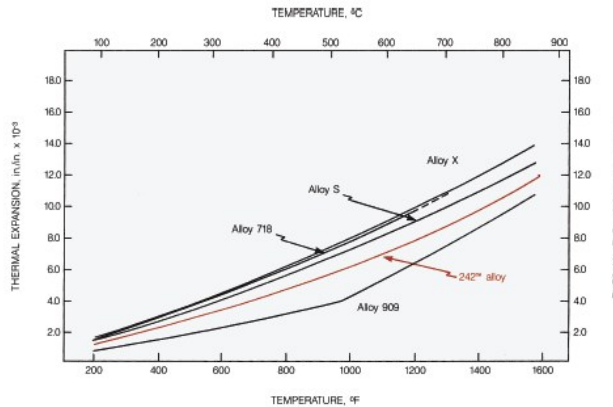


HAYNES[®] 242[®] alloy

Thermal Expansion

HAYNES[®] 242[®] alloy exhibits significantly lower thermal expansion characteristics than most nickel-base high-temperature alloys in the range of temperature from room temperature to 1600°F (871°C). Although its expansion is greater than that for alloy 909 below 1000°F (538°C), at higher temperatures, the difference narrows considerably.

Total Thermal Expansion, Room to Elevated Temperature



Mean Coefficient of Thermal Expansion

The following compares the mean coefficient of expansion for several alloys:

Alloy	Mean Coefficient of Expansion from RT to Temperature, in./in.-°F (mm/mm-°C) x10 ⁻⁶									
	1000°F	538°C	1100°F	593°C	1200°F	649°C	1300°F	704°C	1400°F	760°C
	in./in.- °F x10 ⁻⁶	mm/mm- °C x10 ⁻⁶	in./in.- °F x10 ⁻⁶	mm/mm- °C x10 ⁻⁶	in./in.- °F x10 ⁻⁶	mm/mm- °C x10 ⁻⁶	in./in.- °F x10 ⁻⁶	mm/mm- °C x10 ⁻⁶	in./in.- °F x10 ⁻⁶	mm/mm- °C x10 ⁻⁶
909	5	9	5.4	9.7	5.8	10.4	6.2	11.2	6.6	11.9
242 [®]	6.8	12.2	6.8	12.3	7	12.6	7.2	13	7.7	13.9
B	6.7	12	6.7	12	6.7	12	6.9	12.4	7.1	12.8
N	7.3	13.1	7.4	13.3	7.5	13.5	7.6	13.7	7.8	14
S	7.4	13.2	7.5	13.5	7.6	13.7	7.8	14	8	14.4
X	8.4	15.1	8.5	15.3	8.6	15.5	8.6	15.7	8.8	15.8