



## Technical Information: SM-100<sup>TM</sup>

SM-100 is a PM version of Nitinol 60 characterized by high hardness and excellent corrosion resistance  
 SM-100 is capable of 58-62 HRC after heat treatment  
 SM-100 is produced and trademarked by Puris LLC and Distributed exclusively by SB Specialty Metals

**Typical Chemical Composition**

Nickel	60.0%	Titanium	40.0%
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## SM-100 Properties Comparison

	SM-100	440C
<b>Hardness</b>	<b>58-62</b>	<b>58-62</b>
<b>Corrosion Resistance</b>	<b>Excellent</b>	<b>Average</b>
<b>Magnetism</b>	<b>Non-Magnetic</b>	<b>Magnetic</b>
<b>Young's Modulus</b>	<b>12</b>	<b>30</b>
<b>Thermal Conductivity</b>	<b>18 W/m-k</b>	<b>24 W/m-k</b>
<b>Thermal Expansion</b>	<b>12.4 x 10<sup>-6</sup>/C</b>	<b>10.0 x 10<sup>-6</sup>/C</b>
<b>Density</b>	<b>0.242 lbs/cubic inch</b>	<b>0.278 lbs/cubic inch</b>
<b>Annealed Hardness</b>	<b>30-35 HRC</b>	<b>225 BHN</b>



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### Heat Treatment

#### Annealing

SM-100 is supplied in the annealed condition  
Annealed hardness approximately 30-35 HRC

#### Hardening (Aging)

Salt bath, protective atmosphere, or vacuum furnace equipment preferred.

1775/1825°F for 20 minutes at heat  
1800°F Recommended

#### Quench

Quench in Oil or Quench between plates to ensure flatness

### Typical Heat Treat Response

