



Brand Name	<b>S-COPPER</b>		
Material Code	<b>2.1356</b>		
Abbreviation	<b>BPC</b>		
Chemical Composition.(mass components.) in % average values of alloy components			
Cu	Mn		
Rest	3		

### Form of Delivery

S-COPPER is supplied in the form of wires with dimensions from 0.05 to 8 mm Ø in bare condition. Enamelled wires are available in dimension between 0.05 and 1.5 mmØ. S-COPPER can also be supplied in form of stranded wire, ribbon, flat wire and rods. Please contact us for the range of dimension.

### Features and Application Notes

S-COPPER is used as positive leg for compensating lead of the element type Pt30Rh-Pt6Rh. S-COPPER is standardized in the temperature range between 0 and 100 °C. **ISABELLENHÜTTE delivers S-COPPER with a tolerance of ± 30 µV up to 200 °C (400°F).**

### Thermoelectrical and Electrical Values in Soft-Annealed Condition

EMF vers. Pt/NIST 175 0-200 ° F / mV	EMF vers. Pt67/NIST 175 0-100 ° C / mV	EMF vers. Pt/NIST 175 0-400 ° F / mV	EMF vers. Pt67/NIST 175 0-200 ° C / mV	Electrical resistivity at 20°C in	
				µΩ x cm	Ω / cir mil ft
<b>0.739</b>	<b>0.806</b>	<b>2.077</b>	<b>2.014</b>	<b>12.5</b>	<b>75</b>

### Physical Characteristics (Reference Values)

Density at 20 ° C		Melting Point	Specific heat at 20 ° C	Thermal conductivity at 20 ° C	Average linear thermal expansion coefficient between 20 ° C and 100 ° C	Magnetic at room temp.
g/cm <sup>3</sup>	lb/cub in	°C	J/g K	W/m K	10 <sup>-6</sup> /K	
<b>8.8</b>	<b>0.318</b>	<b>1050</b>	<b>0.39</b>	<b>84</b>	<b>15.5</b>	<b>no</b>

### Mechanical Properties at 20 °C in Annealed Condition (Reference Values) <sup>1)</sup>

Annealing State	Tensile Strength		Elongation	Hardness
	MPa	lb / sq in		
<b>hard</b>	<b>&gt;530</b>	<b>&gt;76850</b>	<b>2</b>	<b>&gt;140</b>
<b>soft</b>	<b>290</b>	<b>42500</b>	<b>30</b>	<b>70</b>

1) The mechanical values considerably depend on dimension. The indicated values refer to a dimension of 1 mm diameter.

### Notes on Treatment

S-COPPER is easy to process. The alloy can be soldered and brazed without difficulty. All known welding methods are applicable.