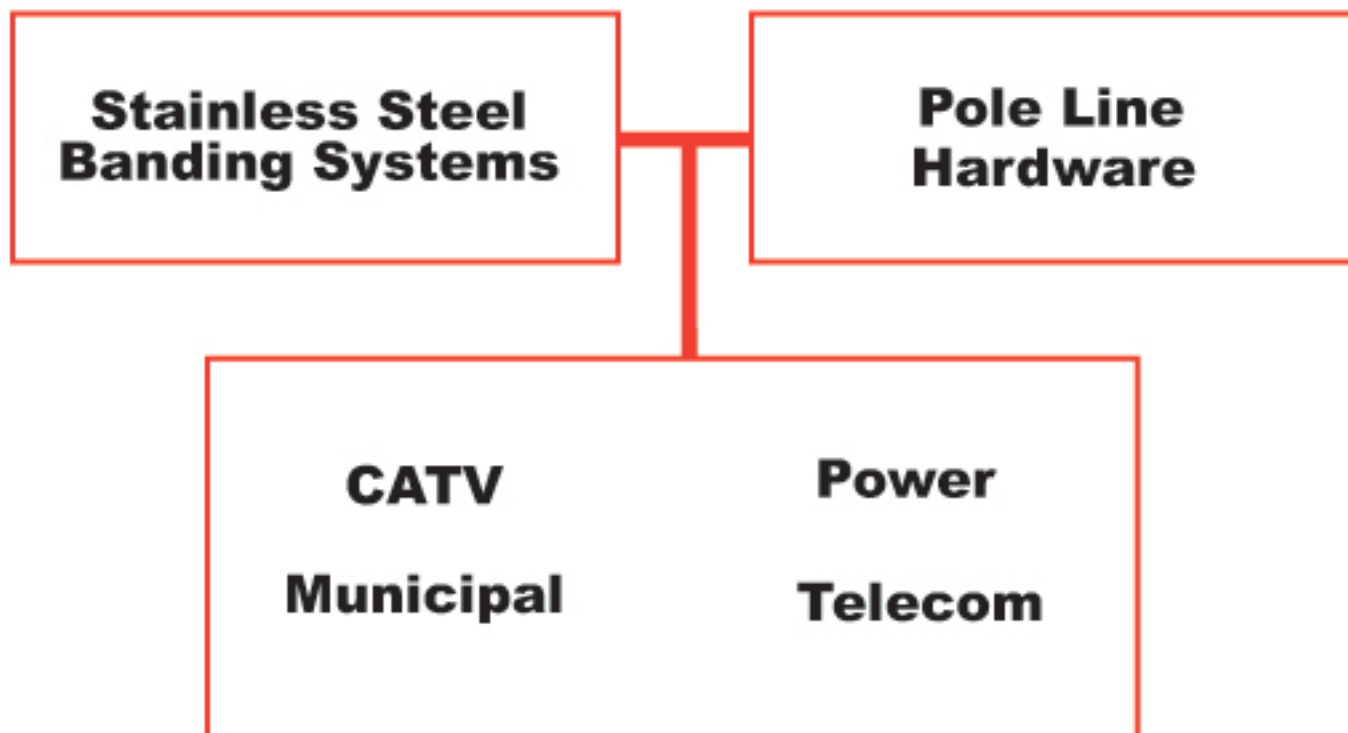


# USABAND™

"Over 60 years of American Quality"



**The Banding Experts**

# USABAND

"Over 60 Years of American Quality"

Suggested  
List Prices  
May 1, 2004

## Standard Duty Banding, Buckles and Tool

### TYPE 201 STAINLESS BAND — 100ft./Roll Plastic Dispensing Safety Carton

| Catalog Number | Width  |       | Thickness |      | Weight |     |
|----------------|--------|-------|-----------|------|--------|-----|
|                | Inches | m m   | Inches    | m m  | Lbs    | Kg  |
| 812202         | 1/4    | 6.35  | .020      | 0.51 | 1.7    | 0.9 |
| 812203         | 3/8    | 9.53  | .025      | 0.63 | 3.2    | 1.6 |
| 812204         | 1/2    | 12.70 | .030      | 0.76 | 5.1    | 2.4 |
| 812205         | 5/8    | 15.88 | .030      | 0.76 | 6.4    | 3.0 |
| 812206         | 3/4    | 19.05 | .030      | 0.76 | 7.7    | 3.6 |

Available in mill coil lengths.



### TYPE 201 STAINLESS STEEL BUCKLES — Package Quantity — 100

| Catalog Number | Width  |       | Weight |     |
|----------------|--------|-------|--------|-----|
|                | Inches | m m   | Lbs    | Kg  |
| 812252         | 1/4    | 6.35  | 0.3    | 0.1 |
| 812253         | 3/8    | 9.53  | 0.8    | 0.4 |
| 812254         | 1/2    | 12.70 | 2.1    | 1.0 |
| 812255         | 5/8    | 15.88 | 2.4    | 1.1 |
| 812256         | 3/4    | 19.05 | 3.7    | 1.7 |



### TYPE 316 STAINLESS STEEL BAND — 100ft./Roll Plastic Dispensing Safety Carton

| Catalog Number | Width  |       | Thickness |      | Weight |     |
|----------------|--------|-------|-----------|------|--------|-----|
|                | Inches | m m   | Inches    | m m  | Lbs    | Kg  |
| 812402         | 1/4    | 6.35  | 0.020     | 0.51 | 1.7    | 0.9 |
| 812403         | 3/8    | 9.53  | 0.025     | 0.63 | 3.2    | 1.6 |
| 812404         | 1/2    | 12.70 | 0.030     | 0.76 | 5.1    | 2.4 |
| 812405         | 5/8    | 15.88 | 0.030     | 0.76 | 6.4    | 3.0 |
| 812406         | 3/4    | 19.05 | 0.030     | 0.76 | 7.7    | 3.6 |

Available in mill coil lengths.



### TYPE 316 STAINLESS STEEL BUCKLES — Package Quantity — 100

| Catalog Number | Width  |       | Weight |     |
|----------------|--------|-------|--------|-----|
|                | Inches | m m   | Lbs    | Kg  |
| 812452         | 1/4    | 6.35  | 0.3    | 0.1 |
| 812453         | 3/8    | 9.53  | 0.8    | 0.4 |
| 812454         | 1/2    | 12.70 | 2.1    | 1.0 |
| 812455         | 5/8    | 15.88 | 2.4    | 1.1 |
| 812456         | 3/4    | 19.05 | 3.7    | 1.7 |



## TOOL

A drop forged tool with tensioning capability of over 2,400 lbs. and a built-in cutter. New, improved features include:

- A spring loaded gripper lever for improved band tensioning
- A friction held cutoff lever with plastic grip for easier operation
- Permanent lubrication on the tension screw to extend tool life and speed clamping
- A zinc plated chromate finish to provide superior corrosion resistance
- A spin handle retaining ring to keep parts intact. The **USABAND Tool** is used to apply Banding and Buckles.

| Catalog Number | Description                                                                   |
|----------------|-------------------------------------------------------------------------------|
| 812001         | Standard Duty Banding Tool Wt 4.4 lbs (2.0 kg)                                |
| 812043         | Close Quarter Tension Nut replaces tool tension handle when space is limited. |
| 812006         | Tension Screw/Handle Kit                                                      |



# USABAND

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## Heavy Duty Banding, Buckles & Tool

HD Band is available in Type 201 stainless steel or galvanized carbon steel. It is used for heavy-duty banding applications. The 1¼" band in 201 stainless steel has a breaking strength of 5,500 lbs. Double wrapped banding is recommended for maximum strength.

### BAND — 100 Ft. Per Roll Matte Finish

| Catalog Number                 | Width  |       | Thickness |      | Weight |     |
|--------------------------------|--------|-------|-----------|------|--------|-----|
|                                | Inches | m m   | Inches    | m m  | Lbs    | Kg  |
| <b>Stainless Steel</b>         |        |       |           |      |        |     |
| 812430                         | ¾      | 19.05 | .044      | 1.12 | 11.6   | 5.4 |
| 812431                         | 1      | 25.40 | .044      | 1.12 | 13.7   | 6.4 |
| 812432                         | 1¼     | 31.75 | .044      | 1.12 | 17.2   | 8.0 |
| <b>Galvanized Carbon Steel</b> |        |       |           |      |        |     |
| 812433                         | ¾      | 19.05 | .048      | 1.14 | 11.5   | 5.2 |
| 812434                         | 1      | 25.40 | .048      | 1.14 | 15.3   | 6.9 |
| 812435                         | 1¼     | 31.75 | .048      | 1.14 | 19.1   | 8.6 |



### Buckles

HD Buckles are offered in widths and metals to correspond to HD band. Band may be double wrapped for extra strength.

### TYPE 201/301 STAINLESS STEEL — Package Quantity 25

| Catalog Number | Width  |       | Weight |     |
|----------------|--------|-------|--------|-----|
|                | Inches | m m   | Lbs    | Kg  |
| 812440         | ¾      | 19.05 | 1.8    | 0.8 |
| 812441         | 1      | 25.40 | 2.4    | 1.1 |
| 812442         | 1¼     | 31.75 | 3.2    | 1.4 |



### Tool

The HD Tool must be used to apply heavy duty band. Measuring 16½" in length, it is designed to pull up to 6,000 lbs.

| Catalog Number | Description     | Weight               |
|----------------|-----------------|----------------------|
| 812110         | HD Banding Tool | Wt 11.7 lbs (5.3 Kg) |



# USABAND

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## Misc. Banding and Buckles

### TYPE 317L STAINLESS STEEL BAND — ¼ Hard 300 Ft. Per Roll *Special Order*

| Catalog Number | Width  |       | Thickness |      | Weight |      |
|----------------|--------|-------|-----------|------|--------|------|
|                | Inches | m m   | Inches    | m m  | Lbs    | Kg   |
| 812423         | 3/8    | 9.53  | 0.020     | 0.51 | 7.8    | 3.5  |
| 812424         | 1/2    | 12.70 | 0.020     | 0.51 | 10.2   | 4.6  |
| 812425         | 5/8    | 15.88 | 0.020     | 0.51 | 12.8   | 5.8  |
| 812426         | 3/4    | 19.05 | 0.020     | 0.51 | 15.3   | 6.9  |
| 812413         | 3/8    | 9.53  | 0.030     | 0.76 | 11.9   | 5.3  |
| 812414         | 1/2    | 12.70 | 0.030     | 0.76 | 15.9   | 7.2  |
| 812415         | 5/8    | 15.88 | 0.030     | 0.76 | 19.9   | 9.0  |
| 812416         | 3/4    | 19.05 | 0.030     | 0.76 | 23.9   | 10.8 |



## Buckles

### SCREW LOCK BUCKLES — Stainless Steel *Special Order*

| Catalog Number | Width  |       | Weight |     | Pkg. |
|----------------|--------|-------|--------|-----|------|
|                | Inches | m m   | Lbs    | Kg  | Qty. |
| 812720         | 1/4    | 6.35  | 0.3    | 0.1 | 50   |
| 812722         | 3/8    | 9.53  | 0.8    | 0.4 | 50   |
| 812724         | 1/2    | 12.70 | 2.1    | 1.0 | 25   |
| 812725         | 5/8    | 15.88 | 2.4    | 1.1 | 25   |
| 812726         | 3/4    | 19.05 | 3.7    | 1.7 | 25   |



### MONEL 400 BAND — 100 Ft. Per Roll *Special Order*

| Catalog Number | Width  |       | Thickness |      | Weight |     |
|----------------|--------|-------|-----------|------|--------|-----|
|                | Inches | m m   | Inches    | m m  | Lbs    | Kg  |
| 812803         | 3/8    | 9.53  | 0.025     | 0.63 | 3.7    | 1.7 |
| 812804         | 1/2    | 12.70 | 0.030     | 0.76 | 5.1    | 2.4 |
| 812805         | 5/8    | 15.88 | 0.030     | 0.76 | 6.4    | 3.0 |
| 812806         | 3/4    | 19.05 | 0.030     | 0.76 | 7.7    | 3.6 |



### MONEL BUCKLES — Package Quantity - 100 per Box *Special Order*

| Catalog Number | Width  |       | Weight |     |
|----------------|--------|-------|--------|-----|
|                | Inches | m m   | Lbs    | Kg  |
| 812853         | 3/8    | 9.53  | 0.8    | 0.4 |
| 812854         | 1/2    | 12.70 | 2.1    | 1.0 |
| 812855         | 5/8    | 15.88 | 2.1    | 1.1 |
| 812856         | 3/4    | 19.05 | 3.7    | 1.7 |



## MONEL BUCKLES

For use with corresponding sizes of Monel Band.

# USABAND

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## Light Duty Banding and Buckles

### BAND .015" (.38 mm) THICK — 200 - 300 Stainless Steel

| Catalog Number | Width  |       | Weight |     | Package Quantity |
|----------------|--------|-------|--------|-----|------------------|
|                | Inches | mm    | Lbs    | Kg  |                  |
| 812133         | 3/8    | 9.53  | 2.2    | 1.0 | 100 Ft. Roll     |
| 812134         | 1/2    | 12.70 | 2.9    | 1.3 | 100 Ft. Roll     |
| 812135         | 5/8    | 15.88 | 3.6    | 1.7 | 100 Ft. Roll     |
| 812136         | 3/4    | 19.05 | 4.4    | 2.0 | 100 Ft. Roll     |
| 812127         | 3/8    | 9.53  | 4.0    | 2.0 | 200 Ft. Roll     |
| 812128         | 1/2    | 12.70 | 5.8    | 2.6 | 200 Ft. Roll     |
| 812129         | 5/8    | 15.88 | 7.3    | 3.2 | 200 Ft. Roll     |
| 812130         | 3/4    | 19.05 | 8.8    | 3.9 | 200 Ft. Roll     |



## Band

### BAND .020" (.51 mm) THICK — 200 - 300 Stainless Steel

| Catalog Number | Width  |       | Weight |     | Package Quantity |
|----------------|--------|-------|--------|-----|------------------|
|                | Inches | mm    | Lbs    | Kg  |                  |
| 812161         | 3/8    | 9.53  | 2.9    | 1.3 | 100 Ft. Roll     |
| 812171         | 1/2    | 12.70 | 3.8    | 1.7 | 100 Ft. Roll     |
| 812181         | 5/8    | 15.88 | 5.6    | 2.6 | 100 Ft. Roll     |
| 812191         | 3/4    | 19.05 | 5.7    | 2.5 | 100 Ft. Roll     |
| 812163         | 3/8    | 9.53  | 5.6    | 2.5 | 200 Ft. Roll     |
| 812173         | 1/2    | 12.70 | 7.6    | 3.4 | 200 Ft. Roll     |
| 812183         | 5/8    | 15.88 | 11.2   | 5.1 | 200 Ft. Roll     |
| 812193         | 3/4    | 19.05 | 11.3   | 5.0 | 200 Ft. Roll     |



## Clips

### TYPE 304 STAINLESS STEEL — Package Quantity - 100 Per Box

| Catalog Number | Width  |       | Weight |     |
|----------------|--------|-------|--------|-----|
|                | Inches | mm    | Lbs    | Kg  |
| 812153         | 3/8    | 9.53  | 0.8    | 0.4 |
| 812154         | 1/2    | 12.70 | 2.1    | 1.0 |
| 812155         | 5/8    | 15.88 | 2.4    | 1.1 |
| 812156         | 3/4    | 19.05 | 3.7    | 1.7 |

## Clips

For use with all light duty band.

## Band

### BAND .025" (.64 mm) THICK — 200 - 300 Stainless Steel

| Catalog Number | Width  |       | Weight |     | Package Quantity |
|----------------|--------|-------|--------|-----|------------------|
|                | Inches | mm    | Lbs    | Kg  |                  |
| 812144         | 1/2    | 12.70 | 4.5    | 2.0 | 100 Ft. Roll     |
| 812145         | 5/8    | 15.88 | 5.6    | 2.6 | 100 Ft. Roll     |
| 812146         | 3/4    | 19.05 | 6.7    | 3.0 | 100 Ft. Roll     |
| 812148         | 1/2    | 12.70 | 9.0    | 4.1 | 200 Ft. Roll     |
| 812149         | 5/8    | 15.88 | 11.2   | 5.1 | 200 Ft. Roll     |
| 812150         | 3/4    | 19.05 | 13.4   | 6.1 | 200 Ft. Roll     |



### Band Type 304 — Stainless Steel — 200 Ft. Per Roll

| Catalog Number | Width  |       | Thickness |      | Weight |     |
|----------------|--------|-------|-----------|------|--------|-----|
|                | Inches | mm    | Inches    | mm   | Lbs    | Kg  |
| 812903         | 3/8    | 9.53  | 0.015     | 0.38 | 4.4    | 2.0 |
| 812904         | 1/2    | 12.70 | 0.015     | 0.38 | 5.8    | 2.6 |
| 812905         | 5/8    | 15.88 | 0.015     | 0.38 | 7.3    | 3.2 |
| 812906         | 3/4    | 19.05 | 0.015     | 0.38 | 8.8    | 3.9 |
| 812913         | 3/8    | 9.53  | 0.020     | 0.51 | 5.9    | 2.7 |
| 812914         | 1/2    | 12.70 | 0.020     | 0.51 | 7.6    | 3.4 |
| 812915         | 5/8    | 15.88 | 0.020     | 0.51 | 9.5    | 4.3 |
| 812916         | 3/4    | 19.05 | 0.020     | 0.51 | 11.3   | 5.0 |

## Light Duty Banding

Applications: Insulation banding, cable bundling and other lightweight applications.

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## Sign Mounting Brackets and Hardware

### 1-BOLT STRAIGHT LEG BRACKET (.075" THICK) — 50 Per Package

| Catalog Number | Description                                           | Weight |     |
|----------------|-------------------------------------------------------|--------|-----|
|                |                                                       | Lbs    | Kg  |
| 812100         | Stainless Steel with SS Bolt, Washer and Nylon Washer | 7.3    | 3.3 |
| 812004         | Stainless Steel, No Bolt or Washer                    | 5.9    | 2.7 |



### 1-BOLT FLARED LEG BRACKET (.075" THICK) — 50 Per Package

| Catalog Number | Description                                            | Weight |     |
|----------------|--------------------------------------------------------|--------|-----|
|                |                                                        | Lbs    | Kg  |
| 812021         | Stainless Steel, with SS Bolt, Washer and Nylon Washer | 7.6    | 3.5 |
| 812022         | Stainless Steel, No Bolt or Washer                     | 6.0    | 2.7 |



### 2-BOLT STRAIGHT LEG (.075" THICK) — 50 Per Package *Special Order*

| Catalog Number | Description                                           | Weight |     |
|----------------|-------------------------------------------------------|--------|-----|
|                |                                                       | Lbs    | Kg  |
| 812008         | Stainless Steel with SS Bolt, Washer and Nylon Washer | 9.6    | 4.4 |
| 812009         | Stainless Steel, No Bolt or Washer                    | 7.1    | 3.2 |

### BOLTS — 50 Per Box

| Catalog Number | Description                                                                        |
|----------------|------------------------------------------------------------------------------------|
| 812002         | Stainless Steel Bolts for Stainless Steel Brackets (5/16 - 18x 3/4" Long Hex Head) |



### Small Brackets *Special Order*

#### STAINLESS STEEL BRACKETS (For 3/8" and 1/2" width band) — 50 Per Package

| Catalog Number | Description                                                          | Weight |     |
|----------------|----------------------------------------------------------------------|--------|-----|
|                |                                                                      | Lbs    | Kg  |
| 812310         | Flared Leg (.052 Thick/1.3 mm) with SS Bolt, Nylon Washer, 1/2" Slot | 3.2    | 1.5 |
| 812315         | Straight Leg (.052 Thick/1.3 mm) with SS Bolt, Nylon Washer          | 3.2    | 1.5 |



"Over 60 Years of American Quality"

**Mounting Brackets, Banner Rods, Mounting Plates and Bolt/Clamps**

**TRAFFIC SIGNAL/BANNER ROD MOUNTING BRACKETS — 25 Per Box *Special Order***

Die cast aluminum brackets strap to poles to mount traffic signal lights, large street signs or banner rods. Use 3/4" x .030" stainless band and buckles.

| Catalog Number | Description                         | Weight Lbs |
|----------------|-------------------------------------|------------|
| 812040         | Standard Mount - NPT 1 1/2" d. Hole | 20.0       |
| 812045         | Narrow Mount - NPT 1 1/2" d. Hole   | 19.5       |
| 812075         | Extended Hub - NPT 1 1/2" d. Hole   | 25.0       |

**THREAD & HANG™ FIBERGLASS BANNER ROD — 25 Per Box *Special Order***

Strong, non-rusting banner mounting system for long lasting installations. Order a mount bracket for each pole. Rod length 3-4". Threads into 040 Aluminum Bracket.

| Catalog Number | Description                      | Weight Lbs |
|----------------|----------------------------------|------------|
| 812-50         | Fiberglass Rod w/Threaded Insert | 40.0       |

**MOUNTING PLATES — Secure with band and buckles**

Strapping holds this extruded aluminum mounting plate to utility poles. Includes plated bolt and nut, unless otherwise stated.

| Catalog Number | Description                                                      | Weight Lbs |
|----------------|------------------------------------------------------------------|------------|
| 812510         | Mounting Plate<br>1 1/2" x 4 3/4" with 2" Plated Bolt            | .60        |
| 812512         | Heavy Duty Mounting Plate<br>1 1/2" x 5 1/4" with 2" Plated Bolt | .85        |
| 812512.3       | Heavy Duty Mounting Plate<br>1 1/2" x 5 1/4" with 3" Plated Bolt | 1.0        |
| 812513         | Heavy Duty Mounting Plate<br>1 1/2" x 5 1/4" with 3" Plated Bolt | 1.0        |

**BOLT/CLAMPS**

Extruded aluminum fittings with zinc plated bolt, nut and washer. To be used with Band for mounting pole hardware.

| Catalog Number | Description                                                                                         | Weight Lbs |
|----------------|-----------------------------------------------------------------------------------------------------|------------|
| 812500         | Bolt/Clamp for use with 3/4" 812206 band. Includes plated nut, bolt 3/8" - 16 x 6" and washer.      | .50        |
| 812504         | HD Bolt/Clamp for use with 1 1/4" 812432 band. Includes plated nut, bolt 5/8" - 11 x 8" and washer. | 1.25       |

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| <b>BOLT/BAND ASSEMBLES</b> |                          | <i>Special Order</i> |          |                   |
|----------------------------|--------------------------|----------------------|----------|-------------------|
| Catalog Number             | Description              | Pole Dia Inches      | Min Lbs. | Breaking Strength |
| 812343                     | 812500 w/ 36" of 812206  | 8" to 10"            | 5200     | 2340              |
| 812344                     | 812500 w/ 40" of 812206  | 8" to 11"            | 5100     | 2210              |
| 812345                     | 812500 w/ 48" of 812206  | 10" to 13"           | 4600     | 2070              |
| 812346                     | 812500 w/ 60" of 812206  | 13" to 17"           | 4000     | 1800              |
| 812347                     | 812500 w/ 72" of 812206  | 17" to 21"           | 3500     | 1575              |
| 812348                     | 812500 w/ 80" of 812206  | 21" to 24"           | 3300     | 1485              |
| 812143                     | 812504 w/ 36" of 812432  | 8" to 10"            | 12300    | 5535              |
| 812144                     | 812504 w/ 40" of 812432  | 8" to 11"            | 11900    | 5300              |
| 812145                     | 812504 w/ 48" of 812432  | 10" to 13"           | 10200    | 4590              |
| 812146                     | 812504 w/ 60" of 812432  | 13" to 17"           | 8900     | 4005              |
| 812147                     | 812504 w/ 72" of 812432  | 17" to 21"           | 7900     | 3555              |
| 812148                     | 812504 w/ 80" of 812432  | 21" to 24"           | 7400     | 3330              |
| 812149                     | 812504 w/ 86" of 812432  | 23" to 26"           | 7250     | 3250              |
| 812151                     | 812504 w/ 144" of 812432 | 27" to 32"           | 5500     | 2950              |
| 812152                     | 812504 w/ 96" of 812432  | 25" to 28"           | 7000     | 3180              |

**Pole Hardware Mounting Kit** — Each kit contains one mounting plate and two-bolt clamp assemblies with pre-cut band.(Prices on request.)

|                |                                | <i>Special Order</i> |          |
|----------------|--------------------------------|----------------------|----------|
| Catalog Number | Description                    | Pole Dia. Inches     | Range Cm |
| 850343         | 1pc - 812510 and 2pcs - 812343 | 8" to 10"            | 20 to 25 |
| 850345         | 1pc - 812510 and 2pcs - 812345 | 10" to 13"           | 25 to 33 |
| 850346         | 1pc - 812510 and 2pcs - 812346 | 13" to 17"           | 33 to 43 |
| 850347         | 1pc - 812510 and 2pcs - 812347 | 17" to 21"           | 43 to 53 |
| 850348         | 1pc - 812510 and 2pcs - 812348 | 21" to 24"           | 53 to 61 |
| 850143         | 1pc - 812512 and 2pcs - 812143 | 8" to 10"            | 20 to 25 |
| 850145         | 1pc - 812512 and 2pcs - 812145 | 10" to 13"           | 25 to 33 |
| 850146         | 1pc - 812512 and 2pcs - 812146 | 13" to 17"           | 33 to 43 |
| 850147         | 1pc - 812512 and 2pcs - 812147 | 17" to 21"           | 43 to 53 |
| 850148         | 1pc - 812512 and 2pcs - 812148 | 21" to 24"           | 53 to 61 |
| 850149         | 1pc - 812512 and 2pcs - 812149 | 24" to 27"           | 61 to 69 |

\*Prices on Other Sizes Upon Request.

# USABAND

"Over 60 Years of American Quality"

## TYPICAL MINIMUM BREAKING STRENGTH OF USABAND BANDS:

(VALUES SHOWN IN POUNDS)

### STAINLESS STEEL:

### CARBON STEEL:

| <u>THICKNESS</u> | <u>WIDTH</u> | <u>TYPE</u> | <u>FORCE</u> | <u>THICKNESS</u> | <u>WIDTH</u> | <u>FORCE</u> |
|------------------|--------------|-------------|--------------|------------------|--------------|--------------|
| .015             | 3/8          | 201         | 450          | .025             | 3/8          | 700          |
| .015             | 1/2          | 201         | 600          | .030             | 1/2          | 1125         |
| .015             | 5/8          | 201         | 750          | .030             | 5/8          | 1405         |
| .015             | 3/4          | 201         | 900          | .030             | 3/4          | 1690         |
| .020             | 1/4          | 201         | 500          | .048             | 3/4          | 2700         |
| .020             | 1/4          | 316         | 400          | .048             | 1            | 3600         |
|                  |              |             |              | .048             | 1 1/4        | 4500         |
| .023             | 3/8          | 201         | 675          |                  |              |              |
| .023             | 1/2          | 201         | 955          |                  |              |              |
| .023             | 5/8          | 201         | 1125         |                  |              |              |
| .023             | 3/4          | 201         | 1435         |                  |              |              |
| .025             | 3/8          | 201         | 900          |                  |              |              |
| .025             | 3/8          | 316         | 750          |                  |              |              |
| .030             | 1/2          | 201         | 1500         |                  |              |              |
| .030             | 1/2          | 316         | 1200         |                  |              |              |
| .030             | 5/8          | 201         | 1875         |                  |              |              |
| .030             | 5/8          | 316         | 1500         |                  |              |              |
| .030             | 3/4          | 201         | 2250         |                  |              |              |
| .030             | 3/4          | 316         | 1800         |                  |              |              |
| .044             | 3/4          | 201         | 3300         |                  |              |              |
| .044             | 1            | 201         | 4400         |                  |              |              |
| .044             | 1 1/4        | 201         | 5500         |                  |              |              |
| .044             | 1 1/2        | 201         | 6600         |                  |              |              |

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| 316                                                                                              | 317L                                                                                                                         | 410                                                                                               | 430                                                                                           | Monel 400                                                                                              | Inconel 625                                                                                                         | Titanium GR1                                                                       | GCS 1045-1055                                       |
|--------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------------------------------------------------|
| C 0.08 Max.<br>Mn 2.00 Max.<br>Si 1.00 Max.<br>Cr 16.00-18.00<br>Ni 10.00-14.00<br>Mo 2.00- 3.00 | C 0.08 Max.<br>Mn 2.00 Max.<br>Si 1.00 Max.<br>Ni 11.00-15.00<br>Cr 18.00-20.00<br>P .04 Max.<br>S .03 Max.<br>Mo 3.00- 4.00 | C 0.15 Max.<br>Cr 11.50-13.50<br>Mn 1.00 Max.<br>Si 1.00 Max.<br>P 0.040 Max.<br>S 0.030 Max.     | C 0.12 Max.<br>Cr 16.00-18.00<br>Mn 1.00 Max.<br>Si 1.00 Max.<br>P 0.040 Max.<br>S 0.030 Max. | C 0.30 Max.<br>Mn 1.25 Max.<br>Si 0.50 Max.<br>Ni 63.0-70.0<br>Cu 31.5<br>Fe 1.25 Max.<br>S 0.024 Max. | C 0.1 Max.<br>Cr 20.0-23.0<br>Mn 0.5 Max.<br>Mo 8.0-10.0<br>Ti 0.4 Max.<br>Fe 2.5 Max.<br>Al 0.4 Max.<br>Ni Balance | C .10 Max.<br>N .03 Max.<br>H .015 Max.<br>O .18 Max.<br>Fe .20 Max.<br>Ti Balance | C .40-60<br>Mn .60-90<br>P .040 Max.<br>S .050 Max. |
| 0.29                                                                                             | 0.29                                                                                                                         | 0.28                                                                                              | 0.28                                                                                          | .319                                                                                                   | .305                                                                                                                | .163                                                                               | .283                                                |
| 28.0                                                                                             | 28.0                                                                                                                         | 29.0                                                                                              | 29.0                                                                                          | 26.0                                                                                                   | 30.0                                                                                                                | 15.0                                                                               | 30                                                  |
| Austenitic                                                                                       | Austenitic                                                                                                                   | Martensitic                                                                                       | Ferritic                                                                                      | —                                                                                                      | —                                                                                                                   | Alpha                                                                              | Ferritic                                            |
| 0.12                                                                                             | 0.12                                                                                                                         | 0.11                                                                                              | 0.11                                                                                          | .099                                                                                                   | .095                                                                                                                | .124                                                                               | .12                                                 |
| 9.4                                                                                              | 9.4                                                                                                                          | 14.4                                                                                              | 15.1                                                                                          | 14.0                                                                                                   | —                                                                                                                   | 10                                                                                 | 29.3                                                |
| 12.4                                                                                             | 12.4                                                                                                                         | 16.6                                                                                              | 15.2                                                                                          | 21.0                                                                                                   | —                                                                                                                   | 11                                                                                 | 21.9                                                |
| 8.9                                                                                              | 8.9                                                                                                                          | 5.5                                                                                               | 5.8                                                                                           | 7.7                                                                                                    | —                                                                                                                   | 4.6                                                                                | 6.3                                                 |
| 9.0                                                                                              | 9.0                                                                                                                          | 6.3                                                                                               | 6.1                                                                                           | 8.8                                                                                                    | —                                                                                                                   | 5.3                                                                                | 7.3                                                 |
| 9.7                                                                                              | 9.7                                                                                                                          | 6.4                                                                                               | 6.3                                                                                           | 9.1                                                                                                    | —                                                                                                                   | 5.5                                                                                | 7.9                                                 |
| 10.3                                                                                             | 10.3                                                                                                                         | 6.5                                                                                               | 6.6                                                                                           | 9.3                                                                                                    | —                                                                                                                   | 5.7                                                                                | 8.2                                                 |
| 2500-2550°F.                                                                                     | 2500-2550°F.                                                                                                                 | 2700-2790°F.                                                                                      | 2600-2750°F.                                                                                  | 2370-2460°F.                                                                                           | 2350-2460°F.                                                                                                        | 3030-3050°F.                                                                       | —                                                   |
| Non-Magnetic<br>$\mu = 1.008$<br>74.0                                                            | Non-Magnetic<br>$\mu = 1.008$<br>74.0                                                                                        | Magnetic<br>$\mu = 700-1000$<br>57.0                                                              | Magnetic<br>$\mu = 600-1100$<br>60.0                                                          | —<br>—<br>5.1                                                                                          | Non-Magnetic<br>1.006<br>12.9                                                                                       | Non-Magnetic<br>1.00005<br>4.20                                                    | Magnetic<br>1500-2000<br>17.2                       |
| 70-85 R <sub>B</sub>                                                                             | 70-85 R <sub>B</sub>                                                                                                         | 75-85 R <sub>B</sub>                                                                              | 75-90 R <sub>B</sub>                                                                          | 60-80 R <sub>B</sub>                                                                                   | 88-94 R <sub>B</sub>                                                                                                | 64-70 R <sub>B</sub>                                                               | 80-95 R <sub>B</sub>                                |
| 80,000<br>90,000                                                                                 | 75,000<br>85,000                                                                                                             | 65,000<br>85,000                                                                                  | 65,000<br>75,000                                                                              | 70,000<br>75,000                                                                                       | 120,000<br>130,000                                                                                                  | 35,000<br>46,000                                                                   | 75,000<br>80,000                                    |
| 35,000<br>50,000                                                                                 | 30,000<br>45,000                                                                                                             | 35,000<br>60,000                                                                                  | 40,000<br>55,000                                                                              | 32,000<br>40,000                                                                                       | 60,000<br>75,000                                                                                                    | 25,000<br>31,000                                                                   | 55,000<br>65,000                                    |
| 35<br>45                                                                                         | 35<br>45                                                                                                                     | 20<br>30                                                                                          | 20<br>25                                                                                      | 35<br>40                                                                                               | 30<br>40                                                                                                            | 40<br>50                                                                           | 10<br>14                                            |
| 0.400-0.500                                                                                      | 0.400-0.500                                                                                                                  | .275-.350                                                                                         | .300-400                                                                                      | —                                                                                                      | —                                                                                                                   | —                                                                                  | —                                                   |
| 22,400<br>16,800<br>11,200<br>6,900                                                              | 22,400<br>16,800<br>11,200<br>6,900                                                                                          | 12,000<br>5,500<br>2,600<br>1,600                                                                 | 8,400<br>4,900<br>2,200<br>1,400                                                              | —<br>—<br>—<br>—                                                                                       | —<br>—<br>—<br>—                                                                                                    | —<br>—<br>—<br>—                                                                   | —<br>—<br>—<br>—                                    |
| 48,000<br>28,000<br>18,000                                                                       | 48,000<br>28,000<br>18,000                                                                                                   | 15,000<br>9,000<br>8,500                                                                          | 15,000<br>8,000<br>5,000                                                                      | —<br>—<br>—                                                                                            | —<br>—<br>—                                                                                                         | —<br>—<br>—                                                                        | —<br>—<br>—                                         |
| Non-Hardening                                                                                    | Non-Hardening                                                                                                                | Heat Treatable                                                                                    | Non-Hardening                                                                                 | —                                                                                                      | Non-Hardening                                                                                                       | Non-Hardening                                                                      | Annealed                                            |
| 1700°F.<br>1550°F.                                                                               | 1700°F.<br>1550°F.                                                                                                           | 1300°F.<br>1450°F.                                                                                | 1550°F.<br>1650°F.                                                                            | 1000°F.<br>1100°F.                                                                                     | 2000°F.                                                                                                             | —                                                                                  | —                                                   |
| Very Good<br>Tough Welds                                                                         | Good<br>Tough Welds                                                                                                          | Fair, Preheat<br>400-500°F.<br>Anneal 1250°F.<br>After Welding                                    | Fair, Non-Ductile<br>Welds. Some<br>Response to<br>Annealing.                                 | Good                                                                                                   | Good                                                                                                                | Good                                                                               | Good                                                |
| Excellent<br>Very Good<br>Very Good<br>Good<br>Good<br>Good<br>Good                              | Excellent<br>Very Good<br>Very Good<br>Good<br>Very Good<br>Good<br>Good                                                     | Good<br>Fair<br>Poor<br>No<br>Fair<br>No<br>No                                                    | Good<br>Good<br>Poor<br>No<br>Fair<br>Fair<br>No                                              | Good<br>Good<br>Excellent<br>Excellent<br>Good<br>Good<br>Good                                         | Good<br>Good<br>Excellent<br>Excellent<br>Good<br>Good<br>Good                                                      | Good<br>Good<br>Good<br>Good<br>Good                                               | Good/Fair<br>Fair<br>Poor<br>No<br>No<br>No<br>No   |
| Marine, Chemical,<br>Food, Petroleum,<br>Paper, Textile,<br>Medical                              | Pulp/Paper<br>Chemical                                                                                                       | Hardware,<br>Fasteners,<br>Cutlery,<br>Machinery Parts,<br>Rifle Barrels,<br>Tools<br>Seal Screws | Interior<br>Architecture,<br>Automotive Trim                                                  | Electronics,<br>Marine,<br>Chemical,<br>Petroleum                                                      | Chemical,<br>Nuclear,<br>Aerospace,<br>Marine                                                                       | Corrosive<br>Service Good<br>for Machinery<br>Weldable                             | Indoor<br>Mild Atmosphere                           |
| 316 Band/Buckle<br>Clamps                                                                        | 317L Band<br>for Paper Mills -<br>Special<br>Applications                                                                    |                                                                                                   |                                                                                               | Special                                                                                                | Special                                                                                                             | Special                                                                            | Band/Buckle<br>Prefomed Clamps<br>Brack-Its         |

# USABAND

"Over 60 Years of American Quality"

## METALS DATA SHEET

| AIISI TYPE NUMBER OR NAME                                           | 201                                                                                            | 201L                                                                                           | 301                                                                            | 302                                                                            | 304                                                                            |
|---------------------------------------------------------------------|------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|--------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| <b>PRINCIPAL ALLOYING ELEMENTS, %</b>                               | C 0.15 Max.<br>Mn 5.50- 7.50<br>Si 1.00 Max.<br>Cr 16.00-18.00<br>Ni 3.50- 5.50<br>N 0.25 Max. | C 0.03 Max.<br>Mn 5.50- 7.50<br>Si 1.00 Max.<br>Cr 16.00-18.00<br>Ni 3.50- 5.50<br>N 0.25 Max. | C 0.15 Max.<br>Mn 2.00 Max.<br>Si 1.00 Max.<br>Cr 16.00-18.00<br>Ni 6.00- 8.00 | C 0.15 Max.<br>Mn 2.00 Max.<br>Si 1.00 Max.<br>Cr 17.00-19.00<br>Ni 8.00-10.00 | C 0.08 Max.<br>Mn 2.00 Max.<br>Si 1.00 Max.<br>Cr 18.00-20.00<br>Ni 8.00-10.50 |
| <b>PHYSICAL PROPERTIES</b>                                          |                                                                                                |                                                                                                |                                                                                |                                                                                |                                                                                |
| Density, Lb./Cu. In.                                                | 0.28                                                                                           | 0.28                                                                                           | 0.29                                                                           | 0.29                                                                           | 0.29                                                                           |
| Mod. of Elasticity in Tension × 10 <sup>6</sup> Lb./Sq. In.         | 28.6                                                                                           | 28.6                                                                                           | 28.0                                                                           | 28.0                                                                           | 28.0                                                                           |
| Structure                                                           | Austenitic                                                                                     | Austenitic                                                                                     | Austenitic                                                                     | Austenitic                                                                     | Austenitic                                                                     |
| Specific Heat, B.t.u./°F./Lb./32-212°F.                             | 0.12                                                                                           | 0.12                                                                                           | 0.12                                                                           | 0.12                                                                           | 0.12                                                                           |
| Thermal Conductivity, B.t.u./Sq. Ft./Hr.°F./Ft.                     | 212°F.<br>9.4<br>932°F.<br>12.4                                                                | 9.4<br>12.4                                                                                    | 9.4<br>12.4                                                                    | 9.4<br>12.4                                                                    | 9.4<br>12.4                                                                    |
| Mean Coefficient of Thermal Expansion Per °F. × 10 <sup>-6</sup>    | 32-212°F.<br>8.7<br>32-600°F.<br>9.7<br>32-1000°F.<br>10.2<br>32-1200°F.<br>—                  | 9.0<br>10.0<br>10.5<br>—                                                                       | 9.4<br>9.5<br>10.1<br>—                                                        | 9.6<br>9.9<br>10.2<br>10.4                                                     | 9.6<br>9.9<br>10.2<br>10.4                                                     |
| Melting Range                                                       | 2550-2650°F.                                                                                   | 2550-2650°F.                                                                                   | 2550-2590°F.                                                                   | 2550-2590°F.                                                                   | 2550-2650°F.                                                                   |
| <b>ELECTRICAL PROPERTIES</b>                                        |                                                                                                |                                                                                                |                                                                                |                                                                                |                                                                                |
| Magnetic Permeability, Annealed                                     | Non-Magnetic                                                                                   | Non-Magnetic                                                                                   | Non-Magnetic                                                                   | Non-Magnetic                                                                   | Non-Magnetic                                                                   |
| Elec. Resistivity, Microhm-cm. 70°F.                                | μ = 1.02<br>69.0                                                                               | μ = 1.02<br>69.0                                                                               | μ = 1.02<br>72.0                                                               | μ = 1.008<br>72.0                                                              | μ = 1.008<br>70.0                                                              |
| <b>MECHANICAL PROPERTIES</b>                                        |                                                                                                |                                                                                                |                                                                                |                                                                                |                                                                                |
| Rockwell Hardness                                                   | 90-95 R <sub>B</sub>                                                                           | 20-30 R <sub>C</sub>                                                                           | 75-95 R <sub>B</sub>                                                           | 70-90 R <sub>B</sub>                                                           | 70-90 R <sub>B</sub>                                                           |
| Ultimate Tensile Strength, Typical [PSI]                            | 100,000<br>115,000                                                                             | 120,000<br>135,000                                                                             | —<br>105,000                                                                   | —<br>80,000                                                                    | 75,000<br>80,000                                                               |
| Yield Strength, Band-Typical [PSI]                                  | 45,000<br>60,000                                                                               | 85,000<br>90,000                                                                               | —<br>55,000                                                                    | —<br>45,000                                                                    | 30,000<br>45,000                                                               |
| Elongation, Band-in 2 Inches, Typical [%]                           | 40<br>55                                                                                       | 40<br>45                                                                                       | —<br>50                                                                        | —<br>50                                                                        | 30<br>45                                                                       |
| Ductility, Annealed-Olsen, Inches                                   | 0.425-0.500                                                                                    | 0.425-0.500                                                                                    | 0.425-0.500                                                                    | 0.400-0.450                                                                    | 0.400-0.450                                                                    |
| Creep Strength, Life of 10,000 Hrs. with 1% Elongation, Lb./Sq. In. | At 1000°F.<br>—<br>At 1100°F.<br>—<br>At 1200°F.<br>—<br>At 1300°F.<br>—                       | —<br>—<br>—<br>—                                                                               | —<br>—<br>—<br>—                                                               | 17,000<br>12,000<br>7,000<br>4,000                                             | 17,000<br>12,000<br>7,000<br>4,000                                             |
| Strength at Elevated Temps., Short Time Tests, Lb./Sq. In.          | 1300°F.<br>37,500<br>1500°F.<br>23,000<br>1700°F.<br>11,000                                    | 37,500<br>23,000<br>11,000                                                                     | 35,500<br>22,500<br>11,000                                                     | 36,000<br>22,000<br>13,500                                                     | 36,000<br>22,000<br>13,500                                                     |
| <b>HEAT TREATMENT</b>                                               | Non-Hardening                                                                                  | Non-Hardening                                                                                  | Non-Hardening                                                                  | Non-Hardening                                                                  | Non-Hardening                                                                  |
| HEAT-RESISTANCE Scaling Temperature                                 | Continuous Service<br>1550°F.<br>Intermittent Service<br>1400°F.                               | 1550°F.<br>1400°F.                                                                             | 1650°F.<br>1500°F.                                                             | 1650°F.<br>1500°F.                                                             | 1700°F.<br>1550°F.                                                             |
| <b>WELDING PROPERTIES</b>                                           | Very Good Tough Welds                                                                          | Very Good Tough Welds                                                                          | Very Good Tough Welds                                                          | Very Good Tough Welds                                                          | Very Good Tough Welds                                                          |
| <b>CORROSION RESISTANCE</b>                                         |                                                                                                |                                                                                                |                                                                                |                                                                                |                                                                                |
| Mild Atmospheric and Fresh Water                                    | Good                                                                                           | Good                                                                                           | Good                                                                           | Very Good                                                                      | Very Good                                                                      |
| Industrial Atmosphere                                               | Good                                                                                           | Good                                                                                           | Good                                                                           | Very Good                                                                      | Very Good                                                                      |
| Marine Atmosphere                                                   | Fair                                                                                           | Fair                                                                                           | Fair                                                                           | Good                                                                           | Good                                                                           |
| Salt Water                                                          | No                                                                                             | No                                                                                             | No                                                                             | No                                                                             | No                                                                             |
| Mild Chemical                                                       | Fair                                                                                           | Fair                                                                                           | Fair                                                                           | Fair                                                                           | Good                                                                           |
| Oxidizing Chemical                                                  | Fair                                                                                           | Fair                                                                                           | Fair                                                                           | Fair                                                                           | Good                                                                           |
| Reducing Chemical                                                   | No                                                                                             | No                                                                                             | No                                                                             | No                                                                             | No                                                                             |