

Table 1. Properties of Common Sheath Materials

Material	Melting Temp. °F	Max. Temp ♦ In Air, °F	Tensile Strength at 1400°F, typical values-PSI	Stress to Rupture in 1000 hrs. at 1400°F PSI
Stainless Steel				
Type 304	2650	1700	30,000	6,000
304L	2650	1700	30,000	6,000
310	2650	2100	40,000	7,000
316	2550	1700	35,000	11,000
321	2600	1700	28,000	6,200
347	2600	1700	30,000	8,000
348	2600	1700	30,000	8,000
410	2790	1200	11,000	1,200
430	2750	1500	10,000	1,700
446	2750	2000	10,000	1,700
Hastelloy C	2380	2000	60,000	18,000
Hastelloy X	2470	2200	60,000	15,000
Haynes 25 (L-605)	2570	2000	60,000	24,000
Haynes 188	2500	2000	55,000	13,000
Incoloy 800	2525	1900	32,000	8,500
Inconel 600	2600	2100	27,000	8,200
Inconel 625	2600	2100	73,000	22,000
Inconel 702	2600	2400	72,000	15,000
Inconel X750	2600	2000	60,000	33,000
Monel Alloy 400	2460	1000	17,000	
Nickel	2625	1650	14,000	
Niobium (Columbium)	4470	1000	30,000	
Platinum	3220	3200	30,000	
Tantalum	5450	750	40,000	
Copper	1980	700	---	
Pt-10Rh	3350	3200	50,000	
Pt-13Rh	3350	3200	55,000	

- ♦ Approximate maximum temperature for continuous operation with good resistance to scaling and oxidation.
- Sheath tubing of these materials is stocked in the greatest quantity and variety of sizes.