

## HIGH TEMPERATURE MATERIALS FOR INSULATION SYSTEMS

Newtex manufactures a comprehensive line of innovative, high temperature fabrics, tapes, and tubings for producing removable insulation, expansion joints, and other fabricated systems. Newtex Performance Materials have excellent cutting, sewing, and handling properties, support temperatures up to 2000°F (1095°C), and can minimize heat transfer while resisting weather, moisture, chemicals, and abrasion. Our comprehensive line of high temperature textiles provide a complete solution for fabricating removable insulation blankets, pads, and covers for use in a broad range of applications and operating conditions. We can help you to find the right product or can design a custom solution for your application.

**Common Applications:** Removable Insulation Blankets, Pads and Covers, Fabric Expansion Joints, Tube Seals, Lagging, Fire Barriers, Thermal Curtains, Encapsulation, Pipe Insulation, and Cable & Wire Insulation

### Hot Side Materials [Facing]

Supporting temperatures to 2000°F, our facing materials provide an initial thermal barrier and protect the insulation layer from abrasion.

Fabric	Features	Peak Temperature *		Weight		Width	
		°F	°C	oz/yd <sup>2</sup>	g/m <sup>2</sup>	inches	cm
Zetex *	Essential thermal protection to 1300°F	1300°F	700°C	8.5 - 100	288 - 3391	40, 60, 72	102, 152, 183
Zetex (wire)	Added wear resistance and heat dissipation to 1300°F	1300°F	700°C	24 - 35	814 - 1187	60	152
ZetexPlus	Essential thermal protection to 2000°F	2000°F	1500°C	9.5 - 68	322 - 2306	40, 60, 72	102, 152, 183
ZetexPlus (wire)	Added wear resistance and heat dissipation to 2000°F	2000°F	1500°C	25 - 37	848 - 1255	60	183
Z-Sil	High heat, chemical and wear resistance to 2300°F	2300°F	1260°C	18, 36	610, 1221	36	91

\* Heat cleaned (HC) premium grade Zetex in 8.5, 12, and 18 oz weight are MIL-C-20079 compliant.

### Cold Side Materials [Exterior Jacketing]

Our outer layer fabrics offer superior resistance to chemicals, heat, abrasion, and moisture. They are used to protect insulated pipes and equipment from environmental conditions and surrounding workers and facilities from heat and fire.

Fabric	Features	Peak Temperature *		Weight		Width	
		°F	°C	oz/yd <sup>2</sup>	g/m <sup>2</sup>	inches	cm
Z-Tuff Silicone	Weather, water, and abrasion resistance	500°F	260°C	15 - 32	509 - 1085	60	152
Z-Tuff PTFE	Tougher, superior chemical resistance	600°F	315°C	12.5, 18	424, 610	60	152
Z-Block	Fire, smoke, and weather resistance	1800°F	980°C	15 - 105	509 - 2102	60	152
Z-Flex Multilayer Aluminized	Heat reflection, chemical and moisture resistance, laminated film remains bonded when flexed	3000°F **	1650°C **	8.5 - 27	288 - 915	40, 58	102, 142
Z-Flex Aluminum Foil	Heat reflection, chemical and moisture resistance	3000°F**	1650°C **	20, 27	678, 915	40, 60	102, 152
Z-Shield Silver	Economical fabric for heat reflection	1000°F	540°C	34	1153	60	152
Z-Shield Silver (wire)	Wire insertion adds tear and puncture resistance	1000°F	540°C	35	1187	60	152

\*Peak Temperature refers to the material's heat tolerance during direct contact.  
\*\*Z-Flex® film reflects radiant temperatures up to 3000°F (1650°C). It cannot tolerate direct contact with temperatures over 350°F (175°C).

**Insulation Materials**

Zetex glass mat protects against heat gain or loss on pipes and equipment. The mats are made from chopped strand fibers needled together without the use of organic binders, so they will not outgas or deteriorate in harsh conditions.

Fabric	Features	Peak Temperature		Weight		Width		Thickness	
		°F	°C	oz/yd <sup>2</sup>	g/m <sup>2</sup>	in.	cm	mils	mm
Zetex Glass Mat	High Heat Performance	1000°F	540°C	29, 58, 115	983, 1967, 3899	60	152	25, 50, 100	0.6, 1.2, 2.5

**Lagging and Insulation Facings**

Newtex's premium lagging and facing materials are used to provide thermal and acoustic insulation, encapsulation, and resistance to oil, water, and chemicals.

Fabric	Features	Peak Temperature		Weight		Width	
		°F	°C	oz/yd <sup>2</sup>	g/m <sup>2</sup>	inches	cm
Zetex*	All purpose fabric, optional oil and water resistance	1300°F	700°C	8.5, 12, 18	288, 407, 610	40, 60, 72	102, 152, 183
ZetexPlus	All purpose fabric with vermiculite high temperature coating	2000°F	1095°C	8.5, 12, 18	288, 407, 610	40, 60, 72	102, 152, 183
Zetex Rewettable	Water-activated adhesive for ease of application and hardened paint-able surface	1300°F	700°C	14.5, 22	492, 746	60	152
Z-Shield Hullboard	Flame, moisture, and mildew resistance, durability	1000°F	540°C	13.5	458	24, 36, 48	61, 91, 122
Z-Flex Aluminum Foil	Heat reflection, chemical and moisture resistance	1000°F	540°C	18, 24	610, 814	40, 60	102, 152
Z-Fil Filament Fabrics	Acoustic insulation facing	1000°F	540°C	6, 12, 13, 26	203, 407, 441, 882	40, 48, 60	102, 122, 152

\* Heat cleaned Zetex meets MIL-C-20079 and MIL-DTL-24244 requirements.

**Tapes and Tubing**

Zetex tapes are ideal for encapsulation, lagging, and insulation and can be wrapped around water and steam pipes, hydraulic lines, and auto exhaust. Zetex tubing can be used to protect hydraulic or electrical lines, and as cable and wire insulation.

Fabric	Features	Peak Temperature		Weight		Width	
		°F	°C	oz/yd <sup>2</sup>	g/m <sup>2</sup>	inches	cm
Zetex Tape	Thermal protection for pipes and exhaust	1300°F	700°C	13 - 115	441 - 3899	½ - 8	1.3 - 20.3
ZetexPlus Tape	Thermal protection with vermiculite high temperature coating for pipes and exhaust	2000°F	1095°C	13 - 115	441 - 3899	½ - 8	1.3 - 20.3
Rewettable Tape	Hardened, paint-able surface	1300°F	700°C	14.5, 22	492 - 746	1 - 6	2.5 - 15.2
Z-Flex Foil Tape	Heat reflecting wrap for insulation & lagging	1000°F	540°C	20	678	1.5 - 3	3.8 - 7.6
Zetex Tubing	Thermal protection for cable and wiring	1300°F	700°C	N/A	N/A	¼ - 4 *	0.6 - 10.2*
ZetexPlus Tubing	Thermal protection for cable and wiring	2000°F	1095°C	N/A	N/A	¼ - 4 *	0.6 - 10.2*

\* Indicates inside diameter for Zetex Tubing.



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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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