

CONTROLLED EXPANSION ALLOYS

ALLOY 52

ALLOY 52 TYPICAL NOMINAL CHEMISTRY

NICKEL (NI)	50.5
CHROMIUM (CR)	0.10
MANGANESE (MN)	0.60
SILICON (SI)	0.30
CARBON (C)	0.05
ALUMINUM (AL)	0.10
MAGNESIUM (MG)	0.50
ZIRCONIUM (ZR)	0.00
TITANIUM (TI)	0.00
PHOSPHORUS (P)	0.025
SULFUR (S)	0.025
IRON (FE)	BALANCE

ALLOY 52 TYPICAL TENSILE STRENGTH

ANNEALED	85,000 MAX.
¼ HARD	90,000 to 115,000
½ HARD	105,000 to 125,000
HARD	120,000 MIN.

TYPICAL HARDNESS, ROCKWELL B

ANNEALED	70 MAX.
¼ HARD	78 to 83
½ HARD	84 to 88



TYPICAL LINEAR COEFFICIENT OF THERMAL EXPANSION

(CM. PER CM. C x 10 – 6)

30 TO 100	10.5
30 to 200	10.4
30 to 300	10.2
30 to 350	10.2
30 to 400	10.1
30 to 425	N/A
30 to 450	10.1
30 to 500	10.0
30 to 550	10.5
30 to 600	10.8
30 to 700	11.7
30 to 800	12.5
30 to 900	13.3
30 to 1000	14.2