

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.

| 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 |

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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For nearly 40 years, Newtex has been a pioneer and leading global producer of high temperature materials and engineered solutions for thermal management and fire protection. Headquartered in Rochester, New York, Newtex is an ISO 9001:2015 certified, vertically integrated manufacturer of an impressive portfolio of textiles and fabricated systems for insulation and fire containment. Globally recognized textile brands include ZetexPlus®, Z-Flex®, and Z-Block™. Newtex is a minority owned, veteran-managed business that has served the US Military and leading global industries since 1978. Newtex products are proudly made in the USA.

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