

Z-FLEX® MULTILAYER ALUMINIZED FABRICS



The Z-Flex® Multilayer Aluminization (MLA) process uses the latest aerospace thin film deposition technology to apply fine, highly reflective aluminum particles to both sides of a high temperature polymer film barrier. The resulting Z-Flex film is then chemically and mechanically bonded to a premium substrate fabric using a proprietary adhesive that is activated with both heat and pressure. The result is a finished fabric with superior bonding which will not delaminate under the most demanding flexing conditions. Z-Flex fabrics provide the highest achievable level of radiant reflectivity, chemical and moisture resistance, and thermal protection.

Applications: Fire Protection Systems, Fire & Proximity Suits for Civil & Military Use, Protective Apparel for Emergency Responders, Industrial High Temperature Safety Apparel, Removable Insulation Systems, Heat Shields & Fire Barriers, Performance Automotive Applications, Forest Fire Shelters & Specialty Applications, Custom Fabrications

Superior Protection

Reflects up to 95% of radiant heat

Z-Flex aluminization provides protection for a longer period of time than any competitive aluminized fabric, far outperforming the leading competitive aluminization during ASTM F1939 radiant heat testing. Z-Flex protects from radiant temperatures up to 3000°F (1650°C).

Unmatched Durability

Will not de-laminate under even the most demanding conditions

Z-Flex features an advanced thermo-set polymer bonding system that is inherently fire retardant. Extensive testing has proven that our adhesive withstands higher temperatures for longer periods of time than the adhesive used on alternative aluminized fabrics.

Improved Comfort

Bonding system allows for flexibility and range of motion

Newtex's proprietary bonding system allows for greater flexibility between the aluminization and base fabric, allowing for a greater range of motion and more comfortable and flexible personal protective equipment (PPE).

Testing & Certifications

Radiant Heat	ISO 6942, EN 366, ASTM F1939
Convective Heat	ISO 9151, EN 367
Limited Flame Spread	ISO 15052, EN 532
Molten Metal	ISO 9185, EN 348, ASTM F955
Abrasion & Tear Resistance	ISO 13937, EN 388
Firefighting	Z-Flex Silver P-202 fabric is NFPA 1971:2013 component certified

Z-Flex® Aluminum Foil: A more economical alternative for radiant heat protection

Z-Flex Aluminum Foil (AF) Lamination offers the same radiant heat protection as Z-Flex Multilayer Aluminization (MLA) at a lower cost. Z-Flex MLA offers greater durability and a better flex-bond, but Z-Flex AF is typically suitable for applications where the fabric will not be subjected to repetitive stretching, twisting, or vibration.

Style	Weight		Thickness	
	oz/yd ²	g/m ²	mils	mm

Zetex® Texturized Glass

Z-Flex A-302	13.0	441	23	0.58
Z-Flex A-601	21.0	712	31	0.81
Z-Flex A-801	27.0	915	48	1.22
Z-Flex A-802	27.0	915	40	1.02

Z-Fil™ Filament Glass

Z-Flex F-407	15.0	509	15	0.38
Z-Flex F-628	8.0	271	8	0.20
Z-Flex F-781	11.0	373	13	0.33
Z-Flex F-824	27.0	915	24	0.61

Z-Sil™ Silica

Z-Flex F-605 Silica	22.0	746	28	0.71
Z-Flex F-1105 Silica	34.0	1153	46	1.17

Para-Aramid

Z-Flex K-270 (Spun)	10.0	339	21	0.53
Z-Flex K-570 (Core Spun)	19.0	644	57	1.45
Z-Flex K-700 (Core Spun)	22.0	746	60	1.52

* Z-Flex P-202 is also available as a breathable micro-perforated fabric called Z-Flex Air. Visit newtex.com/air to learn more. Both versions of the fabric are NFPA 1971:2013 component certified. ** Z-Flex AF A-600 meets the requirements of Military Specification MIL-C-20079H.

Zetex® Texturized Glass: Highly texturized fiberglass fabrics offer great value and superior insulation to protect from extreme heat and to prevent burn-through.

Z-Fil™ Filament Glass: Premium 6 and 9 micron non-texturized fiberglass fabrics are lightweight and flexible. They provide the best value for environments in which radiant heat protection is necessary but convective and conductive heat protection is less of a concern.

Z-Sil™ Silica: Z-Sil is composed of more than 96% silica for superior temperature resistance. Z-Sil is lightweight and flexible and protects from temperatures up to 2300°F (1260°C).

Spun & Core Spun Aramid: Spun aramid is strong and abrasion resistant. It offers superior wear-ability. Core Spun (CS) aramid fabrics are made by covering a fiberglass core yarn with a para-aramid sheath to create a strong and abrasion resistant fabric with added insulation and thermal protection.

Z-Flex® Silver™: Z-Flex Silver fabrics feature a 3D Mock-Knit™ weave structure that provides the comfort of a knit and the strength and insulation of a woven fabric. Z-Flex Silver fabrics were engineered specifically for specialized fire fighting applications including Aircraft Rescue Fire Fighting (ARFF).

O-PAN / Aramid Blends: These fabrics are woven from a unique yarn made from a proprietary blend of oxidized PAN and para-aramid fibers. O-PAN/Aramid fabrics offer excellent fire resistance, high strength and wear-ability, and low shrinkage.

FR Rayon: Rayon is a natural, cellulose based fiber. In addition to being a comfortable and wearable fabric, Fire Retardant Rayon offers excellent thermal protection and a flame resistant finish.

Z-Flex® Aluminum Foil: Z-Flex AF is a cost effective substitute for Z-Flex MLA in stagnant applications.



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Style	Weight		Thickness	
	oz/yd ²	g/m ²	mils	mm

Z-Flex® Silver™

Z-Flex P-202 PBI/Aramid *	7.4	251	24	0.61
Z-Flex K-252 Para-Aramid	10.0	339	31	0.79

O-PAN / Aramid Blends

Z-Flex O-250 Twill	9.4	319	18	0.46
Z-Flex O-310 O-PAN/Aramid	10.0	339	24	0.61
Z-Flex O-422 O-PAN/Aramid	14.3	485	45	1.14
Z-Flex O-500 O-PAN/Aramid	16.0	542	42	1.07
Z-Flex O-505 O-PAN/Aramid	16.0	542	42	1.07

Rayon

Z-Flex R-480 Herringbone	15.0	509	30	0.76
Z-Flex R-540 Herringbone	17.0	576	36	0.91

Aluminum Foil

Z-Flex AF A-600 **	20.5	695	35	0.89
Z-Flex AF F-628	8.0	271	8	0.20
Z-Flex AF A-801	27.0	915	60	1.52
Z-Flex AF A-1201	40.0	1356	75	1.90

For nearly 40 years, Newtex has been a pioneer and leading global producer of high performance materials and engineered solutions for thermal management and fire protection. Headquartered outside of Rochester, New York, Newtex is an ISO 9001:2008 certified, vertically integrated manufacturer of an impressive portfolio of heat and fire resistant fabrics, tapes, personal protective apparel, and custom high temperature solutions. We are a minority owned, veteran-managed business that has proudly served the US Armed Forces and leading global industries since 1978. Newtex products are proudly made in the USA.

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