Technical Bulletin

Elastomeric Material Solutions
UL Industry Specifications

SPECS	ROGERS MATERIAL SOLUTIONS	PRODUCT TYPE	NOTES
FLAMMABILITY			
UL94 V-0	BISCO® BF-1000 & 2000	Silicone Foam	https://iq2.ulprospector.com/en/login BISCO File: E83967 PORON File: E20305
	BISCO HT-800, 820, 840 & 870		
	BISCO RS-800, 820, 840 & 870	Silicone Sponge	
	BISCO HT-6360	Solid Silicone	
	PORON® 4701-V0-M-25	Polyurethane Foam	
UL94 V-1	BISCO EC-2130	Solid Silicone	
UL94 HB	ARLON® 27 Compound	Silicone Compound	
	ARLON 57 Compound		
	BISCO HT-6220	Solid Silicone	
	BISCO RS-800, 820, 840 & 870	Silicone Sponge	
UL94 HBF	PORON 4701-30-15	Polyurethane Foam	
	PORON 4701-37-14		
	PORON 4701-40-15		
	PORON 4701-41-15		
	PORON 4701-50-15		
	PORON 4701-60-15*		
	PORON 4790-79-12		
	PORON 4790-79-12		
	PORON 4790-79-15*		
	PORON 4790-92-12		
	PORON 4790-92-15	* UL testing in progress	
UL94 HF-1	BISCO BF-2000	Silicone Foam	
	BISCO HT-870		
GASKETING, SEALING, INDUSTRIAL, & ELECTRICAL ENCLOSURES			
UL157	BISCO HT-800, 820, 840 & 870	Silicone Foam	https://iq2.ulprospector.com/en/login BISCO File: JMLU2.MH13898 PORON File: JMST2.MH15464
	BISCO RS-800, 820, 840 & 870	Silicone Sponge	
UL50/UL50E	PORON 4701-30, 40, 50 & 60	Polyurethane Foam	
	PORON AquaPro® 4701-37 & 41		
	PORON 4790-79 & 92		
	BISCO HT-800, 820, 840 & 870	Silicone Foam	
UL508	PORON 4701-15, 30, 40, 50 & 60	Polyurethane Foam	
	PORON AquaPro 4701-37 & 41		
	PORON 4790-79 & 92		
	BISCO HT-800, 820, 840 & 870	Silicone Foam	
	BISCO RS-800, 820, 840 & 870	Silicone Sponge	
UL1598	BISCO HT-800, 820, 840 & 870	Silicone Foam	

SPECS		ROGERS MATERIAL SOLUTIONS	PRODUCT TYPE	NOTES
GASKETING, SEALING, INDUSTRIAL, & ELECTRICAL ENCLOSURES, cont'd				
UL Enclosure Designations	Type 2	BISCO HT-800, 820, 840 & 870	Silicone Foam	https://iq2.ulprospector.com/en/login BISCO File: JMLU2.MH13898 PORON File: JMST2.MH15464
	Type 3	BISCO HT-800, 820, 840 & 870		
	Type 3X	BISCO HT-800, 820, 840 & 870		
	Type 3R	BISCO HT-800, 820, 840 & 870		
	Type 3RX	BISCO HT-800, 820, 840 & 870		
	Type 3S	BISCO HT-800, 820, 840 & 870		
	Type 3SX	BISCO HT-800, 820, 840 & 870		
	Type 4	BISCO HT-800, 820, 840 & 870		
	Type 4X	BISCO HT-800, 820, 840 & 870		
	Type 5	BISCO HT-800, 820, 840 & 870		
	Type 6	BISCO HT-800, 820, 840 & 870		
	Type 6P	BISCO HT-800, 820, 840 & 870		
	Type 12	BISCO HT-800, 820 & 870		
	Type 12K	BISCO HT-800, 820 & 870		
	Type 13	BISCO HT-800, 820 & 870		
INSULATING TAPES-COMPONENT				
UL510A E179854		DeWAL® DW101T	PTFE Tape	Flame Retardant/Cold Resistant 180°C (356°F)
		DW204-2HD		
		DW204- & 204-3HD		
		DW204-5 & 204-5HD		
		DW244-2HD		
		DW230NA	Unsintered PTFE	Flame Retardant 260°C (500°F)
		DW304-1, 304-2 & 304-5	Kapton® Tape	Flame Retardant/Cold Resistant 180°C (356°F)
		DW469	Glass Cloth	Flame Retardant 260°C (500°F)
MISCELLANEOUS TAPES				
UL510A E515707		DW423-10	UHMW-PE Tape	Flame Retardant

SPECS	ROGERS MATERIAL SOLUTIONS	PRODUCT TYPE	NOTES
FOOD & BEVERAGE			
FDA 21CFR177.2600	ARLON 99C92R125, 99C92R250	Silicone Sponge	https://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfcfr/CFRSearch.cfm?CFRPart=177
	ARLON FDA Medium	Silicone Sponge	
	BISCO BF-1000 White, HT-800 Gray, BISCO MF-1 all grades White, MS-80 & 96 White	Silicone Foam	
	BISCO HT-1204, 1250, 1260 & 1270	Solid Silicone	
	ARLON 3018, 4018, 5018, 6018, 7018 & 8018FDA		
	kSil® GP30, 40, 50, 60, 70, & 80		
	kSil PL30, 40, 50, 60 & 70		
	kSil HT40, 50, 60 & 70		
	kSil US30, 40, 50, 60 & 70		
FDA 21CFR177.1550	DeWAL DW200, 202, 212,219, 219AE, 219C & 2000	PTFE Film	
	DeWAL DW950 Series	Sealing Cap LIner	
FDA 21CFR177.1520	DeWAL DW401, 402, 402B, 405BNC, 406BF & 406WF	UHMW-PE Film	
	DeWAL DW750-10	Pressure Sensitive Tape	
NSF 51/61	BISCO HT-1240, 1250, 1260 & 1270	Solid Silicone	https://iq2.ulprospector.com/en/login BISCO File MH622330

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SPECIFICATION	DEFINITION
FLAMMABILITY	
UL94 V-0 & V-1	**Vertical Burn Test**-measures the self-extinguishing time of a vertically oriented polymer V-0 rated material must self-extinguish within 10 seconds with no dripping. V-1 rated material must self extinguish within 30 seconds with no dripping
UL94 HB & HBF	**Horizontal Burn Test-** slow burning on a horizontal swatch Material is rated HBF if the burning rate does not exceed 40 mm/min over a 100 mm span. Materials with a thickness burning time 3-13mm are classified as HB if they do not have a burning rate exceeding 40mm/min.
UL94 HF-1	**Horizontal Burn Test-** more stringent than HBF Burning stops within 2 seconds; afterglow less than 30 seconds; no burning drips allowed.
GASKETING, SEALING, INDUSTRIAL, & ELECTRICAL ENCLOSURES	
UL157	**Basic Standard for Gaskets & Seals-**specification includes critical safety tests such as tensile/ elongation, accelerated aging, compression set, low temperature, hardness, immersion, detergent/cleaner test, bursting strength, and several others.
UL50/UL50E	**UL 50E-** most common standard for electrical enclosures This certification is given to enclosures as well as gasketing material. Materials are rated either continuous compression (including oil immersion) or periodic re-compression.
UL508	**Industrial Control Equipment-**specification relates to equipment rated 100 volts or less used for starting, stopping, regulating, controlling, or protecting electrical motors.
UL1598	**National Safety Standard for Lighting/Luminaries-**for use within North America It includes safety testing for temperature, shock and reliable mounting methods, among other criteria.
NEMA Ratings	**National Electrical Manufacturer's Association-**ratings are numbered from 1-13 Common ratings for indoor applications are 12 & 13. Common ratings for outdoor applications are 3, 4, 4X, 6 & 6P. NEMA focuses on voluntary standardization activities not requiring third party testing leaving compliance completely to the manufacturer.
INSULATING TAPES-COMPONENT	
UL510A E179854	**Specification for tapes used for electrical insulation of joints and wire splicing** These tapes may have constructional features designed to achieve specific performance properties that align with individual applications. The end-use product manufacturer selects the functional uses that match the demands of the applications with the tape's attributes.
MISCELLANEOUS TAPES	
UL510A E515707	**Specification for tapes intended for applications requiring specific performance of the tape** Polyethylene terephthalate (PET), woven, without adhesive or with double-sided adhesive, and metal foil-backed tapes are miscellaneous tapes that have variations in constructional features not intended for use in electrical insulation in contact with live parts without additional suitable insulation. End-use product manufacturers can select the functional uses that match the demands of the applications with the attributes of the tape.

SPECIFICATION	DEFINITION
FOOD & BEVERAGE	
FDA **21CFR177.2600**	**Part 177** indicates indirect food additives, specifically polymers. **Section 177.2600** is specifically for rubber articles intended for repeated use; this refers to rubber materials used in producing, manufacturing, and packaging food products.
FDA **21CFR177.1550/1520**	**Part 177** indicates indirect food additives, specifically polymers. **Section 17.1550** focuses on perfluorocarbons such as PTFE Films. **177.1520** focuses on olefin polymers such as UHMW-PE films.
NSF 51/61	**NSF 51** is the standard for plastic materials and components used in food equipment. **NSF 61** is the standard for drinking water system components and applies to materials and products used in contact with drinking water.
OTHER	
UL	**Underwriters Laboratories**-requires testing and certifies an enclosure to achieve a specific rating.
IEC **International Electrotechnical Commission**	**International Standard for Ingress Protection Ratings**-focuses on enclosures/devices and assigns an IP-XX code to specify the level of protection required. There are two numerals in each code representing the protection level from dust and water.

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