**Features**
- Clean Steel Technology
- Electric Furnace Melt
- Vacuum Degassed
- Fine Grain Structure
- Heat Treated
- Machine Straightened
- Stress Relieved
- Free of Hard & Soft Spots

**Typical Properties**
- Hardness: 269/341 BHN
- Tensile: 156,000 PSI
- Yield: 123,500 PSI
- Elongation in 2" - 17%
- Reduction of Area - 55%

*Based on 1/2" test piece

**Available Sizes**
- Squares to 4"
- 1/4" x 1" to 2" x 5"
- Rounds to 16"
- 3" OD x 1-1/2" ID up to 6" OD x 3-1/2" ID

KROMITE® #3 HRHT (4140/4150 MOD)
HIGH STRENGTH, PREHARD, ALLOY

( equivalent to Sheffield™ #10)

**Features**
- Clean Steel Technology
- Fine Grain Structure
- Machine Straightened
- Fatigue Resistant
- Machinable

**Typical Properties**
- Hardness: 180/235 BHN
- Tensile: 114,000 PSI
- Yield: 100,500 PSI
- Elongation in 2" - 24%

*Based on 1/2" test piece

**Available Sizes**
- Hexagons - 3/16" to 4"
- Squares - 3/8" to 4"
- Flats - 1/4" x 1" to 2" x 6"

KROMITE® COLD DRAWN
(4140 MOD), COLD FINISHED, ANNEALED ALLOY

( equivalent to Sheffield™ Cold Drawn)

**Features**
- Clean Steel Technology
- Fine Grain Structure
- Machine Straightened
- Fatigue Resistant
- Machinable

**Typical Properties**
- Hardness: 90/110 BHN
- Tensile: 50,000 PSI
- Yield: 35,000 PSI
- Elongation in 2" - 24%

*Based on 1/2" test piece

**Available Sizes**
- Hexagons - 3/16" to 4" (1/4" to 2"
- Squares - 3/8" to 4"
- Flats - 1/4" x 1" to 2" x 6"

REDI-RAIL® CUSTOM HARDENED, PRECISION FINISHED, WEAR COMPONENTS

Engineered for applications including: transfer and conveyor rails, guides, machine ways, beef rails, heavy-duty tracks as well as various OEM parts. Even after further heat treatment is applied, wear resistant properties far exceed that of "cold roll" steels. Hardness range from Rockwell "C" 55/62 or tempered down to 38/42 depending upon application; results based on decarb removal.

**Available Sizes**
- Squares - 3/8" to 4"
- Flats - 1/4" x 1" to 2" x 6"

Redi-Rail® has been a time-tested and field-proven product.

Lengths
- 10/13 Ft R/L, 20/26 Ft R/L
- and Custom Cuts

Special Stock (Beef & Pork Rails)
1/2" x 2-1/2", 1/2" x 3" and 5/8" x 3" with Round & Square
Hardened Edges - 20/26 Ft R/L

For over 40 years, Redi-Rail® has been a time-tested and field-proven product.
Our metals are manufactured utilizing clean steel technology and strict process controls to ensure the highest level of quality.

**MIRRALOY® TGP (4140/4150 MOD), TURNED GROUND & POLISHED, ALLOY SHAFT**

Features
- Heat Treated
- Turned, Ground & Polished
- Machine Straightened
- Stress Relieved
- Clean Steel Technology
- Electric Furnace Melt
- Vacuum Degassed
- Fine Grain Structure
- Weldable

Typical Properties*
- Hardness - 269/341 BHN
- Tensile - 156,000 PSI
- Yield - 123,500 PSI
- Elongation in 2" - 17%
- Reduction of Area - 55%

*Based on 1/2" test piece

Available Sizes
- Rounds - 1/4" to 8"
- Metrics - 4MM to 100MM

Lengths
- 10/12 Ft R/L
- 20/24 Ft R/L
- and Custom Cuts

*Mirraloy® TGP is a FATIGUE RESISTANT alloy shaft that can be used for a variety of maintenance applications. It is more dependable and tougher than commercial grade steels like AISI 1018, 1045, 4140 and 4150.*

**MIRRALOY® FM TGP (1144 MOD), FREE MACHINING, TGP SHAFT**

Features
- Free Machining
- Precision TGP Finish
- Machine Straightened
- Fatigue Resistant
- Clean Steel Technology

Typical Properties*
- Hardness - 260 BHN
- Tensile - 133,000 PSI
- Yield - 110,000 PSI
- Elongation in 2" - 8% min.
- Machinability - 83% of 1212

*Based on 1/2" test piece

Available Sizes
- Rounds - 1/4" to 4"

Lengths
- 10/12 Ft R/L
- 20/24 Ft R/L
- and Custom Cuts

*(equivalent to Sheffield™ #20)*

**MIRRALOY® FM PRE-KEYED FREE MACHINING, KEYED TGP SHAFT**

Features
- Pre-Keyed Full Length
- Free Machining
- Precision TGP Finish
- Machine Straightened
- Fatigue Resistant
- Clean Steel Technology

Typical Properties*
- Hardness - 260 BHN
- Tensile - 133,000 PSI
- Yield - 110,000 PSI
- Elongation in 2" - 8% min.
- Machinability - 83% of 1212

*Based on 1/2" test piece

Available Sizes
- Rounds - 1/2" up to 2-15/16"
- Other Sizes & Metrics Available

Lengths
- 10/12 Ft R/L
- and Custom Cuts

*(equivalent to Sheffield™ FM Redi-Key)*

**Comparison of Mirraloy® FM vs Commercial Grade Carbon Steels**

<table>
<thead>
<tr>
<th></th>
<th>Mirraloy® FM</th>
<th>1045</th>
<th>1018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tensile</td>
<td>133,000 PSI</td>
<td>91,000 PSI</td>
<td>70,000 PSI</td>
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<tr>
<td>Yield</td>
<td>110,000 PSI</td>
<td>77,000 PSI</td>
<td>50,000 PSI</td>
</tr>
</tbody>
</table>

*Based on 1/2" test piece

Contact Us For Keystock Requirements
HIGH PERFORMANCE, CORROSION RESISTANT STAINLESS

**MIR 50® STAINLESS**

**Features**
- High Strength
- Galling Resistant
- Corrosion Resistant
- Fatigue Resistant
- Double Stress Relieved
- Resists Shock
- Machinable
- Weldable
- Sour Service Approved

**Agency Concurrence**
- NACE MR0175-97
- AMS-5763 (chemistry)
- FDA and API-6A

**Typical Properties**
- Hardness: 258/294 BHN
- Tensile: 140,000 PSI
- Yield: 108,000 PSI
- Elongation in 2" - 26%
- Reduction of Area: 65%
- Charpy “V” Notch: 105 @ 70°F

**Service Temperature**
- 800°F (constant); Oxidation Resistant To 1200°F

**Available Sizes¹**
- PSQ TGP - 1/4" to 6-1/2"
- RTOS - 3/4" to 10"

*Certain sizes may have modified analysis relative to production requirements.

**Lengths**
- 10/12 Ft R/L
- 20/24 Ft R/L
- and Custom Cuts

---

**MIR 50® BUSHING STOCK**

**Features**
- High Strength
- Galling Resistant
- Corrosion Resistant
- Fatigue Resistant
- Double Stress Relieved
- Low Memory
- Machinable
- Weldable
- Sour Service Approved

**Agency Concurrence**
- NACE MR0175-97
- AMS-5763 (chemistry)
- FDA and API-6A

**Typical Properties**
- Hardness: 186 BHN
- Tensile: 82,000 PSI
- Yield: 33,000 PSI
- Elongation in 2" - 35%
- Reduction of Area: 45%

**Service Temperature**
- 1400°F (max limit)

**Available Sizes¹**
- 2-1/2” OD x 1” ID up to 6-1/2” OD x 3” ID

Other Sizes Available

*Certain sizes may have modified analysis relative to production requirements.

**Lengths**
- Custom Cuts

---

**CENCOR™ STAINLESS**

**Features**
- Corrosion Resistant
- Precision TGP Finish
- Tight Tolerances
- Scaling Resistant
- Machinable

**Agency Concurrence**
- NACE MR0175-09

**Typical Properties**
- Hardness: 167 BHN
- Tensile: 78,000 PSI
- Yield: 35,000 PSI
- Elongation in 2" - 35%
- Reduction of Area: 45%

**Service Temperature**
- 1400°F (max limit)

**Available Sizes**
- Rounds - 1/8” to 4-1/2”

**Metrics**
- 4MM to 50MM

**Lengths**
- 10/13 Ft R/L
- and Custom Cuts

---

*Mir 50® can replace other grades of stainless such as: 304L, 316L, 410, 416, 17-4PH and 15-5PH depending upon the application. It will accept additional hardening up to Rockwell “C” 36/44. Contact office for details.*

*Mir 50® is well-known as the “4340 of the stainless world”. It offers excellent serviceability in the pulp & paper, petrochemical, energy, wastewater and food processing industries.*

*(equivalent to Nass 45®)*

*(equivalent to Sheffield™ Stainless)*
**ASC2250® LDX** LEAN DUPLEX, HIGH STRENGTH, BEARING-FIT, STAINLESS SHAFT

**Features**
- Stress Corrosion Cracking (SCC) Resistance
- Excellent Pitting Resistance (PRE26)
- Corrosion Fatigue Resistance
- Bearing-Fit, Turned Ground & Polished Finish
- Machinable and Weldable
- Service Temperature Up To 750°F
- Improved Strength Over 304L & 316L Stainless
- Sour Service Approved

**Agency Concurrence**
- National Sanitation Foundation approval for drinking water applications (NSF Section 61).
- USDA approval for dairy processing applications (3-A Format for Sanitary and Typical Properties*

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
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<tbody>
<tr>
<td>Hardness</td>
<td>290 BHN max</td>
</tr>
<tr>
<td>Tensile</td>
<td>94,000 PSI min</td>
</tr>
<tr>
<td>Yield</td>
<td>65,000 PSI min</td>
</tr>
<tr>
<td>Elongation in 4D</td>
<td>35%</td>
</tr>
<tr>
<td>Reduction of Area</td>
<td>72%</td>
</tr>
</tbody>
</table>

*Based on 2” test piece

**Available Sizes**
- Bearing-Fit TGP Rounds - 1/2” to 6”
- Rough Turned, Oversize Rounds - 3/4” to 6”
- Metric Bearing-Fit Rounds - 20MM to 100MM

**Lengths**
- 10/13 Ft R/L, 20/26 Ft R/L and Custom Cuts

*Contact Us For Thin Gage Duplex Stainless Sheets*

**Typical Chemical Analysis**

<table>
<thead>
<tr>
<th>Element</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>CR</td>
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</tr>
<tr>
<td>MN</td>
<td>5.0</td>
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<tr>
<td>P</td>
<td>.04</td>
</tr>
<tr>
<td>N</td>
<td>.21</td>
</tr>
<tr>
<td>SI</td>
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<tr>
<td>C</td>
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<tr>
<td>MO</td>
<td>.60 max</td>
</tr>
<tr>
<td>CU</td>
<td>.1/.8</td>
</tr>
</tbody>
</table>

Meets the following specifications: UNS S32101, ASTM A276 and A479, EN 1.4162.

**ASC2250® LDX** is a 2101 Duplex stainless steel that exhibits equal parts Austenite and Ferrite. It combines high chromium, nitrogen and molybdenum to enhance the corrosion resistance and toughness of the steel.

**AQUA-KEY®** HIGH STRENGTH, CORROSION RESISTANT STAINLESS KEYSTOCK

A premium stainless steel product designed to provide a high level of reliability for maintenance applications in corrosive environments.

**Available Sizes**

- Squares and Rectangles
  - (Contact Office For Details)

**ASSOCIATED STEEL** is proud to serve the following heavy industrial marketplaces with our high performance, corrosion resistant stainless steel products.

- Energy
- Pulp & Paper
- Food Process
- Chemical
- Wastewater
- Mining
- Steel & Iron
## Features
- Abrasion Resistant
- Thru-Hardened
- Weldable
- Formable
- Ease of Machining
- Low Carbon Equivalency

## Typical Properties
- Hardness - 385/425 BHN
- Elongation in 2" - 15%
- Reduction of Area - 60%
- Grain Type - Tempered Martensite
- Carbon Equivalency (CE) - 47

## Available Sizes
- Plates - 1/8” to 4”

## Sheet Sizes
- 48” x 96”, 48” x 144”, 48” x 288”, 96” x 144”, 96” x 288” and Custom Cuts

---

Rhino-Tuf® EZ is engineered to replace most other commercial grade abrasion resistant plate products, not limited to: HSLA, T-1, A36, AR360, AR400 and A514.

---

## Available Sizes*
- Strips - 1/8” to 1” Thick
- Widths - 3/4” to 4” and Custom Cuts

## Lengths
- 10/12 Ft R/L
- 20/24 Ft R/L
- and Custom Cuts

*Offered as hot rolled bars (mill edged), oxy-cut, and/or high-definition plasma cut depending upon size and thickness.

---

## ONE OF THE LARGEST WEAR BAR INVENTORIES IN NORTH AMERICA.

---

## Features
- Abrasion Resistant
- Quench & Tempered
- Thru-Hardened
- Inclusion Shape Control

## Typical Properties
- Hardness - 475/535 BHN
- Elongation in 2” - 15%
- Reduction of Area - 41%
- Grain Type - Tempered Martensite
- Carbon Equivalency (CE) - 54

## Available Sizes
- Plates - 1/4” to 3”

## Sheet Sizes
- 48” x 96”, 48” x 144”, 48” x 288”, 96” x 144”, 96” x 288” and Custom Cuts

---

Rhino-Tuf® EZ and Ultima™ 501 are engineered to perform where a good balance of impact, toughness and abrasion resistance are required. Cutting and Fabrication services offered.

---

## Typical Applications For Rhino-Tuf® EZ and Ultima™ 501
- Chain Conveyors
- Crusher Plates
- Hammers
- Levelers
- Cutting Edges
- Wear Guides
- Truck Bed Liners
- Chipper Blades
- Wear Rings
- Screens
- Fan Blades
- Bucket Liners
- Baler Plates
- Mixer Components
- Coal Chutes
- Impact Pads
- Hoppers
- Screw Flights
- Teeth Caps
- Grouser Bars
- Shakeout Decks

Abrasion resistant steels are typically sold to hardness ranges, not fixed chemistries. Wear plates are designed for liner applications; they are not intended for self-supporting structures or lifting devices. Proper precautions should be adhered to when working with and/or fabricating AR plate.
ULTIMA™ 601 AR600 ABRASION RESISTANT, HARDENED I.D. WEAR PIPE

**Features**
- Excellent Hardness
- Superior Abrasion Resistance
- Adaptable To Various Configurations
- Up To 6X More Life Than Mild Steel

**Typical Properties**
- I.D. Hardness - 600 BHN
- O.D. Hardness - 250 BHN approx.

**Available Sizes**
- 3” SCH 40 to 8” SCH 40
- 6” SCH 80 to 14” SCH 80
- 10” XH to 20” XH

**Lengths**
- 10 Ft R/L
- 20 Ft R/L
- Custom Cuts

The I.D. hardness tapers to a ductile outer surface.

**ULTIMA™ 601 is designed to extend service life where abrasive materials (i.e. glass, coke, coal, wood chips, fly ash, sand, cement, rice and stone) can cause pre-mature wear. Welding and Cutting precautions required.**

RHINO-KLAD™ CHROMIUM CARBIDE OVERLAY CLAD PLATE AND CUSTOM SHAPES

**Features**
- Superior Abrasion Resistance
- Moderate Impact Resistance
- Fair Corrosion Resistance

**Available Sizes**
- Standard Nominal Thickness - 3/8” to 1”
- Carbide Overlay Thickness - 1/8” to 3/8” (Single or Double Overlays)

**Typical Properties**
- Developed Hardness - Rc “60/62”

**Rhino-Klad™ provides excellent service in extreme abrasion and moderate impact applications including cyclones, blades, chutes, classifiers and mixers. The process offers a chromium carbide overlay that is bonded to a base carbon steel plate.**

WORKWEAR™ 14 11-14% (HADFIELD) MANGANESE IMPACT STEEL

**Features**
- Excellent Hardness Results
- Hardens Under Load and Impact
- True Hadfield Grade

**Available Stock**
- Plates, Rounds, Flats, Squares and Angles

**Typical Properties**
- Hardness - 250 BHN (as delivered)

*Material work hardens up to 550 BHN depending upon the application.

**Contact office for all inquires.**

(equivalent to Tuf-Pipe™ 600)

(equivalent to Redi-Clad™)

(equivalent to Sheffield™ 14% Manganese)
**KROMITE® THREADED BAR**
HEAT TREATED, ROLL THREADED ROD

**Features**
- Heat Treated
- High Strength - Alloy Material
- Rolled Threads vs Cut Threads
- Excellent Toughness
- Creep Resistant
- Consistent Grain Structure
- High Degree of Accuracy
- Precision Class 2A & 2G Fit

**Agency Concurrence**
ASTM A193, Grade B7

**Typical Properties**
- Hardness - 321 BHN
- Tensile - 155,000 PSI
- Yield - 135,000 PSI
- Grain Size - 7
- Elongation in 2" - 19%
- Reduction of Area - 53%
*Based on 1/2" test piece

**Available Sizes**
- National Fine - 1/4" (28) to 2" (12)
- National Coarse - 1/4" (20) to 2-1/2" (4-1/2)
- Eight Pitch - 1" (8) to 2-1/8" (8)
- Acme - 3/8" (12) to 2-1/2" (4)
- Right Hand, Left Hand & 2-Start
- Metrics - 4MM (.7) to 39MM (4.0)

The strength of our threaded bar is in the rolling process. Thread rolling deforms the blank material as it is forced along the contour of the die. The worked material is strain hardened, resulting in a product stronger and harder with minimal risk of fatigue failure relative to cut threads.

**KROMITE® ECONO-FINISH**
PRE-HARD, 28/34 RC, DECARB-FREE, PLATE

**Features**
- Heat Treated
- High Strength
- 4140/4142 (Mod.) Alloy
- Furnished 269/341 BHN
- Decarb-Free
- Machinable

**Surface Condition**
- Ground Top & Bottom (+.015”/+ .035” oversize)
- Saw Cut Width & Length (+1/8” oversize)
*As Delivered (Pre-Machined Condition)

**Available Stock**
- Squares and Flats
- (Contact office for all inquires.)
- Also available in the Annealed Condition.

This pre-hardened, pre-machined product will reduce material preparation time and allow you to get your finished parts into service quicker and extend service life.

All of the decarb (from the heat treating process) has been removed. This “decarb-free” surface finish will accept maximum surface hardening for maximum wear resistance. The PLUS TOLERANCE is provided to minimize machining at your job site.

Consider Kromite® Threaded Bar as a suitable upgrade where maintenance applications require improved strength, durability, creep resistance and overall performance.

**KROMITE® THREADED BAR**

Grain structure is maintained in continuous unbroken lines, increasing tensile and shear strength.

**COMMERCIAL THREADED BAR**

Sharp cuts and gouges, weaken threads and can serve as stress risers.
(equivalent to Sheffield™ Stud Stock)

**KROMITE® THREADED BAR**

Grain structure is maintained in continuous unbroken lines, increasing tensile and shear strength.

**COMMERCIAL THREADED BAR**

Sharp cuts and gouges, weaken threads and can serve as stress risers.
(equivalent to Sheffield™ Stud Stock)

**OTHER SPECIALTY MAINTENANCE MATERIALS**

**KROMITE® ECONO-FINISH**
PRE-HARD, 28/34 RC, DECARB-FREE, PLATE

**Features**
- Heat Treated
- High Strength
- 4140/4142 (Mod.) Alloy
- Furnished 269/341 BHN
- Decarb-Free
- Machinable

**Surface Condition**
- Ground Top & Bottom (+.015”/+ .035” oversize)
- Saw Cut Width & Length (+1/8” oversize)
*As Delivered (Pre-Machined Condition)

**Available Stock**
- Squares and Flats
- (Contact office for all inquires.)
- Also available in the Annealed Condition.

This pre-hardened, pre-machined product will reduce material preparation time and allow you to get your finished parts into service quicker and extend service life.

All of the decarb (from the heat treating process) has been removed. This “decarb-free” surface finish will accept maximum surface hardening for maximum wear resistance. The PLUS TOLERANCE is provided to minimize machining at your job site.

Consider this product for dies, molds, support tooling, and various fixtures. Please inquire with your “finished” dimensions.

**OTHER TOOL & DIE STEELS**

<table>
<thead>
<tr>
<th>Material</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Molex® #7 (O-1)</td>
<td>Oil Hardening Tool Steel</td>
</tr>
<tr>
<td>Molex® #8 (A-2)</td>
<td>Air Hardening Die Steel</td>
</tr>
<tr>
<td>Molex® #13 (H-13)</td>
<td>Hot Working Tool Steel</td>
</tr>
<tr>
<td>Krome Die™ (D-2)</td>
<td>Air Hardening Die Steel</td>
</tr>
<tr>
<td>Lusco™ #7 (S-7)</td>
<td>Shock Resistant Tool Steel</td>
</tr>
</tbody>
</table>

*Precision Finish, Decarb-Free, Close Tolerance*

Drill Rod & Flat Ground Stock Available (all grades)
## Features
- Induction Hardened
- Chrome Plated
- Abrasion Resistance
- Corrosion Resistance
- Polished Finish
- Fatigue Resistance

## Typical Properties*
- **Case**
  - Hardness: Rc “50” min
  - Depth of Plating: .001”/side
  - Yield: 100,000 PSI approx.
  - Elongation in 2”: 10%
  - Reduction of Area: 38%
  - Finish: 12/15 RMS
  - *Based on 1/2” test piece

## Available Sizes
- **Rounds**
  - 1/2” to 6”
- **Metrics**
  - 12MM to 100MM (other sizes may be available)

## Lengths
- 10/12 Ft, 20/24 Ft R/L and Custom Cuts

---

**MIRRALOY® HCP**

**Features**
- Chrome Plated
- Abrasion Resistance
- Corrosion Resistance
- Polished Finish

**Typical Properties*
- **Chrome**
  - Hardness: Rc “58/60”
  - Depth of Plating: .001”/side
  - Yield: 100,000 PSI approx.
  - Elongation in 2”: 10%
  - Reduction of Area: 38%
  - Finish: 12/15 RMS
  - *Based on 1/2” test piece

**Available Sizes**
- **Rounds**
  - 1/2” up to 4”
- **Metrics**
  - 12MM up to 100MM (other sizes may be available)

**Lengths**
- 10/12 Ft, 20/24 Ft R/L and Custom Cuts

---

**MIRRO-MAX 60®**

**Features**
- Hardened Case
- Wear Resistant
- Machine Straightened
- Precision Finish
- Bearing-Fit Tolerances
- Chamfered Ends

**Available Sizes**
- **Rounds**
  - 1/4” up to 4”
- **Metrics**
  - 8MM up to 50MM

**Lengths**
- Custom (Job Dependent)

---

*Mirro-Krome 60® and Mirraloy® HCP are engineered for use in pneumatic and hydraulic piston rods, as well as, dowel and guide pins commonly seen in the agricultural and construction industries. Proper consideration should be given for material choice dependent upon specific requirements and/or in-house machining capabilities.*

*Mirro-Max 60® is ideal for bearing, linear shafting and guides, shaft supports and hardened roller applications that require tight diameter and straightness tolerances. This product is not chrome plated. Contact our offices for additional details.*
### METRIC SIZED METALS

#### ALLOY

**Heat Treated, TGP (4140/4150 mod) Shafting - MIRRALOY®**

**Available Sizes**

- 7MM - 100MM Rounds

**Typical Tensile Strength**

- 156,000 PSI

#### STAINLESS STEEL

**Precision Fit, TGP (316/316L) Shafting - CENCOR™**

**Available Sizes**

- 4MM - 50MM Rounds

**Typical Tensile Strength**

- 82,000 PSI

**Bearing-Fit, TGP Lean Duplex Shafting - ASC2250® LDX**

**Available Sizes**

- 20MM - 100MM Rounds

**Typical Tensile Strength**

- 94,000 PSI

#### THREADED ROD

**Heat Treated, Roll Threaded (B7) - KROMITE® THREADED BAR**

**Available Sizes**

- M6 - 1.0 up to M30 - 3.5

**Specification**

- ASTM A193, Grade B7 & Class 2A fit

#### CHROME SHAFTS

**Induction Hardened, Chrome Plated - MIRRO-KROME 60®**

**Available Sizes**

- 12MM - 80MM Rounds

**Surface Case Hardness**

- Rockwell “C” 50 min.

**Hard Chrome Plated Shafting - MIRRALOY® HCP**

**Available Sizes**

- 10MM - 70MM Rounds

**Chrome Hardness**

- Rockwell “C” 58/60

#### LINEAR SHAFTING

**Induction Hardened, Bearing-Fit - MIRRO-MAX 60®**

**Available Sizes**

- 8MM up to 50MM Rounds

**Hardened Case**

- Rockwell “C” 60/65

---

Contact our office for all of your requirements on other sizes, grades and configurations of metric materials that are not shown.

---

**English / Metric Conversions**

<table>
<thead>
<tr>
<th>Unit (English)</th>
<th>Conversion Factor</th>
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<tbody>
<tr>
<td>Inches (in)</td>
<td>X 25.4</td>
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<tr>
<td>Millimeters (mm)</td>
<td>.04</td>
</tr>
<tr>
<td>Feet (ft)</td>
<td>X .304</td>
</tr>
<tr>
<td>Meters (m)</td>
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<tr>
<td>Pounds (lbs)</td>
<td>X .453</td>
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<tr>
<td>Kilograms (kg)</td>
<td>X 2.2</td>
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**METRICS**
For over 80 years, Associated Steel Corporation has been providing value-added services that include machining, fabrication and technical assistance. Our experienced team routinely handles difficult maintenance problems through our Special Service Division (SSD). We can provide a complete O.E.M. replacement component that is ready for immediate installation to minimize one's downtime. In certain instances, quotes can be generated from worn or new parts. (restrictions apply)

**AVAILABLE PROCESSES**

- Plasma Cutting
- Saw Cutting
- Counter-Boring
- Polishing
- Chamfering
- Counter-Sinking
- Facing-To-Length
- Turning-On-Centers
- Shape Cutting
- Flame Hardening
- Straightening
- Heat Treating
- Tapping
- Planning
- Grinding
- Welding
- Broaching
- Milling
- Broaching
- Drilling

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