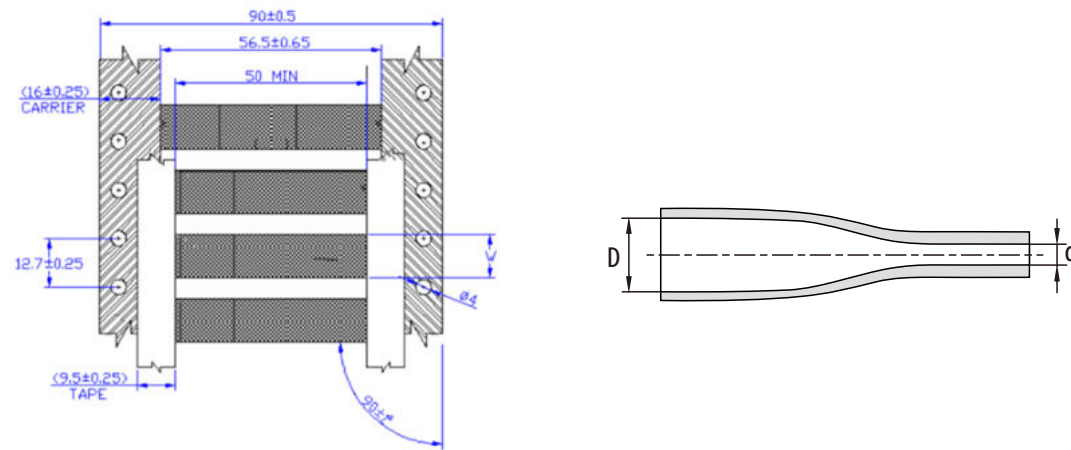
Features

Material	The sleeving shall be fabricated from irradiated, thermally stabilized and flame retarded modified polyolefin compound containing no halogens or cadmium in the formulation.
Application range	commercial, Industrial environment
Operating temperature range	-55~+125°C
Minimum recovery temperature	+125°C
Maximum storage temperature	+50°C
Shrink ratio	2:1, 3:1
Color	White, Yellow, other color is available if ordered
Printing mode	Single sided printing and Double sided printing formats available
Supplied mode	Either Continuous type or Ladder format type is available
Recommended Printers	Thermal transfer printer
Recommended Ribbons	N85 resin ribbon, Black, 100mm(width)*300m(length)

Physic performance

Property	Unit	Testing Requirement	WOER Results
Tensile strength	MPa	10.3	14.3
Ultimate elongation	%	200	330
Low temperature flexibility 4 hours at -55±1°C	-	No cracking	Pass(no cracking)
Dielectric strength	kV/mm	19.7	20
Volume Resistivity	Ω · cm	10 ¹⁴	2.0×10 ¹⁴
Corrosive effect	-	No corrosive	pass
Heat aging	-	168 hours at 158±2°C	Pass(no cracking, print is legible)
Print performance	Rubs	SAE-AS 81531	Pass(legible after 100 rubs)
	Strokes	MIL-STD-202F	Pass(legible after 100 Strokes)

Part Numbering System



- RSFR-M-3X-4.8-50-2.0K-Y0 P2 W
- Package: W for WOLABLE painting package. O for OEM package
 - Printing: PO/P1/P2 for printing/single-side printing/ double-side printing.
 - Dash line: 0/1/2/3.....for not need/one line/two-line/three-line.....
 - Color: Y for yellow, W for white and ten colors are available
 - Standard pack: 2.5K/2K/1.5K/1K/0.5K/0.25K/for 2500/...../500 and 250 pieces
 - Sleeve length: nominal length is 50mm(the total length is 56.5mm)
 - Expanded ID: as supplid, nominal inside diameter
 - Expansion ratio: 2X/3X refers to 2:1 or 3:1
 - Standard wall thickness
 - Product family: RSFR refers to UL 224

Color code	BL	Br	R	Or	Y	G	Blu	V	Gr	W
Color	Black	Brown	Red	Orange	Yellow	Green	Blue	Violet	Grey	White

Note: Yellow and white are standard, other color is available if ordered.

Dimensions

Shrink ratio-2X

Part Number	As Supplied (mm)			After Recovery(mm)	
	ID (D)	Flatten Width (W)	Double Wall Thickness	ID (d)	Single Wall Thickness
RSFR-M-2X-2.4-	2.79±0.20	5.0±0.3	0.48±0.10	≤1.18	0.49±0.06
RSFR-M-2X-3.2-	3.64±0.23	6.3±0.4	0.48±0.10	≤1.59	0.51±0.06
RSFR-M-2X-4.8-	5.26±0.25	8.9±0.4	0.49±0.10	≤2.36	0.54±0.06
RSFR-M-2X-6.4-	6.92±0.28	11.5±0.4	0.50±0.10	≤3.18	0.56±0.06
RSFR-M-2X-9.5-	10.2±0.32	16.7±0.5	0.51±0.11	≤4.75	0.59±0.06
RSFR-M-2X-12.7-	13.5±0.36	21.8±0.6	0.52±0.11	≤6.35	0.60±0.07
RSFR-M-2X-19.0-	20.1±0.40	32.2±0.6	0.53±0.11	≤9.53	0.62±0.07
RSFR-M-2X-25.0-	26.7±0.45	42.5±0.7	0.55±0.12	≤12.70	0.63±0.07
RSFR-M-2X-38.0-	39.8±0.51	63.2±0.8	0.57±0.12	≤19.10	0.64±0.07
RSFR-M-2X-51.0-	53.0±0.56	83.9±0.9	0.58±0.13	≤25.40	0.64±0.08

Shrink ratio-3X

Part Number	As Supplied (mm)			After Recovery(mm)	
	ID (D)	Flatten Width (W)	Double Wall Thickness	ID (d)	Single Wall Thickness
RSFR-M-3X-2.4-	2.79±0.20	5.0±0.3	0.47±0.10	≤0.79	0.57±0.06
RSFR-M-3X-3.2-	3.64±0.23	6.3±0.4	0.48±0.10	≤1.06	0.61±0.06
RSFR-M-3X-4.8-	5.26±0.25	8.9±0.4	0.49±0.10	≤1.59	0.67±0.06
RSFR-M-3X-6.4-	6.92±0.28	11.5±0.4	0.50±0.10	≤2.13	0.71±0.06
RSFR-M-3X-9.5-	10.2±0.32	16.7±0.5	0.52±0.11	≤3.18	0.77±0.06
RSFR-M-3X-12.7-	13.5±0.36	21.8±0.6	0.53±0.11	≤4.23	0.80±0.07
RSFR-M-3X-19.0-	20.1±0.40	32.2±0.6	0.55±0.11	≤6.35	0.84±0.07
RSFR-M-3X-25.0-	26.7±0.45	42.5±0.7	0.56±0.12	≤8.47	0.86±0.07
RSFR-M-3X-38.0-	39.8±0.51	63.2±0.8	0.57±0.12	≤12.90	0.89±0.07
RSFR-M-3X-51.0-	53.0±0.56	83.9±0.9	0.57±0.13	≤17.20	0.90±0.08

Package Information

Ordering Size (RSFR-M-2X/3X)	Ladder Format Type	Continuous Type
	Small Box Packing (PCS/Box)	A-Paper reel Packing (m/reel)
Φ2.4	2500	50
Φ3.2	2000	100
Φ4.8	2000	100
Φ6.4	2000	100
Φ9.5	1000	100
Φ12.7	1000	100
Φ19.0	500	100
Φ25.0	500	100
Φ38.0	500	50
Φ51.0	250	50