

## **HASTELLOY ALLOY C-276:**

**HASTELLOY alloy C-276 is known for its corrosion resistance in a wide range of aggressive media.**

**The high molybdenum content imparts resistance to localized corrosion such as pitting.**

**The low carbon minimizes carbide precipitation during welding to maintain resistance to intergranular attack in heat-affected zones of welded joints.**

**It is used in chemical processing, pollution control, pulp and paper production, industrial and municipal waste treatment and the recovery of “sour” natural gas.**

**Applications in air pollution control include stack liners, ducts, dampers, scrubbers, stack-gas re-heaters, fans and fan housings.**

**In chemical processing, the alloy is used for components including heat exchangers, reaction vessels, evaporators and transfer piping.**

## Chemical properties(Limiting Chemical Composition%)

Ni	C	Mn	Fe	S	Si	V	P	W	Cr	Mo	Co
Balance	0.01 max	1.0 max	4.0- 7.0	0.03 max.	0.08 max	0.35 max.	0.04 max	3.0- 4.5	14.5- 16.5	15.0- 17.0	2.5 max.

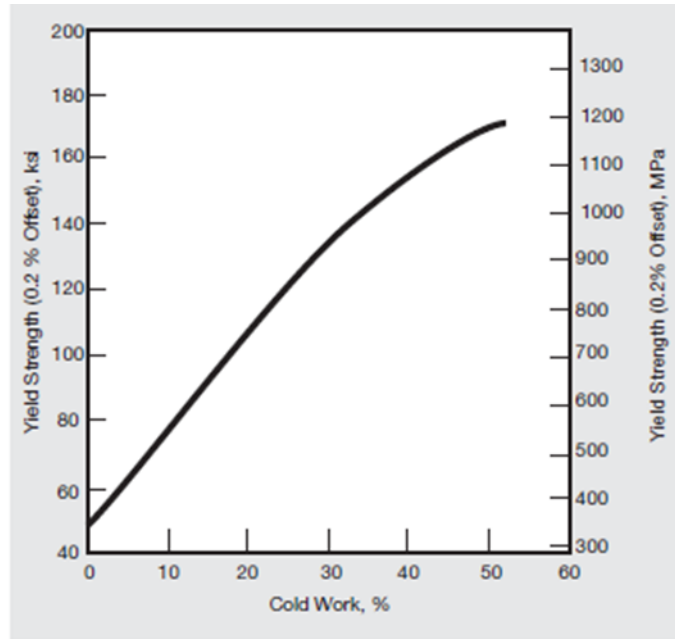
## Physical properties

Density		Melting Range		Thermal Conductivity		Specific Heat		Young's Modulus		Shear Modulus		Permeability at 200 oersted	Poisson's Ratio
lb/in <sup>3</sup>	g/cm <sup>3</sup>	°F	°C	°F	°C	°F	°C	ksi	GPa	ksi	GPa		
0.321	8.89	2415- 2500	1325- 1370	67.9	9.8	0.102	427	29.8	205	11.4	79	1.0002	0.307

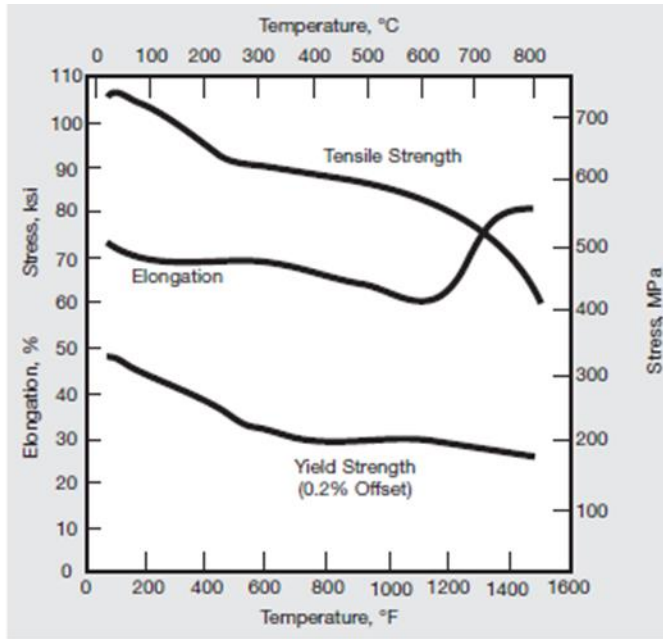
## MECHANICAL PROPERTES

Product Form	Tensile Strength		Yield Strength (0.2% Offset)		Elongation	Hardness
	ksi	MPa	ksi	MPa	%	Rb
Tubing	105.4	727	45.4	313	70	92
Plate	107.4	741	50.3	347	67	89
Bar	110.0	758	52.6	363	62	88
Sheet	115.5	796	54.6	376	60	86

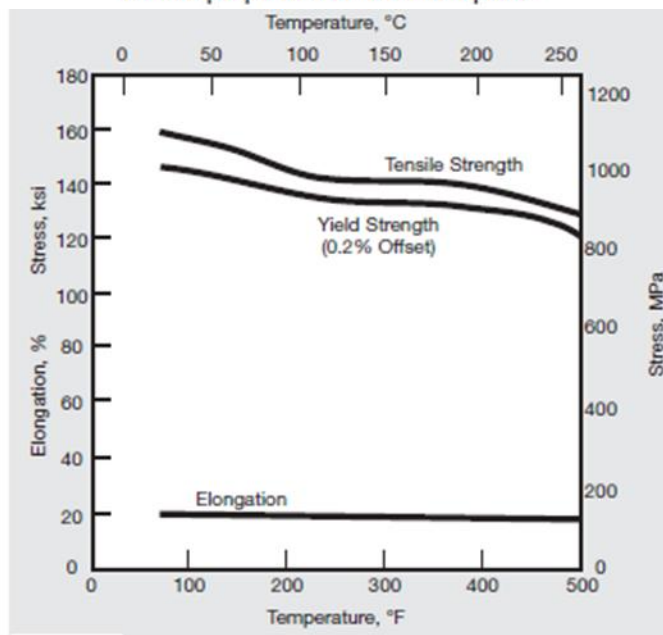
## MECHANICAL PROPERTES DIAGRAM



Effect of cold work on the yield strength of annealed plate.



Tensile properties of annealed plate.



Tensile properties of 33.5% cold-worked tubing