ROGERS CORPORATION

HIGH PERFORMANCE TAPES

ARLON® ENGINEERED FOR YOU

bisco® TRUSTED TO THE EXTREME

DeWAL® SHEER QUALITY

ROGERS HIGH PERFORMANCE TAPES

For product designers and engineers, Rogers Corporation is the material solutions partner of choice when quality, innovation, and collaborative support are critical to design optimization and product functionality.

Designed into products and market applications where high reliability and performance are essential, Rogers advanced materials are mission-critical in applications such as automobiles, aerospace, mass transit, electronics, protective gear, footwear, medical products and much more.

With unrivaled technical support, Rogers fosters successful customer relationships through a dedication to technical know-how, application expertise, and global support.

Tape Product Families:

1 **ARLON® Self-Fusing Silicone Tapes**

Self-fusing silicone rubber tape that sticks to itself without the use of an adhesive.

2 **BISCO® Silicone Foam Tapes**

Compressible silicone foam tape with acrylic or silicone pressure-sensitive adhesive applied to one or both sides of the foam.

3 **DeWAL® Tapes**

PTFE and thermal spray masking tapes available with either silicone or acrylic adhesives.

Self-Fusing Silicone Tape	ARLON® ENGINEERED FOR YOU	**Applications** • Wire harness wrapping • Pipe and hose repair • Sealing and insulating electrical connections • Motor connection wrapping • Weatherproofing
Silicone Foam with PSA	bisco® TRUSTED TO THE EXTREME	**Applications** • Silicone foam tape and wrapping • Flooring/cableway panel gaskets in aircraft • Environmental gaskets and seals
PTFE and UHMW Tapes	DeWAL® SHEER QUALITY	**Applications** • Composite manufacturing release and flash type • Automotive buzz, squeak, and rattle abatement • Automotive block heaters • Wire harness, coil winding • Submersible pump repair

APPLICATION SPOTLIGHT – AEROSPACE

Material solutions that deliver high reliability under extreme conditions, critical for aerospace applications.

ARLON® Silicones

1. Wire harness wrapping
2. Sealing and insulating electrical connections
3. Self fusing tapes for MRO

BISCO® Silicones

1. Gap filling tape
2. Flooring and cableway panel gasket tape
3. HVAC gaskets and seals

DeWAL® Tapes

1. Plasma spray tape for MRO
2. Process aid for composite manufacturing
3. Thermal and electrical insulation for wire and cable

ARLON® Silicone Self-Fusing Tapes are fully cured silicone rubber products that provide superior electrical insulation in thousands of demanding applications. Their proprietary chemistry enables them to fuse only to themselves and form a permanent bond that provides a barrier to moisture, ozone, and corona over a wide temperature range.

ARLON® Self-Fusing Tapes

- Excellent moisture, oxygen, and ozone resistance
- Excellent and smooth conformability
- Forms a permanent bond only to itself in 24 hours
- Insulates with a single wrap
- Tapes come in a rectangular or Levelwrap® triangular shape for ease of installation
- Rapid-Bond® fast fusing or FR flame resistance tapes are available to meet your unique requirements
- Available as both unsupported and supported by fiberglass, providing tear resistance as needed
- Extruded to widths from 0.25 inch (6.35 mm) to 3 inch (76.2 mm)
- Certifiable to MIL-I-46852

Unsupported and Supported Self-Fusing Tapes for Industrial Applications									
Property	**Method**	**Unit**	**Method**	**A2020-R004-12**	**A2040-R004-12**	**A1010-R004-12**	**A1020-R004-12**	**A3020-R004-12**	**A3030-R012-12**
Profile		---	---	Triangular		Rectangular		Rectangular	
Cross Section									
Reinforcement		---	---	None		None		Fiberglass	
Thickness[1]	ASTM D2148*	inch (mm)	SQA-TMS-012	0.020 (0.51)	0.040 (1.02)	0.010 (0.25)	0.020 (0.51)	0.020 (0.51)	0.030 (0.76)
Width[1]	ASTM D2148*	inch (mm)	SQA-TMS-012	1.00 (25.4)	1.00 (25.4)	1.00 (25.4)	1.00 (25.4)	1.00 (25.4)	3.00 (76.2)
Color[2]		---	---	Red	Red	Red	Red	Red	Black
Tensile Strength	ASTM D3759*	PSI (kPa)	SQA-TMS-009	1291 (8901)	1308 (9018)	1247 (8598)	1401 (9660)	3870 (26062)	4153 (28633)
Break Strength		lbf/in (N/cm)	---	---	---	---	---	78 (136.6)	90 (157.6)
Elongation at Break	ASTM D3759*	%	SQA-TMS-009	515	536	559	534	30	40
Adhesion Strength	ASTM D2148*	lbf/in (N/cm)	SQA-TMS-015	2.9 (5.1)	3.6 (6.3)	2.4 (4.2)	3.4 (6.0)	7.4 (13.0)	8.9 (15.6)
Dielectric Strength	ASTM D149/ D2148*	V/mil (kV/mm)	SQA-TMS-020	689 (27.1)	504 (19.8)	923 (36.3)	816 (32.1)	705 (27.8)	761 (30.0)
Water Absorption	FED-STD-601*	%w/w	SQA-TMS-016	1	0.6	0.8	0.5	1.8	3
Temperature Range				-54ºC to +260ºC (-65ºF to +500ºF)					
Volume Resistivity			ASTM D257	10^13 ohm-cm min.					
Self Adhesion			ASTM D2240	2 p.p.i. min. (3.5 N/cm)					
Hardness			ASTM D2240	50 Shore A					

1. Available in a variety of thicknesses and widths. Consult your Sales Engineer or Customer Service for Availability.
2. Available colors include; red (red iron oxide), black, white, gray, blue, green, orange, yellow, vibrant red, and translucent. Custom colors available.
* Fiberglass reinforced tape tested as per Mil-1-22444C Specification.

MOX-Tape® Self-Fusing Tapes

- MOX-Tape® Self-Fusing silicone tapes are produced from specially formulated silicone rubber designed to meet various aerospace tape specifications
- Superior electrical insulation with a dielectric strength of 300 VPM minimum at 356°F (180°C)
- Comes in either a rectangular or triangular shape for ease of installation
- Available as both unsupported and supported by fiberglass, providing tear resistance as needed
- Extruded to widths from 0.25 in (6.35 mm) to 3 in (76.2 mm)
- Unsupported MOX-Tape® is certifiable to: MIL-I-46852, A-A-59163, General Dynamics P3584, GE 30003M70 and A50A493, Lockheed Martin 5-00615 and MMS J517, Rockwell ST0130RB0078, Trane/American Std, DMS2186, RMS315
- Supported MOX-Tape® is certifiable to: MIL-I-22444, Crane R24784, GE A50E112 and A50A493, IBM 6084744, Lockheed Martin 5-00857 and P5189, DMS2186, RMS315

Property	**Method**	**Unit**	**Method**	**T2020-B004-12**	**T2040-B004-12**	**T1010-B004-12**	**T1020-B004-12**	**T3020-B004-12**	**T3030-B012-12**
Profile		---	---	Triangular		Rectangular		Rectangular	
Cross Section									
Reinforcement		---	---	None		None		Fiberglass	
Thickness[1]	ASTM D2148*	inch (mm)	SQA-TMS-012	0.020 (0.51)	0.040 (1.02)	0.010 (0.25)	0.020 (0.51)	0.020 (0.51)	0.030 (0.76)
Width[1]	ASTM D2148*	inch (mm)	SQA-TMS-012	1.00 (25.4)	1.00 (25.4)	1.00 (25.4)	1.00 (25.4)	1.00 (25.4)	3.00 (76.2)
Color[2]		---	---	Black	Black	Black	Black	Black	Black
Tensile Strength	ASTM D3759*	PSI (kPa)	SQA-TMS-009	1262 (8701)	1306 (9005)	1288 (8880)	1317 (9080)	3810 (26269)	2444 (16851)
Break Strength		lbf/in (N/cm)	---	---	---	---	---	86 (150.6)	78 (136.6)
Elongation at Break	ASTM D3759*	%	SQA-TMS-009	779	787	748	823	29	25
Adhesion Strength	ASTM D2148*	lbf/in (N/cm)	SQA-TMS-015	2.6 (4.6)	3.6 (6.3)	2.7 (4.7)	3.4 (6.0)	7.3 (12.8)	11.1 (19.4)
Dielectric Strength	ASTM D149/ D2148*	V/mil (kV/mm)	SQA-TMS-020	704 (27.2)	479 (18.8)	1146 (45.1)	817 (32.2)	659 (25.9)	649 (25.6)
Water Absorption	FED-STD-601*	%w/w	SQA-TMS-016	0.2	0.1	0.4	0.2	1.6	1.1
Temperature Range				-54ºC to +260ºC (-65ºF to +500ºF)					
Volume Resistivity			ASTM D257	10^13 ohm-cm min.					
Self Adhesion			ASTM D2240	2 p.p.i. min. (3.5 N/cm)					
Hardness			ASTM D2240	50 Shore A					

1. Available in a variety of thicknesses and widths. Consult your Sales Engineer or Customer Service for Availability.
2. Available colors include; red (red iron oxide), black, white, gray, blue, green, orange, yellow, vibrant red, and translucent. Custom colors available.
* Fiberglass reinforced tape tested as per Mil-1-22444C Specification.

ARLON® ENGINEERED FOR YOU | BISCO® TRUSTED TO THE EXTREME | DeWAL® SHEER QUALITY

BISCO® materials are the industry leaders in silicone foams used for gasketing and sealing applications. With a wide range of cellular, solid and specialty materials, BISCO silicone foams are trusted for their superior performance characteristics and the support of Rogers Corporation's expert technical service team.

BISCO® High Performance Cellular Foam and Solid Tapes

BISCO® cellular foams can be fabricated into pressure-sensitive tapes for ease of application.

These high-performing silicone tapes are known for their mission-critical reliability in numerous applications across many industries, including aerospace, electronics, life science, transportation, LED lighting, and electric vehicles (EV).

Cellular Foam Tapes

When long-term performance and extreme temperature stability are required, BISCO® silicone BF-2005, BF-1005, HT-805, HT-875, HT-825, and HT-845 are the go-to protection solutions.

BF-2005

BF-2005 is a highly compressible, ultra-soft silicone foam. Its low weight and softness make it an ideal solution where low closure force and sealing are critical.

BF-1005

BF-1005 is a highly compressible, soft silicone foam. Similar to BF-2005, the combination of low weight and softness makes it an ideal solution where low closure force and sealing are critical.

HT-805

HT-805 is a versatile, medium-firm silicone foam. It embodies the transition from soft and conformable to firm, as it offers the lightness of a foam while also exhibiting enhanced sponge rubber sealing capabilities.

HT-875

HT-875 is a medium-soft silicone foam. It is a firmer and denser version of BF-1005, offering low closure force and conformability characteristics while also exhibiting enhanced sponge rubber sealing capabilities.

HT-825

HT-825 is a firm-grade cellular silicone foam with the enhanced sealing capabilities of sponge rubber. It offers higher tear and tensile strength than lighter grade BISCO® foams.

HT-845

HT-845 is an extra-firm grade cellular silicone foam with the enhanced sealing capabilities of sponge rubber. It offers higher tear and tensile strength than lighter grade BISCO® foams.

Tape Options

BISCO® silicone tape options include:

- Acrylic Adhesive: acrylic-supported pressure-sensitive on one or two sides of the product.
- Silicone Adhesive: 0.051 mm (0.002 inches) unsupported silicone adhesive on only one side.
- Various widths can be produced depending on the product type. For cellular foams, the width cannot be less than the thickness of the product.

Product			BF-2005	BF-1005	HT-875	HT-805	HT-825	HT-845
Standard Color			Black	White, Gray, Black	Red, Black	Black, Gray, Red	Gray	Gray
Physical Properties (Foam Only)		**Standard**						
Thickness mm (in)			3.18-12.70 (0.125-0.500)	1.6-12.700 (0.063-1.000)	1.6-12.70 (0.063-0.500)	0.79-12.70 (0.031-0.500)	0.79-6.35 (0.031-0.250)	1.6-6.35 (0.063-0.250)
Density								
Density, kg/m³ (lb./ft³)	typical values specification values		175 (11) 160-240 (9.98-14.98)	192 (12) 156-316 (9.8-19.7)	240 (15) 215-327 (13.4-20.4)	352 (22) 300-473 (18.7-29.5)	384 (22) 336-528 (21-33)	448 (28) 369-553 (23.7-34.5)
Firmness								
Compression Force Deflection, kPa (psi)	typical values specification values	ASTM D1056 @ 25% Deflection	10 (1.5) 0-17 (0-2.5)	16.5 (2.4) 7-35 (1-5)	26 (3.8) 7-48 (1-7)	67 (9.7) 41-97 (6-14)	106 (15.3) 82-138 (12-20)	142 (20.6) 110-179 (16-26)
		ASTM D1056 @ 100°C (212°F)	6.9	1.7	1.6	2.4	2.6	1.8
Tensile Strength, kPa (psi) HT-1500-Tensile Fill/ Tensile Warp (ppi)		ASTM D412 ASTM D751	>138 (20PSI)	138 (20)	138 (20)	207 (30)	207 (30)	207 (30)
Tensile Elongation (% min.)		ASTM D412	60	60	20	45	45	45
Water Absorption (%)			1.4	1.4	0.5	0.5	0.5	0.5
Temperature Resistance								
Recommended Temperature Range Without Adhesive, °C (°F)			-55 to 200 (-67 to 392)					
Recommended Temperature Range With Acrylic Adhesive, °C (°F)			-40 to +149 (-40 to +300)					
Recommended Temperature Range With Silicone Adhesive, °C (°F)			-55 to 200 (-67 to 392)					
Shelf Life								
Foam with Acrylic Adhesive			18 months from date of application					
Foam with Silicone Adhesive			6 months from date of application					

Nomenclature Note:
Standard BISCO® products without adhesive are BF-2000, BF-1000, HT-800, HT-870, HT-820, and HT-840.

Example:
BF1000WHT .375x36x10 NT is the standard BISCO® product description
BF1005WHT .375x36x10 AT is the same product as above, but with adhesive

In the example above, the number 5 is added to the end of the product series name to denote that an adhesive is applied to the product. Both acrylic and silicone adhesives are available.

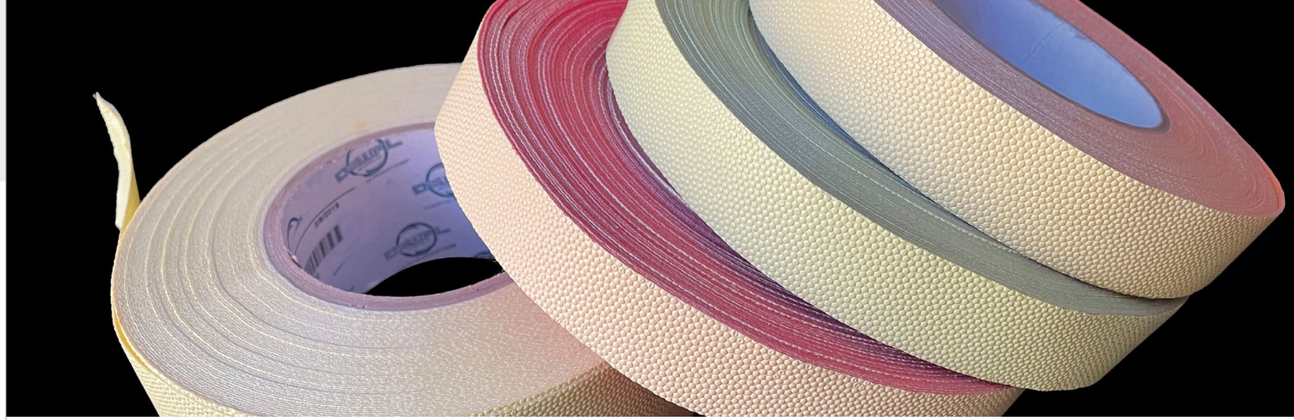
Rogers DeWAL® product line is the industry leading manufacturer of high-performance polymer films and pressure-sensitive PTFE and UHMW tape. DeWAL films are among the longest and widest splice free lengths in the industry.

PTFE Tapes

DeWAL® PTFE-backed tapes are offered with either a high temperature silicone or aggressive acrylic adhesive. Several products within this line are tensilized PTFE-backed versions, with increased tensile strength and decreased elongation properties. Other offerings include pigmented adhesive, with tensilized PTFE and etching on the backside of the skived PTFE film to promote self-bonding.

- Non-stick and low friction surface
- PTFE tapes with silicone have a high heat resistance, 250°C (500°F)
- Good insulation
- Excellent chemical resistance

Property	Test Method	204-5HD	204-2HD	215-5	204-3	215-2HD	101T
Backing Material		PTFE Film	PTFE Film	PTFE Film	PTFE Film	PTFE Film	PTFE Film
Backing Thickness, mm (in)		0.114 - 0.14 (0.0045 - 0.0055)	0.043 - 0.058 (0.0017 - 0.0023)	0.114 - 0.14 (0.0045 - 0.0055)	0.069 - 0.084 (0.0027 - 0.0033)	0.043 - 0.058 (0.0017 - 0.0023)	0.04 - 0.06 (0.0017 - 0.0023)
Adhesive System		Silicone	Silicone	Acrylic	Silicone	Acrylic	Silicone
Adhesive Thickness, mm (in)		0.03 - 0.046 (0.0012 - 0.0018)	0.03 - 0.046 (0.0012 – 0.0018)	0.03 - 0.046 (0.0012 - 0.0018)	0.069 - 0.084 (0.0027 - 0.0033)	0.03 - 0.046 (0.0012 - 0.0018)	0.03 - 0.05 (0.0012 - 0.0018)
Adhesion, g/cm (oz./in)	ASTM-D1000	413 - 524 (37 - 47)	279 - 446 (25 - 40)	390 - 647 (35 - 58)	457 - 558 (41 - 50)	279 - 558 (25 - 50)	279 - 413 (25 - 37)
Tensile Strength, MPa (PSI)	ASTM-D3759	90 - 108 (13,069 - 15,702)	96 - 133 (13,909 - 19,269)	39 - 52 (5,709 - 7,506)	32 - 62 (4,716 - 8,933)	96 - 133 (13,909 - 9,269)	42 - 58 (6,108 - 8,435)
Elongation, %	ASTM-D3759	159 - 246	116 - 182	365 - 536	344 - 494	116 - 182	344 - 459
Dielectric Strength, V/Mil	ASTM-D149	3,072 - 4,506	5,200 - 6,680	2,032 - 3,120	1,785 - 2,305	5,200 - 6,680	3,040 - 4,267
Maximum Operating Temperature, C° (F°)		500	500	500	500	500	500
U.L. Approval		NA	NA	NA	NA	NA	Flame 510 Retardant/Cold Resistant



Thermal Spray Tapes

DeWAL® Thermal Spray Masking Tapes offer many varieties to meet the individual needs of spray shops. The tapes are conformable, with an aggressive silicone adhesive that will remove cleanly after spraying. Many of the tapes are designed as a one-step process that will withstand the harsh environment of the thermal spray process.

- Excellent protection during grit blasting
- High temperature masking
- Clean removal after spraying
- Conforms easily to parts with complex geometries
- Double ply, single ply, glass cloth, foil and HVOF options available

Property	Test Method	504	500	410	497
Backing Material		White Silicone Rubber & Glass Cloth Combination	White Silicone Rubber/ Glass Cloth	Blue Silicone Rubber/ Glass Cloth	White Silicone Rubber/ Glass Cloth
Backing Thickness, mm (in)			0.178 - 0.229 (0.007 - 0.009)	0.178 - 0.229 (0.007 - 0.009)	0.178 - 0.229 (0.007 - 0.009)
Overall Thickness, mm (in)		0.56 - 0.71 (0.022 - 0.028)	0.0274 - 0.35 (0.0108 - 0.0138)	0.242 - 0.318 (0.0095 - 0.0125)	0.242 - 0.318 (0.0095 - 0.0125)
Adhesive System		Silicone	Silicone	Silicone	Silicone
Adhesion, g/cm (oz./in)	ASTM-D1000	525 - 636 (47 - 57)	480 - 603 (43 - 54)	335 - 670 (30 - 60)	379 - 602 (34 - 54)
Approvals		PMC-4630	PMC-4630 & 4295, OMAT 2/96M, GE C10-012	PMC-4416, OMAT 2/96L, GE C10-012, MIL Spec-Y	PMC-4458, GE C10-012, OMAT 2/96L

ROGERS CORPORATION

www.rogerscorp.com

Product selection and design tools:

BISCO® Product Properties Guide

BISCO® Application Design Tool

Compression Force Deflection Curve Tool

ARLON® Product Properties Guide

Additional Information and Samples

Rogers and its global converter network provide supply chain and logistic support for serial production programs.

A network of global manufacturing sites and converter networks provide resiliency in the event of supply chain shocks.

North America
Elastomeric Material Solutions
Toll Free: 800.935.2940
solutions@rogerscorp.com

BISCO® Silicone Foams
Carol Stream, IL, USA
Tel: 630.784.6200
Fax: 860.928.3906

DeWAL® Tapes
Narragansett, RI, USA
Tel: 401.789.9736

ARLON® Silicones
Bear, DE, USA
Tel: 302.384.2100

Europe
Rogers BV
Evergem, Belgium
Tel: 32.9.2353611
Fax: 32.9.2353658

Asia
Rogers Japan, Inc.
Tokyo, Japan
Tel: 81.3.5200.2700
Fax: 81.3.5200.0571

Rogers Korea, Inc.
Gyonggido, Korea
Tel: 82.31.360.3622
Fax: 82.31.360.3623

Rogers Taiwan, Inc.
New Taipei City, Taiwan
Tel: 886.2.8660.9056
Fax: 886.2.8660.9057

Rogers Technologies Singapore Inc.
Singapore
Tel: 65.6747.3521
Fax: 65.6747.7425

Rogers Technologies, Co.
Shanghai, China
Tel: 86.21.6217.5599
Fax: 86.21.6267.7913

Rogers Technologies, Co.
Shenzhen, China
Tel: 86.755.8236.6060
Fax: 86.755.8236.6123

Rogers Technologies, Co.
Suzhou, China
Tel: 86.512.6258.2700
Fax: 86.512.6258.2808