

**SILICONE RUBBER INSULATED THERMOCOULE WIRE:**



*Silicone Rubber Insulation provides superior flexibility, excellent softness, resistant to moisture and can be immersed in water for a longer period of time without much effect on its electrical & mechanical properties. Wide operating temperature range from -55 °C to 200 °C*

APPLICATIONS	PRODUCT FEATURES
<ul style="list-style-type: none"> <li>• Medical Equipments</li> <li>• Food Equipments</li> <li>• Pharmaceuticals</li> <li>• Laboratories</li> <li>• Thermocouple Circuits</li> <li>• General Industry</li> <li>• Temperature sensors</li> </ul>	<ul style="list-style-type: none"> <li>• Continuous use up to 200 °C</li> <li>• Single Exposure up to 260 °C</li> <li>• Excellent Flexibility</li> <li>• Excellent softness</li> <li>• Resistant to moisture</li> <li>• Resistant to oil, solvent &amp; chemicals</li> <li>• Continuous use up to 105 °C</li> </ul>

**PRODUCT SPECIFICATIONS:**

<b>Conductor</b>	Solid or stranded thermocouple wires from 12 AWG to 24 AWG (2.44mm to 0.51mm)
<b>Core Insulation</b>	Extruded Silicone Rubber
<b>Construction</b>	Parallel Conductors
<b>No. of Pair</b>	1
<b>Inner Sheath</b>	Silicone Rubber
<b>Armored (Optional)</b>	WIRE ARMORED or SS METAL OVERBRAID
<b>Color Coding</b>	Confirms to ANSI MC 96.1 (International Color Code Available), Refer Color Code

- Other sizes in SWG and also different construction in other stranded sizes are available on request
- Optional construction of twisted conductors & shielding
- Duplex construction are also available
- Optional Color coding: IEC 60584 – 3, BS 1843, DIN 13711, JIS C 1610 – 1981, NFC 42334 as per requirement

TYPE OF TC	Metal Alloy + ve leg	Metal Alloy – ve leg	Thermal Tolerance
J	Fe	Cu Ni	ASTM E 230 – ANSI MC 96.1 & IEC EN 60584 - 2
K	Ni Cr	Ni Al	ASTM E 230 – ANSI MC 96.1 & IEC EN 60584-2
T	Cu	Cu Ni	ASTM E 230 – ANSI MC 96.1 & IEC EN 60584- 2
E	Ni Cr	Cu Ni	ASTM E 230 – ANSI MC 96.1 & IEC EN 60584 - 2
N	Ni Cr Si	Ni Si	ASTM E 230 – ANSI MC 96.1 & IEC EN 60584 - 2

- Thermocouple wires are normally supplied to meet tolerance above 0 °C. If material is reqd. to meet tolerance below 0 °C, the purchaser should clarify the same in Purchase Order. Special selection of material is reqd.
- Initial calibration & Tolerance suggested, its requirement should be discussed well in advance before placing the order.
- R & S extension wires are also manufactured with copper as positive and different nickel alloys respective for R & S.
- B Type extension wire is manufactured with Copper as positive & negative for transition below 100 °C



**ELTEC CABLES & INSTRUMENTS**

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EMPOWERING PROCESS MANAGEMENT



TYPE OF CABLE	Wire Size AWG	Type of Wire	Type K	Type J	Type T	Type N	Type E
EXTRUDED SILICONE RUBBER INSULATED & SHEATHED	7 * 32	Stranded	Kt-7*32 SR	Jt-7*32SR	Tt-7*32SR	Nt-7*32SR	Et-7*32SR
	24	Solid	Kt-24 SR	Jt-24SR	Tt-24SR		
	22	Solid	Kt-22 SR	Jt-22SR			
	20	Solid	Kt-20 SR	Jt-20SR			
	18	Solid	Kt-18 SR	Jt-18SR			
	16	Solid	Kt-16 SR	Jt-16SR			
	14	Solid	Kt-14 SR	Jt-14SR			
	12	Solid	Kt-12 SR	Jt-12SR			

- SR – INSULATION & JACKET OF PVC
- Duplex construction are suffix with D i.e. KtD \_\_\_\_\_
- Extension & Compensating Grade Wire are suffix with e & c respectively.

**Initial Calibration Tolerances as per ASTM E230 and ANSI MC96.1**

**Tolerance-Reference Junction 0°C (32 °F)**

Thermocouple Designation	Temperature Range °C ( °F)	Standard Grade Limits °C ( °F) whichever is greater	Special Grade Limits °C( °F) Whichever is greater
<b>Thermocouple Grade Wires</b>			
Jt	0 (32) to 750 (1382)	±2.2 (4.0) or ±0.75%	±1.1 (2.0) or 0.4%
Kt	0 (32) to 1250 (2282) -200 (-328) to 0 (32)	±2.2 (4.0) or ±0.75% ±2.2 (4.0) or ±2%	±1.1 (2.0) or 0.4% -----
Tt	0 (32) to 350 (662) -200 (-328) to 0 (32)	±1.0 (1.8) or ±0.75% ±1.0 (1.8) or ±1.5%	±0.5 (1.0) or 0.4% -----
Et	0 (32) to 900 (1652) -200 (-328) to 0 (32)	±1.7 (3.0) or ±0.5% ±1.7 (3.0) or ±1%	±1.0 (1.8) or 0.4% -----
Nt	0 (32) to 1300 (2372) -270(-454) to 0 (32)	±2.2 (4.0) or ±0.75% ±2.2 (4.0) or ±2%	±1.1 (2.0) or 0.4% -----
<b>Extension / Compensating Grade Wires</b>			
Jx	0 (32) to 200 (400)	±2.2 (4.0)	
Kx or Kc	0 (32) to 200 (400)	±2.2 (4.0)	
Tx	32 (0) to 100 (212)	±1.0 (1.8)	
Ex	0 (32) to 200 (400)	±1.7 (3.1)	
Nx or Nc	0 (32) to 200 (400)	±2.2 (4.0)	
Rc or Sc or Bc	0 (32) to 200 (400)	±5.0 (9.0)	



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