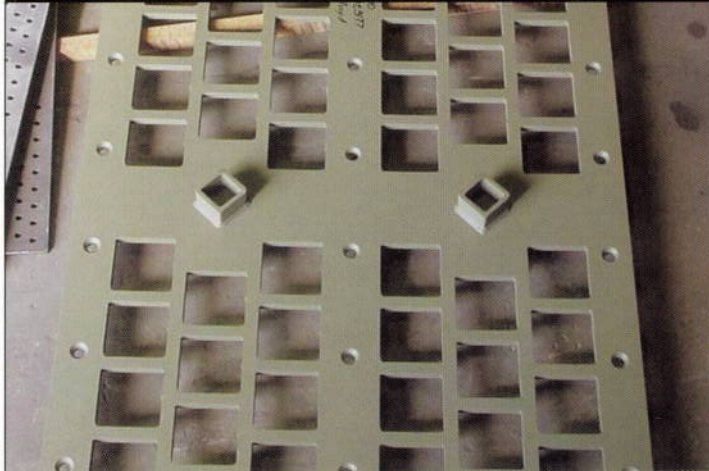




**TRICON METALS & SERVICES, INC.**  
www.TriconMetals.com

# Tri-Braze®

## IMPACT AND ABRASION RESISTANT ALLOY STEEL



### Features

To meet the needs of your toughest abrasion and impact resistant applications, **Tri-Braze®** combines an engineered balance of alloying elements with controlled heat treating and extremely low sulfur for an ideal hardness/toughness ratio. Quenched and tempered, this through-hardened, high impact resistant alloy steel offers excellent abrasion resistance. Tri-Braze® is specially treated for sulfide shape control, improving internal cleanliness and notch toughness as well as improved torching and forming characteristics. Tri-Braze® is the standard by which all other impact and abrasion resistant alloy steels are measured.

### Chemistry

Carbon (C)	.18/.24	Chromium (Cr)	1.60/1.80
Manganese (Mn)	.75/1.00	Molybdenum (Mo)	.20/.30
Phosphorus (P)	.025 Max.	Boron (B)	.001 Min.
Sulfur (S)	.003 Max.	Titanium (Ti)	.01/0.10
Silicon (Si)	.20/.40	Aluminum (Al)	.015 Min
Nickel (Ni)	.50/.85		

### Advantages

- High hardness for better wear resistance (Through-Hardened)
- Balanced alloy steel chemistry for optimum hardness/ toughness ratio
- Extremely low sulfur content
- Sulfide shape control
- Excellent hardenability for depth of hardness
- Excellent internal cleanliness (Meets ASTM A578-96, Level C)
- Fine grain structure
- High impact resistance
- Controlled processing assures homogeneous properties in longitudinal & transverse directions
- Tempered martensitic microstructure with titanium carbide particles improves wear resistance
- Brinell Hardness 418/512 with aim to hardness of 444 BHN
- Quenched and tempered
- Provides longer service life & less downtime to lower your overall maintenance costs
- Complete inventories maintained for prompt service

### Mechanical Properties

While Tri-Braze is normally specified to hardness only, it is sometimes of interest to know other mechanical properties. Typical mechanical and toughness properties in thickness up to 3/4" would be as follows:

<b>Yield Strength</b>	192-240 ksi	<b>Percent Elongation</b>	12-20%
<b>Tensile Strength</b>	215-267 ksi	<b>Reduction of Area</b>	40-60%
<b>CVN Impacts @ 0°F</b>	35/60 ft-lbs		

### Availability

Tri-Braze is available in standard sizes or can be cut to order in thickness from 1/8" - 10".

**Midwest Office**  
Chicago, Illinois  
Tel: 708-235-8719  
Toll Free: 888-932-3427

**Home Office**  
Birmingham, Alabama  
Tel: 205-956-2567  
Toll Free: 800-633-6054

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