

# Kromite® #3

## Hot Roll Heat Treated, High Strength Alloy

### Typical Physical Properties\*

Brinell Hardness .....	269/321 BHN
Tensile Strength .....	156,000 P.S.I.
Yield Strength .....	123,500 P.S.I.
Grain Size .....	95% - 8
Elongation .....	17%
Reduction of Area .....	50%

\*Based on 1/2" Diameter Test Specimen

(Past Protected Trade Name of  
Ludlow Steel Company – Centrex® HT)

### Advantages of Kromite #3

- **Electric Furnace Melt** – offers more control of heat and refinement of chemistry.
- **Vacuum Degassed** – eliminates many impurities found in standard commercial grade alloys. The results are a better, cleaner and stronger product that will last longer and perform better.
- **Heat Treated** – eliminates excessive cost in heat treatment, our material is thermally treated (as delivered) to a hardness of 269/321 BHN.
- **Machine Straightened** – eliminates excessive bow and distortion. Our standard straightness is 1/8" in any 5 feet, better than twice the industry standard for a hot roll and quench and tempered product.
- **Stress Relieved** – reduces the likelihood of material “walking” or moving during machining.

### Available Stock Lengths

Custom Cut Lengths  
10 Ft to 12 Ft Random Lengths  
20 Ft to 24 Ft Random Lengths

### Benefits of Kromite #3

- Refined Chemistry • High Strength
- Fatigue Resistant • Longer Service Life

### Semi-Finished and Finished Products

**Econo-Finish** – furnished ground top and bottom to (+.015"/+.030") oversize; sides saw cut to (+1/8"/-0"). Available up to 12 Ft lengths; see page 53 in this technical reference book.

**Flat Ground** – furnished precision ground to (+.001"/-.000") on thickness and (+.005"/-.000") on all sides with lengths (+1/4"/-0") at 18" and 36" available. See page 61 in this technical reference book.



**Custom Forgings  
Are Available  
Upon Request**

**In applications where 4000 series alloy materials are required, consider Kromite #3 as an upgrade.**

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### Machining Data

Note: Caution should be exercised when cold working any hardened alloy material. Use equipment of sufficient capacity that is in good condition. Utilize machine operators that are experienced in working with hardened alloys and wear appropriate safety gear.

**Kromite #3** is a heat treated alloy material, furnished with an approximate hardness of Rockwell "C" 30. It is a product of the 4000 series of Ultra High Strength Alloys. Machinability rating is approximately 60%, depending on actual hardness.

#### High Speed

- Depth of Cut .150"
- Speed 70fpm
- Feed .015 inch/revolution
- Tooling C6

#### Carbide

- Depth of Cut .150"
- Speed 260 brazed, 330 Throw-away
- Feed .015 inch/revolution
- Tooling C6

(Cutting Fluid: Soluble Oil 1:20)

#### Drilling

- Point Angle 118 degree, relief 12 degree
- Helix Angle 29 degree, point: plane
- Feed .005 inch/revolution

### Typical Applications

Arbors	King Bolts	Stub Shafts
Bolts	Line Shafts	Tool Shanks
Crank Shafts	Lead Screws	Turbine Shanks
Drive Shafts	Mine Car Axles	Tie Rods
Drag Line Parts	Pinions	Textile Parts
Feed Screws	Pins	Valve Stems
Gears	Piston Rods	Wear Strips
Hubs	Rings	Worm Gears
Hoist Shafts	Spindles	Wrist Pins
Journals	Studs	

### Special Services and Fabrications

We offer total fabrication services to provide you with finished parts and assemblies, whether you require multiple parts or one-of-a-kind prototype items. Let us quote on; machining, grinding, straightening, and all types of hardening. We offer these services for materials purchased from Associated Steel.

**Biggest Selection of Alloy Flats and Squares in North America.**

### Available Stock Sizes\*



**Rounds**  
1/2" to 16"



**Squares**  
1/2" to 4-1/2"



**Flats**  
1/4" to 6" thick  
1/2" to 12" wide

\*Typically, 10" Rounds and above are furnished as Rough Turned Oversized, to finish to the nominal size, and have an approximate 500 RMS finish. All squares over 4-1/2" are produced from plate; standard plate tolerances apply. Certain flats may be furnished from cut plate; standard plate tolerances apply.

**Hot Roll Annealed stock is available upon request.**

**Brake Die stock is available upon request.**

### Welding Data

Please see page 11 in this reference book.