

## CONTROLLED EXPANSION ALLOYS

### ALLOY 46

#### ALLOY 46 TYPICAL NOMINAL CHEMISTRY

NICKEL (NI)	46.0
CHROMIUM (CR)	0.10
MANGANESE (MN)	0.80
SILICON (SI)	0.30
CARBON (C)	0.05
PHOSPHORUS (P)	0.025
SULFUR (S)	0.025
IRON (FE)	BALANCE

#### ALLOY 46 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	8.2
30 to 200	7.9
30 to 300	7.5
30 to 350	7.4
30 to 400	7.5
30 to 425	7.6
30 to 450	7.9
30 to 500	8.6
30 to 550	9.3
30 to 600	9.8
30 to 700	10.7
30 to 800	11.6
30 to 900	12.5
30 to 1000	13.4