



Alloy Composition							
High Expansion Alloys (HES)		Low Expansion Alloys (LES)		Common Materials	High Expansion Material		Basic 2-Layer Bimetal Material System
B	22 Ni, 3 Cr, Bal Fe	10	36 Ni, Bal Fe		High Expansion Material	Low Expansion Material	
C	19.4 Ni, 2.25 Cr, 0.5 C, Bal Fe	11	38.65 Ni, Bal Fe	High Expansion Material	Intermediate Layer		Typical 3-Layer Bimetal Material System: <b>Intermediate Layer</b> of Ni or Cu added to alter resistive properties of the material
F	Copper	14	38 Ni, 7 Cr, Bal Fe	High Expansion Material	Low Expansion Material		
GB	19 Ni, 7 Cr, Bal Fe	20	40 Ni, Bal Fe	Specialty Materials	High Expansion Material		Thin exterior Cu layer added to improve welding performance
LA	20 Ni, 6Mn, Bal Fe	30	42 Ni, Bal Fe		Intermediate Layer	Low Expansion Material	
M	18 Cr, 8 Ni, Bal Fe	40	45 Ni, Bal Fe	High Expansion Material	Low Expansion Material		Thin exterior stainless steel layers added to enhance corrosion resistance
N	Nickel	50	50 Ni, Bal Fe		Low Expansion Material		
P	72 Mn, 18 Cu, 10 Ni	70	17 Cr, Bal Fe				

### Standard Tolerances

Strip Thickness (t)		Tolerance	
in	mm	in	mm
$t \leq 0.005''$	$t \leq 0.127$	$\pm 0.0003''$	$\pm 0.0076$
$0.005'' < t \leq 0.010''$	$0.127 < t \leq 0.254$	$\pm 0.00035''$	$\pm 0.0089$
$0.010'' < t \leq 0.015''$	$0.254 < t \leq 0.381$	$\pm 0.0004''$	$\pm 0.0102$
$0.015'' < t \leq 0.020''$	$0.381 < t \leq 0.508$	$\pm 0.0005''$	$\pm 0.0127$
$0.020'' < t$	$0.508 < t$	$\pm 2.5\%$	$\pm 2.5\%$

Strip Width (w)		Tolerance	
in	mm	in	mm
$w \leq 0.005''$	$w \leq 12.70$	$\pm 0.003''$	$\pm 0.006$
$0.5'' < w \leq 1''$	$12.70 < w \leq 25.4$	$\pm 0.004''$	$\pm 0.102$
$1'' < w \leq 3''$	$25.4 < w \leq 76.2$	$\pm 0.008''$	$\pm 0.203$
$3'' < w \leq 6''$	$76.2 < w \leq 152.4$	$\pm 0.010''$	$\pm 0.254$
$6'' < w$	$152.4 < w$	$\pm 0.030''$	$\pm 0.762$

### Edgewise Camber

Strip Width	Test Length	Max. Camber	Strip Width	Test Length	Max. Camber
in	ft	in	mm	M	mm
$w < 0.125''$	1	0.312''	----	---	---
$0.125'' \leq w$	3	0.281''	$3.18 \leq w$	1	8.5

### Metal Identification

Type	Thickness	Width
Chemical Marking	All gages	All widths
Mechanical Marking	0.012'' and thicker	All widths
Engraving	0.040'' and thicker	Less than 0.500''

If not specified by the customer, the low expansion side (LES) is identified by chemical or mechanical marking with the word "Truflex" followed by the metal type designation

### Coiling & Packaging

ID	Thickness	Sleeve Type	Packaging Options
16" to 20"	< 0.005'' 0.005'' to 0.0119'' 0.012'' to 0.025'' > 0.025''	Plastic Plastic or Cardboard No ID core unless specified No ID Core	Radial wrap: 1-2 coils @ 55 lb max Vacuum Pack: 55 lbs and 27" OD max Gift wrap or plastic bags Corrugated cardboard or wooden box

Note: Traverse spool winding available upon request.

### Edge Conditions

> As slit ASTM #3
> As flattened ASTM #5
> Burr < 10% t for $t \leq 0.020''$ (0.508 mm)
> Burr = 0.002'' Max (0.05 mm max) for $t > 0.020''$ (0.508 mm)
> Edge rounding available upon request

### Cross Curvature

$H = 0.10 t + (0.00025w^2/t)$
Where H = chord height in inches t = material thickness in inches w = width of stock in inches