# **Self-Fusing Silicone Tapes**





Arlon and MOX-Tape® silicone tapes are produced from specially formulated silicone rubber. They bond irreversibly to provide an insulative barrier that is resistant to moisture, oxygen, ozone and corona over a wide

temperature range (-65°F up to +500°F). Our products provide superior electrical insulation with a dielectric strength of 300 VPM minimum at 356°F/180°C.

# TYPICAL PROPERTIES

Thermal Stability	356°F/180°C
Temperature Range	65°F to +500°F (-54°C to +260°C)
Volume Resistivity	10 <sup>13</sup> ohm-cm min. (ASTM D257)
Self Adhesion	2 p.p.i min. (3.5 N/cm) (ASTMD2148)
Hardness	
Moisture Absorption	0.9% (46 hrs. in H₂O @ 70°F)

NOTES: - The above properties are published as a guide only, and should not be used for specifications without testing in your own laboratory.

- Arlon Tape and MOX-Tape product shelf life is 12 months from the date of manufacture when stored at 70+/- 5° F (21+/- 3° C). This statement applies to all fiberglass-supported and unsupported MOX-Tapes and all unsupported Arlon tapes (-P0, -P1, -P2, -P3, -P6, -M0, -M1, -M5, -M6 and -M7 tape suffixes).

## PERFORMANCE ADVANTAGES

• Resists moisture, oxygen, and ozone to assure continuous high insulation values.

- Conforms smoothly when wrapped around complex forms.
- Bonds to itself at room temperature within 24 hours.
- Remains non-tacky to the touch and does not adhere to other surfaces, or substrates.
- Insulates with single wrap, thereby reducing labor time and cost.
- Dampens vibration and resists heat and mechanical shock as well as corona.
- Inherently flame resistant and when burned forms a non-conductive ash.
- SA & SB MOX-Tapes<sup>®</sup> provide a uniform thickness even around sharp edges. Fiberglass fabric, encapsulated inside the silicone rubber, prevents wicking and maintains high insulation resistance under high humidity conditions. These controlled stretch tapes provide a uniform insulation barrier.
- All tapes are protected by a special interleaved liner.

# **APPLICATIONS**

# Mechanical

- Protection of coils from vibration.
- Vibration fixture, anti-scratch, and clamping pads.
- Harness wrapping and wire bundling, including for high temperature applications.
- Applied to rollers for protection and traction.
- Plant maintenance.
- Superior, heavy duty repair tape for emergency insulating barrier.

# Electrical

- Insulation of field armature and interpole coils in large motors.
- Insulation for splicing and terminating of wire and cable.
- Insulating and sealing electrical connections.
- Insulating coil leads and bus bar connections.
- Electromagnetic coil insulation.
- Motor connections.
- Overwrapping of deteriorated insulation in reclaimed motors.

#### Environmental

- On-board aviation and space applications.
- Underground cable splices.
- Insulating heated transfer lines.
- Insulating in radioactive environments.
- Masking agent utilized in manufacturing processes and powder coatings.
- Insulating, protecting, and sealing rigging hardware and power systems in marine applications.

Arlon Rectangular Tape



Rectangular tape is of uniform thickness and is ideal for applications where a smooth, even layer of tape is not required. MOX-Tape<sup>®</sup> 600-R Series rectangular unsupported tapes, which also meet various military and aerospace specifications, are also available.

9	Example: 920-10R12-P0
	1 for Mil Spec testing. <b>0</b> if not
	Liner Type. Polyethylene or Mylar
	Length in yards.
	Color. <b>R</b> ed, <b>B</b> lack, <b>W</b> hite or Gray ( <b>X</b> )
	Width in inches. For example 125
	for 1 1/4" wide tape. Available in 0.5" to 2" wide.
	Thickness in mils. Available in10 to 80 mils thick.
	Designates Rectangular Tape

## Arlon MOX-Tape<sup>®</sup> Fiberglass Reinforced Tape

These self-fusing silicone rubber tapes incorporate a sinusoidal fiberglass fabric that gives a controlled elongation and increased tear resistance. The SA series has a maximum elongation of 25% and the SB series has a maxium elongation of 15%. This reinforcement provides excellent mechanical characteristics while allowing the tape to conform to irregular shapes. The table below lists a few examples of reinforced tapes that are available.

Standard Part No.	Arlon Part No.	<b>Thickness</b> (inches)	Width (inches)	Elongation (%)	Break Strength (Ibs)
SA00520	T3020-R002	0.02	1/2	25	40
SB00520	T4020-R002	0.02	1/2	15	40
SA01015	T3015-R004	0.015	1	25	40
SB01015	T4015-R004	0.015	1	15	40
SA03030	T3030-R012	0.03	3	25	40
SB03030	T4030-R012	0.03	3	15	40

Arlon LevelWrap® Tape Tape Cross Section Bonded Cross Section

LevelWrap<sup>®</sup> has tapered edges and a colored line along its apex. The purpose of the line is to act as a guide for subsequent wraps in order to form a uniformly thick layer. MOX-Tape<sup>®</sup> 600-T series triangular unsupported tapes, which also meet various military and aerospace specifications, are also available.



# CERTIFICATIONS

Tapes are manufactured under ISO9001:2000 certification. Products can also be certified to many of the following specifications upon request.

- MIL-I-46852C, Type I & Type II
- A-A-59163, Type I & Type II
- MIL-I-22444C
- Boeing DMS2186 Type 1 & Type 2
- Lockheed Martin MMS J517
- Lockheed Martin 5-00857
- General Electric A50A493

- General Electric A50E112
- General Dynamics P5384
- Rohr RMS315
- FAR 25.853 & UL94 (upon request)
- UL listed







**Arlon**, a division of Bairnco Corporation, a subsidiary of WHX Corporation, has been a leader in silicone rubber and silicone adhesive technologies for nearly five decades. Silicone rubber is a unique elastomer that delivers high performance for a wide variety of applications. Product uses range from thermal insulation pads and molded heat shields for aircraft, aerospace, and automotive applications to substrates for flame retardant flexible heaters, ducting, and motor coil insulation. We focus on precision-calendered silicone rubber, coated fabric, and specialty extruded silicone rubber tapes. Our development team continually explores new technologies so that Arlon remains the world leader in silicone technology.

# **TECHNOLOGY ENABLING INNOVATION**

We want to work with

you to create tomorrow's

solutions today!



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