Thermocouple Grade

- Maximum Temperature Range
  32 to 2642°F
  0 to 1450°C

- Limit of Error
  (whichever is greater)
  Standard: 1.5°C or 0.25%
  Special: 0.6°C or 0.1%

- Comments, Bare Wire Environment:
  Oxidizing or Inert: Do Not Insert Metal Tubes;
  Beware of Contamination; High Temperature

- Temperature in Degrees °F Reference Junction at 32°F

- Reference Tables
  Revised Thermocouple
  ITS-90
  N.I.S.T.
<table>
<thead>
<tr>
<th>Temperature (°C)</th>
<th>Platinum-13% Rhodium Voltage (mV)</th>
<th>Thermocouple Grade</th>
<th>MAXIMUM TEMPERATURE Ranges</th>
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<td>2.339</td>
<td>1.5°C or 0.25%</td>
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**Specifications:**
- Platinum-13% Rhodium Thermocouple
- Operating Temperature Range: -175°C to 1250°C
- Maximum Temperature Range: 1.5°C or 0.25%

**Comments:**
- Do Not Insert to Metal Tubes
- Beware of Contamination
- High Temperature
**Thermocouple Type Reference Tables**

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<th>°F</th>
<th>2000</th>
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<th>2060</th>
<th>2090</th>
<th>2120</th>
<th>2150</th>
<th>2180</th>
<th>2210</th>
<th>2240</th>
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</table>

**Platinum-13% Rhodium vs. Platinum**

**LIMITS OF ERROR**

| 1.0°C or 0.2% |

**REFERENCES**

- Oxidizing or Inert; Do Not Insert in Metal Tubes;
- Beware of Contamination; High Temperature

**TEMPERATURE IN DEGREES °F REFERENCE JUNCTION AT 32°F**

<table>
<thead>
<tr>
<th>°F</th>
<th>1410</th>
<th>1420</th>
<th>1430</th>
<th>1440</th>
<th>1450</th>
<th>1460</th>
<th>1470</th>
<th>1480</th>
</tr>
</thead>
</table>

**SPECIAL:**

- Oxidizing or Inert; Do Not Insert in Metal Tubes;
- Beware of Contamination; High Temperature

**REFERENCE N.T.S**

- Monograph 175
- Revisited to ITS-90

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**Z-230**
**Revised Thermocouple Reference Tables**

**N.I.S.T. Monograph 175**
Revised to ITS-90

**Thermocouple Grade**
Platinum-13% Rhodium vs. Platinum

**Extension Grade**

---

<table>
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<th>°F</th>
<th>0</th>
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<th>3</th>
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<th>5</th>
<th>6</th>
<th>7</th>
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**Thermoelectric Voltage in Millivolts**

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### Maximum Temperature Range

<table>
<thead>
<tr>
<th>Thermocouple Grade</th>
<th>Extension Grade</th>
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<tbody>
<tr>
<td>32 to 2642°F</td>
<td>0 to 1450°C</td>
</tr>
</tbody>
</table>

### Limits of Error

| Standard: 1.5°C or 0.25% |
| Special: 0.6°C or 0.1% |

### Comments, Bare Wire Environment

- Oxidizing or inert; Do not insert in metal tubes;
- Beware of contamination;
- High temperature

### Temperature in Degrees °F

Reference Junction at 32°F

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**Z-231**