

SHRINK RATIO: 3:1
RoHS COMPLIANT
E306685 cUL CERTIFIED

Medium wall heat shrinkable tubing is suitable for a variety of low voltage electrical and mechanical applications, where lighter weight and greater flexibility are important. This medium wall tubing is flexible yet has robust insulation characteristics. When the tubing shrinks and cools down, the inner layer forms an adhesion layer between the tubing and the component or wire. This provides a watertight seal, protecting the connector and/or wire in direct burial and submersed applications.

MWAL-NF Applications:

- Electrical insulation - Ideal for exposed or underground applications providing good insulation, waterproofing and mechanical protection
- Also suitable for Mechanical and abrasion protection, Physical/Electrical Protection of Components, Strain Relief, and Solder Insulation.



Characteristics

- 3:1 shrink ratio, not Flame-retardant
- Seal and protect cable splice and terminations
- Rugged mechanical protection
- Complete moisture sealing
- Strain relief for delicate wire connections
- High resistance to impact and abrasion
- Thermoplastic adhesive liner for complete environmental protection and insulation
- Continuous operating temperature: -45° to 125°C
- Shrinking temperature: 125°C
- RoHS compliant

Tubing Physical and Electrical Properties

Property	Test Method	Standard	Typical Performance
Tensile Strength, MPa	ASTM D2671	≥14	15
Elongation, %	ASTM D2671	≥400	450
Tensile Strength after Aging, MPa	UL224 158°C, 168hr	≥12	12.5
Elongation after aging, %	UL224 158°C, 168hr	≥300	350
Dielectric Strength, kV/mm	IEC 243	≥15	17.5
Volume resistivity, Ω-cm	ASTM D876	≥10 ¹⁴	2.5x10 ¹⁴

Adhesives Properties

Property	Test Method	Standard
Water Absorption	ASTM D570	<0.2%
Softening Point, °C	ASTM E8	90±5
Peel Strength, PE	ASTM D 1000	120N/25mm
Peel Strength, AL	ASTM D 1000	80N/25mm

Dimensions

Gamma Part No. with Size, 0.01 inch	Expanded	After Recovery			
	Internal Diameter, mm	Internal Diameter, mm	Jacket Thickness, mm	Adhesive Thickness, mm	Total Wall Thickness, mm
MWAL-NF-25-0-4FT	6.0	2.0	1.40 ± 0.20	0.45±0.10	1.85±0.25
MWAL-NF-31-0-4FT	8.0	2.0	1.40 ± 0.20	0.45±0.10	1.85±0.25
MWAL-NF-31-0-4FT	10.2	3.0	1.40 ± 0.20	0.50±0.10	1.90±0.25
MWAL-NF-50-0-4FT	12.0	3.0	1.40 ± 0.20	0.50±0.10	1.90±0.25
MWAL-NF-63-0-4FT	16.0	5.0	1.40 ± 0.20	0.55±0.15	2.15±0.30
MWAL-NF-75-0-4FT	19.1	5.6	1.80 ± 0.20	0.60±0.15	2.40±0.30
MWAL-NF-87-0-4FT	22.0	6.0	2.00 ± 0.30	0.60±0.15	2.60±0.30
MWAL-NF-100-0-4FT	25.0	8.0	2.00 ± 0.30	0.60±0.15	2.70±0.30
MWAL-NF-110-0-4FT	28.0	6.0	2.40 ± 0.30	0.95±0.20	3.30±0.35
MWAL-NF-130-0-4FT	33.0	8.0	2.40 ± 0.30	0.80±0.15	3.30±0.35
MWAL-NF-150-0-4FT	38.1	12.0	2.40 ± 0.30	0.80±0.15	3.30±0.35
MWAL-NF-170-0-4FT	43.2	12.7	2.50 ± 0.30	0.80±0.15	3.30±0.35
MWAL-NF-218-0-4FT	55.0	16.0	2.50 ± 0.30	0.80±0.15	3.30±0.35
MWAL-NF-257-0-4FT	65.0	19.0	2.50 ± 0.30	0.80±0.15	3.30±0.35
MWAL-NF-297-4FT	75.0	22.0	2.90 ± 0.30	2.90 ± 0.30	0.80±0.15
MWAL-NF-337-0-4FT	85.0	25.0	2.90 ± 0.30	2.90 ± 0.30	0.80±0.15
MWAL-NF-376-0-4FT	95.0	30.0	3.00 ± 0.30	3.00 ± 0.30	0.80±0.15
MWAL-NF-455-0-4FT	115.0	34.0	3.00 ± 0.30	3.00 ± 0.30	0.80±0.15
MWAL-NF-554-0-4FT	140.0	42.0	3.00 ± 0.30	3.00 ± 0.30	0.80±0.15
MWAL-NF-633-0-4FT	160.0	50.0	3.10 ± 0.30	3.10 ± 0.30	0.80±0.15
MWAL-NF-712-0-4FT	180.0	65.0	3.10 ± 0.30	3.10 ± 0.30	0.80±0.15
MWAL-NF-800-0-4FT	200.0	69.0	3.10 ± 0.30	3.10 ± 0.30	0.80±0.15
MWAL-NF-911-0-4FT	230.0	78.0	3.10 ± 0.30	3.10 ± 0.30	0.80±0.15



MWAL-NF

Medium Wall Adhesive-Lined Cross-Linked
Polyolefin Heat Shrink

Ordering Information

Available in 4-Foot Standard Lengths

Color Code: 0=BLK, X=CLR

P/N Example: MWAL-LVNF-3/4-0 = 4-Foot Length of 3/4" Black Tubing