

**AA59163-1I0010 / AA59163-1I0020 / AA59163-1I0030 / AA59163-1I0040**

**Class 1 - Type I**

**AA59163-1II0020 / AA59163-1II0030 / AA59163-1II0040 / AA59163-1II0060**

**Class 1 - Type II**

## Silicone Rubber Self Fusing Electrical Insulating Tape

Operating temperature: -65°F to +500°F / -54°C to 260°C; Brittle temperature -85°F / -65°C

FlameShield™ Self Binding / Self-Fusing / Self Amalgamating Tape -

High Temperature, Heat & Flame Resistant



- Self-bonds / self fuses / self amalgamating tape. No residue when removed. Starts fusing within minutes; fully bonded within hours. Excellent cold temperature performance. Low water absorption.
- Tested to:
  - ASTM D 149; provides minimum 400 V/mil. for .010" to .030" thick tape, 300 V/mil for .040" thick tape and 250 V/mil for .060" thick tape.
  - ASTM D 412; provides minimum 700 psi tensile strength and minimum 300% elongation.
  - ASTM D 2240; Durometer (Shore A); 55. Other test data available.
- Excellent for sealing ends of firesleeve: prevents sleeve from absorbing contamination and wicking liquids. Excellent for wrapping electrical & mechanical connections and splices. Makes clean and neat installations of cables, wires and hoses. Makes an instant separation bumper and provides vibration dampening.
- Meets Mil-I-46852, AA59163 and ABS 5334 specifications. Certificate of Conformity available.
- Cross Reference Equivalents Available to MOX 600R and 600T levelwrap series; 602-1, 603-1, 604-1, 605-1, 606-1, 607-1. McDonnell Douglas / Boeing DMS-2186 Type I & II, McDonnell Douglas Helicopter HS5215, General Dynamics P5384, Martin Marietta MMS 517-6 Type II, McDonnell Douglas P.S. 17115, ST0130RB0078 Type I, 3003M70P01, MS70T09-S, WS1363A, Premier Farnell 810112, Safe Flight 59562-5, PLYSIL3455, TYT200-1, 66N, 67N and various NATO / National Stock Numbers (NSN).
- Amalgamating time: Room temperature; 24 hours / at 120°C; 120 minutes / at 150°C; 35 minutes / at 200°C; 20 minutes / at 250°C; 15 minutes. Tested for short duration fluid resistance: Jet Fuel (JP5), Hydraulic Fluid (Skydrol 500B4), Mineral Oil (NATO 0142), Synthetic Oil (NATO 0156), MIL-C-87836 & Foran 141B cleaning fluids, MIL-A-8243 cooling fluid.

These tapes are guaranteed to meet specification for 1 year from date of manufacture providing tapes are stored dry at 21°C +/- 3°C or 70°F +/- 5°F. Standard tapes have an interleaved liner of polyethylene. Polyester liner available.

Type II tapes have a center guideline stripe to assist in making 50% overwraps. The triangular profile version tape allows for minimal ridge lines, providing wire and cable splices and joints with an almost totally smooth surface (prevents snagging when splice is pulled through obstructions).

**FlameShield™ CID AA-59163 Specification**  
**High Temperature Silicone Self Fusing**  
**Compression/Stretch Electrical Insulating Tape**

**AA59163-1I0020 / AA59163-1II0020 / AA59163-1I0030 / AA59163-1II0030**  
**AA59163-1I0040 / AA59163-1II0040**

**Class 1 – Type I and Class 1 - Type II**

Part Number	Tape Width Inches / mm	Thickness inches / mm	Color / Type / Profile
AA59163-1I0020-RXX-0.50	½" / 12.7	0.020" / 0.508	Black or Red / Type I / Rectangular
AA59163-1I0030-RXX-0.50	½" / 12.7	0.030" / 0.760	Black or Red / Type I / Rectangular
AA59163-1I0020-RXX-0.62	5/8" / 15.7	0.020" / 0.508	Black or Red / Type I / Rectangular
AA59163-1I0020-RXX-0.75	¾" / 19	0.020" / 0.508	Black or Red / Type I / Rectangular
AA59163-1I0010-RXX-1.00	1" / 25.4	0.010" / 0.250	Black or Red / Type I / Rectangular
AA59163-1I0020-RXX-1.00	1" / 25.4	0.020" / 0.508	Black or Red / Type I / Rectangular
AA59163-1II0020-TXX-1.00	1" / 25.4	0.020" / 0.508	Black or Red / Type II / Triangular
AA59163-1I0030-RXX-1.00	1" / 25.4	0.030" / 0.760	Black or Red / Type I / Rectangular
AA59163-1II0030-TXX-1.00	1" / 25.4	0.030" / 0.760	Black or Red / Type II / Triangular
AA59163-1I0040-RXX-1.00	1" / 25.4	0.040" / 1.000	Black or Red / Type I / Rectangular
AA59163-1II0040-TXX-1.00	1" / 25.4	0.040" / 1.00	Black or Red / Type II / Triangular
AA59163-1I0012-RXX-1.50	1 ½" / 38.1	0.012" / 0.304	Black or Red / Type I / Rectangular
AA59163-1I0020-RXX-1.50	1 ½" / 38.1	0.020" / 0.508	Black or Red / Type I / Rectangular
AA59163-1II0060-TXX-1.50	1 ½" / 38.1	0.060" / 1.524	Black or Red / Type II / Triangular
AA59163-1I0020-RXX-2.00	2" / 50.8	0.020" / 0.508	Black or Red / Type I / Rectangular
AA59163-1II0020-TXX-2.00	2" / 50.8	0.020" / 0.508	Black or Red / Type II / Triangular

**Guideline Color on Type II Triangular Tapes Only:** .020" = blue / .030" = white / .040" = green

Type II edge thickness is .008" +/- .001"

**Please enquire for pricing on widths and thicknesses other than those listed above.**

- Standard roll length is 36 feet / 12 Yards / 10.9 Metres; other lengths available.
- For the XX value (color code): OR = Oxide-Red, BK = Black. Other colors available.
- Certificate of Conformity: Add \$6.00 for individual roll CofC. Lot/Batch CofC \$25.00 per order line item.
- Test Report: Add \$75.00 per order line item.

Amalgamating time: Room temperature; 24 hours / at 120°C; 120 minutes / at 150°C; 35 minutes / at 200°C; 20 minutes / at 250°C; 15 minutes. Tested for short duration fluid resistance: Jet Fuel (JP5), Hydraulic Fluid (Skydrol 500B4), Mineral Oil (NATO 0142), Synthetic Oil (NATO 0156), MIL-C-87836 & Foran 141B cleaning fluids, MIL-A-8243 cooling fluid.

These tapes are guaranteed to meet specification for 1 year from date of manufacture providing tapes are stored dry at 21°C +/- 3°C or 70°F +/- 5°F. Standard tapes have an interleaved liner of polyethylene. Polyester liner available.

## FlameShield™ CID A-A-59163 Specification Silicone Rubber Self Fusing Electrical Insulating Tape - Technical Data

<b>Specifications for FlameShield™ Silicone Rubber Tape (MIL-I-46852 &amp; A-A-59163) Class 1 – Type I and Type II</b>			
<b>Property</b>	<b>Standard</b>	<b>Nominal Test Result or Tolerance</b>	<b>Test Method</b>
Thickness: 1" wide tape	.010" .020" .030" .040"	+/- .002"	N/A
Width	0.50", 0.625", 0.75", 1.00", 1.50", 2.00"	+/- .020"	N/A
Length	36 feet / 12 yards	+/- 6.00"	N/A
Color	Oxide-Red or Black	N/A	N/A
Guideline Color (Type II)	.020" Tapes: Blue .030" Tapes: White .040" Tapes: Green	N/A	N/A
Operating Temperature	-60°C to +260°C -76°C to +500°F	N/A	N/A
Brittle Temperature	-65°C / -85°F	N/A	N/A
Interleave Material	.002" thick Mylar	N/A	N/A
Tensile Strength	700 psi (minimum)	1100	ASTM D412 / D119
Dielectric Strength	.010" tape: 400 V/mil .020" tape: 400 V/mil .030" tape: 400 V/mil .040" tape: 300 V/mil	575	ASTM D-149
Dielectric Constant		2.94 @ 1Khz	ASTM D150
Volume Resistivity	1 x 10 <sup>14</sup> ohms/cm <sup>3</sup>	3 x 10 <sup>14</sup>	ASTM D149
Elongation	300% (minimum)	700	ASTM D412 / D119
Tear Strength	85 psi (minimum)	146	ASTM D624
Bond Strength (1" Width)	2 lbs (minimum)	5.5	ASTM D2148
Adhesion	Shall not unwind more than 1.0" after 3 minutes with 600g load	0.12"	ASTM D2148
Inclined Mandrel Tack Test (inch)		0.25	ASTM D2148
Water absorption (by wt)	3% Maximum	0.9%	FED-STD-601 Method 6251
Dissipation Factor		<0.0004 @ 1 KHz	ASTM D150
Hardness, durometer Shore A	55 - 65	55	ASTM D2148 / D2240
Flame Test		Pass	FAA 60 Sec Vertical

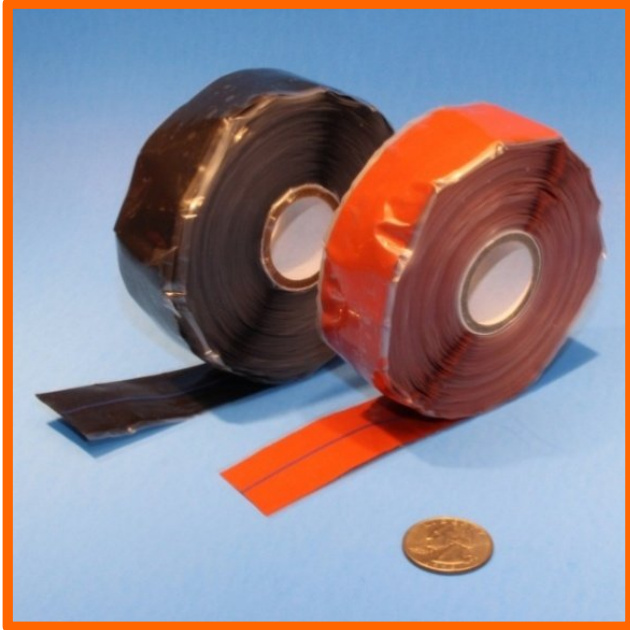
**AA59163-1I0010 / AA59163-1I0020 / AA59163-1I0020 / AA59163-1I0030  
AA59163-1I0030 / AA59163-1I0040 / AA59163-1I0040**

**Class 2 - Type IM and Class 2 - Type IIM**

**Silicone Rubber Self Fusing Electrical Insulating Tape**

Operating temperature: -65°F to +500°F / -54°C to 260°C; Brittle temperature -85°F / -65°C

FlameShield™ Self Binding / Self-Fusing / Self Amalgamating Tape -  
High Temperature, Heat & Flame Resistant



- Self-bonds / self fuses / self amalgamating tape. No residue when removed. Starts fusing within minutes; fully bonded within hours. Excellent cold temperature performance. Low water absorption.
- Tested to:
  - ASTM D 149; provides minimum 400 V/mil. for 0.250mm to 0.750mm thick tape, 300 V/mil for 1.000mm thick tape.
  - ASTM D 412; provides minimum 4800 kPa tensile strength and minimum 300% elongation.
  - ASTM D 2240; Durometer (Shore A); 55. Other test data available.
- Excellent for sealing ends of firesleeve: prevents sleeve from absorbing contamination and wicking liquids. Excellent for wrapping electrical & mechanical connections and splices. Makes clean and neat installations of cables, wires and hoses. Makes an instant separation bumper and provides vibration dampening.
- Meets Mil-I-46852, AA59163 and ABS 5334 specifications. Certificate of Conformity available.
- Cross Reference Equivalents Available to MOX 600R and 600T levelwrap series; 602-1, 603-1, 604-1, 605-1, 606-1, 607-1. McDonnell Douglas / Boeing DMS-2186 Type I & II, McDonnell Douglas Helicopter HS5215, General Dynamics P5384, Martin Marietta MMS 517-6 Type II, McDonnell Douglas P.S. 17115, ST0130RB0078 Type I, 3003M70P01, MS70T09-S, WS1363A, Premier Farnell 810112, Safe Flight 59562-5, PLYSIL3455, TYT200-1, 66N, 67N and various NATO / National Stock Numbers (NSN).
- Amalgamating time: Room temperature; 24 hours / at 120°C; 120 minutes / at 150°C; 35 minutes / at 200°C; 20 minutes / at 250°C; 15 minutes. Tested for short duration fluid resistance: Jet Fuel (JP5), Hydraulic Fluid (Skydrol 500B4), Mineral Oil (NATO 0142), Synthetic Oil (NATO 0156), MIL-C-87836 & Foran 141B cleaning fluids, MIL-A-8243 cooling fluid.

These tapes are guaranteed to meet specification for 1 year from date of manufacture providing tapes are stored dry at 21°C +/- 3°C or 70°F +/- 5°F. Standard tapes have an interleaved liner of polyethylene. Polyester liner available.

Type II tapes have a center guideline stripe to assist in making 50% overwraps. The triangular profile version tape allows for minimal ridge lines, providing wire and cable splices and joints with an almost totally smooth surface (prevents snagging when splice is pulled through obstructions).

**FlameShield™ CID AA-59163 Specification  
High Temperature Silicone Self Fusing  
Compression/Stretch Electrical Insulating Tape**

**AA59163-1I0020 / AA59163-1II0020 / AA59163-1I0030 / AA59163-1II0030  
AA59163-1I0040 / AA59163-1II0040**

**Class 2 – Type IM and Class 2 - Type IIM**

Part Number	Tape Width mm	Thickness mm	Color / Type / Profile
AA59163-2IM0500-RXX-13	13	0.500	Black or Red / Type IM / Rectangular
AA59163-2IM0750-RXX-13	13	0.750	Black or Red / Type IM / Rectangular
AA59163-2IM0500-RXX-15	15	0.500	Black or Red / Type IM / Rectangular
AA59163-2IM0500-RXX-20	20	0.500	Black or Red / Type IM / Rectangular
AA59163-2IM0250-RXX-25	25	0.250	Black or Red / Type IM / Rectangular
AA59163-2IIM0500-TXX-25	25	0.500	Black or Red / Type IIM / Triangular
AA59163-2IM0500-RXX-25	25	0.500	Black or Red / Type IM / Rectangular
AA59163-2IIM1000-TXX-25	25	1.000	Black or Red / Type IIM / Triangular
AA59163-2IM1000-RXX-25	25	1.000	Black or Red / Type IM / Rectangular
AA59163-2IM0500-RXX-38	38	0.500	Black or Red / Type IM / Rectangular
AA59163-2IM0300-RXX-38	38	0.300	Black or Red / Type IM / Rectangular
AA59163-2IM0500-RXX-50	50	0.500	Black or Red / Type IM / Rectangular
AA59163-2IIM0500-TXX-50	50	0.500	Black or Red / Type IIM / Triangular

**Guideline Color on Type IIM Triangular Tapes Only:** .500mm = blue / .750mm = white / 1.000mm = green

Type IIM edge thickness is 0.215mm +/- 0.015mm

**Please enquire for pricing on widths and thicknesses other than those listed above.**

- Standard roll length is 36 feet / 12 Yards / 10.9 Metres; other lengths available.
- For the XX value (color code): OR = Oxide-Red, BK = Black. Other colors available.
- Certificate of Conformity: Add \$6.00 for individual roll CofC. Lot/Batch CofC \$25.00 per order line item.
- Test Report: Add \$75.00 per order line item.

Amalgamating time: Room temperature; 24 hours / at 120°C; 120 minutes / at 150°C; 35 minutes / at 200°C; 20 minutes / at 250°C; 15 minutes. Tested for short duration fluid resistance: Jet Fuel (JP5), Hydraulic Fluid (Skydrol 500B4), Mineral Oil (NATO 0142), Synthetic Oil (NATO 0156), MIL-C-87836 & Foran 141B cleaning fluids, MIL-A-8243 cooling fluid.

These tapes are guaranteed to meet specification for 1 year from date of manufacture providing tapes are stored dry at 21°C +/- 3°C or 70°F +/- 5°F. Standard tapes have an interleaved liner of polyethylene. Polyester liner available.

## FlameShield™ CID AA-59163 Specification Silicone Rubber Self Fusing Electrical Insulating Tape - Technical Data

<b>Specifications for FlameShield™ Silicone Rubber Tape (MIL-I-46852 &amp; A-A-59163) Class 2 – Type IM and Type IIM</b>			
Property	Standard	Nominal Test Result or Tolerance	Test Method
Thickness: 1" wide tape	0.250mm 0.500mm 0.750mm 1.000mm	+/- .002"	N/A
Width	13mm, 19mm, 25mm, 38mm, 50mm	+/- .020"	N/A
Length	10.9m	+/- 120mm	N/A
Color	Oxide-Red or Black	N/A	N/A
Guideline Color (Type II)	0.500mm Tapes: Blue 0.750mm Tapes: White 1.000mm Tapes: Green	N/A	N/A
Operating Temperature	-60°C to +260°C -76°C to +500°F	N/A	N/A
Brittle Temperature	-65°C / -85°F	N/A	N/A
Interleave Material	.002" thick Mylar	N/A	N/A
Tensile Strength	4800 kPa (minimum)	7400	ASTM D412 / D119
Dielectric Strength	0.250mm tape: 400 V/mil 0.500mm tape: 400 V/mil 0.750mm tape: 400 V/mil 1.000mm tape: 300 V/mil	575	ASTM D-149
Dielectric Constant		2.94 @ 1Khz	ASTM D150
Volume Resistivity	1.7 x 10 <sup>14</sup> nanoohm metre	3 x 10 <sup>14</sup>	ASTM D149
Elongation	300% (minimum)	700	ASTM D412 / D119
Tear Strength	85 psi (minimum)	146	ASTM D624
Bond Strength (25mm Width)	0.9 kilogram-force	2.6	ASTM D2148
Adhesion	Shall not unwind more than 1.0" after 3 minutes with 600g load	0.12"	ASTM D2148
Inclined Mandrel Tack Test (inch)		0.25	ASTM D2148
Water absorption (by wt)	3% Maximum	0.9%	FED-STD-601 Method 6251
Dissipation Factor		<0.0004 @ 1 KHz	ASTM D150
Hardness, durometer Shore A	55 - 65	55	ASTM D2148 / D2240
Flame Test		Pass	FAA 60 Sec Vertical