

COLD FINISH CARBON STEEL

BAR SPECIFICATION

C - 1018 - COLOR CODE - BLACK

General Purpose, low carbon, suited to Cold Forming and Welding. Machinability 76%.

C - 1045 - COLOR CODE - BRONZE

Medium carbon that has advantages in strength over lower carbon steels - important for shafting. Good heat treatment which is useful for studs and special bolts. Machines to a smoother finish than 1018. Machinability 57%.

C - 1117 - COLOR CODE - RED

Ideal for use in manufacture of parts subject to shock or vibrations, as it is readily case carbonized. Machinability 90%.

C - 1215 - COLOR CODE - BLUE

Low carbon screw stock, produces smooth and bright finish. Machinability 136%.

C - 12L14 - COLOR CODE - BROWN (LED "A")

Recommended for high speed automatic screw machining. Produces a smooth machined surface. Provides longer tool life and increased production. Contains lead. Machinability 180%.

C - 12L15X - COLOR CODE - RED AND GREEN

Ledloy "A" with Selenium added. Provides faster machining than Led "A". Produces excellent surface finish and longer tool life. Machinability 300%.

STANDARD MANUFACTURING TOLERANCES

(Undersize variation in inches) COLD FINISHED CARBON BARS

| <i>Size and Shape</i> | <i>Carbon to .28% Max.</i> | <i>Carbon over .28% to .55%</i> |
|-----------------------|----------------------------|---------------------------------|
| ROUNDS | | |
| 1½" or under | .002" | .003" |
| Over 1½" to 2½" Incl. | .003" | .004" |
| Over 2½" to 4" Incl. | .004" | .005" |
| Over 4" to 6" Incl. | .005" | .006" |
| Over 6" to 8" Incl. | .006" | .007" |
| Over 8" to 9" Incl. | .007" | .008" |
| HEXAGONS | | |
| Up to ¾" Incl. | .002" | .003" |
| Over ¾" to 1½" Incl. | .003" | .004" |
| Over 1½" to 2½" Incl. | .004" | .005" |
| Over 2½" to 3⅞" Incl. | .005" | .006" |
| SQUARES | | |
| Up to ¾" Incl. | .002" | .004" |
| Over ¾" to 1½" Incl. | .003" | .005" |
| Over 1½" to 2½" Incl. | .004" | .006" |
| Over 2½" to 3⅞" Incl. | .006" | .006" |
| FLATS | | |
| To ¾" Incl. | .003" | .004" |
| Over ¾" to 1½" Incl. | .004" | .005" |
| Over 1½" to 3" Incl. | .005" | .006" |
| Over 3" to 4" Incl. | .006" | .006" |
| Over 4" to 6" Incl. | .006" | .010" |
| Over 6" | .013" | |

COLD DRAWN FLATS



Standard Lengths 10/12 Ft. C-1018 (Cont'd.)

| <i>Size in Inches</i> | | | | <i>Size in Inches</i> | | | | | |
|---------------------------|-------|-----------------|-------|---------------------------|-------|-----------------|-------|-------|------|
| | | <i>Lbs./Ft.</i> | | | | <i>Lbs./Ft.</i> | | | |
| 1/2 | x | 1 1/2 | 2.55 | 3/4 | x | 4 1/2 | 11.48 | | |
| | | 1 3/4 | 2.98 | | | 5 | 12.75 | | |
| | | 2 | 3.40 | | | 6 | 15.30 | | |
| | | 2 1/4 | 3.83 | | | 8 | 20.40 | | |
| | | 2 1/2 | 4.25 | | | 10 | 25.50 | | |
| | | 3 | 5.10 | | | 12 | 30.60 | | |
| | | 3 1/2 | 5.95 | | | | | | |
| | | 4 | 6.80 | | | 7/8 | x | 2 | 5.95 |
| | | 4 1/2 | 7.65 | | | | | | |
| | | 5 | 8.50 | | | 1 | x | 1 1/4 | 4.25 |
| | | 5 1/2 | 9.35 | | | | | 1 1/2 | 5.10 |
| | | 6 | 10.20 | | | | | 1 3/4 | 5.95 |
| | | 7 | 11.90 | | | | | 2 | 6.80 |
| | | 8 | 13.60 | | | | | 2 1/2 | 8.50 |
| 10 | 17.00 | | | 2 3/4 | 9.35 | | | | |
| 12 | 20.40 | | | 3 | 10.20 | | | | |
| | | | | 3 1/2 | 11.90 | | | | |
| 5/8 | x | 3/4 | 1.59 | 4 | 13.60 | | | | |
| | | 1 | 2.12 | 4 1/2 | 15.30 | | | | |
| | | 1 1/2 | 3.19 | 5 | 17.00 | | | | |
| | | 2 | 4.25 | 6 | 20.40 | | | | |
| | | 2 1/2 | 5.31 | 7 | 23.80 | | | | |
| | | 3 | 6.38 | 8 | 27.20 | | | | |
| | | 4 | 8.50 | 10 | 34.00 | | | | |
| | | 6 | 12.75 | 12 | 40.80 | | | | |
| | | 8 | 17.00 | | | | | | |
| | | 10 | 21.25 | 1 1/4 | x | 1 1/2 | 6.38 | | |
| 12 | 25.50 | | | 1 3/4 | 7.44 | | | | |
| | | | | 2 | 8.50 | | | | |
| 3/4 | x | 1 | 2.55 | 2 1/4 | 9.56 | | | | |
| | | 1 1/4 | 3.19 | 2 1/2 | 10.63 | | | | |
| | | 1 1/2 | 3.83 | 3 | 12.75 | | | | |
| | | 1 3/4 | 4.46 | 3 1/2 | 14.88 | | | | |
| | | 2 | 5.10 | 4 | 17.00 | | | | |
| | | 2 1/4 | 5.73 | 4 1/2 | 19.13 | | | | |
| | | 2 1/2 | 6.38 | 5 | 21.25 | | | | |
| | | 2 3/4 | 7.01 | 5 1/2 | 23.38 | | | | |
| | | 3 | 7.65 | 6 | 25.50 | | | | |
| | | 3 1/4 | 8.29 | 8 | 34.00 | | | | |
| | | 3 1/2 | 8.93 | 10 | 42.50 | | | | |
| | | 4 | 10.20 | 12 | 51.00 | | | | |

Looking for a specific material, grade, or size that's not listed in our Material Selection Guide?
Call and inquire!

COLD DRAWN FLATS



Standard Lengths 10/12 Ft. C-1018 (Cont'd.)

| <i>Size in Inches</i> | <i>Lbs./Ft.</i> | <i>Size in Inches</i> | <i>Lbs./Ft.</i> |
|---------------------------|-----------------|---------------------------|-----------------|
| 1½ x 1¾ | 8.93 | 2 x 2¼ | 15.30 |
| 2 | 10.20 | 2½ | 17.00 |
| 2¼ | 11.48 | 3 | 20.40 |
| 2½ | 12.75 | 3½ | 23.80 |
| 3 | 15.30 | 4 | 27.20 |
| 3½ | 17.85 | 4½ | 30.60 |
| 4 | 20.40 | 5 | 34.00 |
| 4½ | 22.95 | 6 | 40.80 |
| 5 | 25.50 | 8 | 54.40 |
| 5½ | 28.05 | 10 | 68.00 |
| 6 | 30.60 | 12 | 81.60 |
| 8 | 40.80 | | |
| 10 | 51.00 | 2½ x 3 | 25.50 |
| 12 | 61.20 | 3½ | 29.75 |
| | | 4 | 34.00 |
| 1¾ x 2 | 11.90 | 5 | 42.50 |
| 2½ | 14.88 | 6 | 51.00 |
| 3 | 17.85 | | |
| 6 | 35.70 | 3 x 3½ | 35.70 |
| | | 4 | 40.80 |
| | | 5 | 51.00 |
| | | 6 | 61.20 |
| | | 8 | 81.60 |

For Specifications See Page 27.

T G & P ROUNDS



12 - 24 Ft. Random Lengths

C-1045

Call for current available stock length

| <i>Size in Inches</i> | <i>Lbs./Ft.</i> | <i>Size in Inches</i> | <i>Lbs./Ft.</i> |
|--------------------------------|-----------------|---------------------------------|-----------------|
| ½ | .67 | 1½ | 6.01 |
| ⅝ | 1.04 | 1⅝ | 7.05 |
| ¾ | 1.50 | 1 ¹⁵ / ₁₆ | 10.02 |
| 7/8 | 2.04 | 2 | 10.68 |
| 1 | 2.67 | 2 ³ / ₁₆ | 12.78 |
| 1⅛ | 3.38 | 2 ⁷ / ₁₆ | 15.87 |
| 1 ³ / ₁₆ | 3.77 | 2½ | 16.96 |
| 1¼ | 4.17 | 2 ¹⁵ / ₁₆ | 23.04 |
| 1 ⁷ / ₁₆ | 5.52 | 3 | 24.03 |

COLD DRAWN ROUNDS



Std. Lengths
10/12 Ft.

| | | AISI TYPE | | | | | |
|-----------------------|-----------------|-----------|-------|-------|---------|--------|-------|
| <i>Size in Inches</i> | <i>Lbs./Ft.</i> | C1018 | C1117 | C1215 | C12L15X | C12L14 | C1045 |
| 1/8 | .04 | X | | | | | |
| 5/32 | .07 | X | | | X | X | |
| 3/16 | .09 | X | | | | X | |
| 1/4 | .17 | X | | | | X | |
| 5/16 | .26 | X | | | | X | |
| .322 | .27 | | | | X | | |
| 11/32 | .32 | | | X | | | |
| 3/8 | .38 | X | X | | | X | |
| 7/16 | .51 | X | | | | X | |
| 1/2 | .67 | X | | X | | X | X* |
| 9/16 | .85 | X | | | | X | |
| 5/8 | 1.04 | X | X | X | | X | X |
| 11/16 | 1.26 | X | | | | X | |
| 3/4 | 1.50 | X | | X | | X | X* |
| 13/16 | 1.76 | | | | | X | |
| 7/8 | 2.04 | X | | X | | X | |
| 15/16 | 2.35 | X | | | | X | |
| 1 | 2.67 | X* | | X | | X | X* |
| 11/16 | 3.01 | X* | | X | | X | |
| 1 1/8 | 3.38 | X* | | X | | X | |
| 1 3/16 | 3.77 | X* | | | | X | |
| 1 1/4 | 4.17 | X* | | X | | X | X* |
| 1 5/16 | 4.60 | X* | | | | X | |
| 1 3/8 | 5.05 | X* | | | | X | |
| 1 7/16 | 5.52 | X | | | | X | X* |
| 1 1/2 | 6.01 | X* | | X | | X | X* |
| 1 9/16 | 6.52 | | | | | X | |
| 1 5/8 | 7.05 | | | X | | X | X* |
| 1 11/16 | 7.60 | X* | | | | X | |
| 1 3/4 | 8.18 | X* | | | | X | X* |
| 1 7/8 | 9.39 | X* | | | | X | |
| 1 15/16 | 10.02 | X* | | | | X | |
| 2 | 10.68 | X* | | X | | X | X* |
| 2 1/8 | 12.06 | X* | | | | X | |
| 2 3/16 | 12.78 | X* | | | | X | |
| 2 1/4 | 13.52 | X* | | | | X | X* |
| 2 5/16 | 14.28 | X | | X | | | |
| 2 3/8 | 15.06 | X* | | | | X | |
| 2 7/16 | 15.87 | X* | | | | X | X* |
| 2 1/2 | 16.96 | X* | | X | | X | X* |
| 2 5/8 | 18.40 | | | | | X | |

* Also Available In 20 Ft. Lengths

COLD DRAWN ROUNDS



Std. Lengths

10/12 Ft.

(Continued)

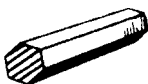
**Size in
Inches Lbs./Ft.**

| | | AISI TYPE | | | | | |
|---------------------------------|--------|-----------|-------|-------|---------|--------|-------|
| | | C1018 | C1117 | C1215 | C12L15X | C12L14 | C1045 |
| 2 ¹¹ / ₁₆ | 19.29 | | | | | X | |
| 2 ³ / ₄ | 20.20 | X* | | | | X | X* |
| 2 ⁷ / ₈ | 22.07 | X* | | | | X | |
| 2 ¹⁵ / ₁₆ | 23.04 | X* | | | | | |
| 3 | 24.03 | X* | | | | X | X* |
| 3 ¹ / ₄ | 28.21 | X* | | | | X | |
| 3 ³ / ₈ | 30.42 | | | | | X | |
| 3 ¹ / ₂ | 32.71 | X* | | | | X | |
| 3 ⁵ / ₈ | 35.09 | X* | | | | | |
| 3 ³ / ₄ | 37.55 | X* | | | | X | |
| 3 ⁷ / ₈ | 40.10 | | | | | X | |
| 4 | 42.73 | X* | | | | X | X* |
| 4 ¹ / ₂ | 54.08 | X* | | | | X | |
| 4 ³ / ₄ | 60.25 | | | | | X | |
| 5 | 66.76 | X* | | | | X | X* |
| 5 ¹ / ₂ | 80.78 | X* | | | | | |
| 6 | 96.13 | X* | | | | X | X* |
| 6 ¹ / ₄ | 104.30 | X* | | | | | |
| 6 ¹ / ₂ | 112.82 | X* | | | | | |

* Also Available In 20 Ft. Lengths

COLD DRAWN HEXAGONS

Std. Lengths 10/12 Ft.



Size in Inches Lbs./Ft.

| | | AISI TYPE | | |
|---------------------------------|------|-----------|-------|--------|
| | | C1018 | C1215 | C12L14 |
| 5 ⁵ / ₁₆ | .29 | X | | X |
| 3 ³ / ₈ | .41 | | | X |
| 7 ¹ / ₁₆ | .56 | X | | X |
| 1/2 | .74 | | | X |
| 9 ¹ / ₁₆ | .93 | | X | |
| 5 ⁵ / ₈ | 1.15 | | | X |
| 3/4 | 1.66 | | | X |
| 7 ⁷ / ₈ | 2.25 | | | X |
| 1 | 2.94 | | | X |
| 1 ³ / ₁₆ | 4.15 | | X | |
| 1 ¹¹ / ₁₆ | 8.40 | X | | |

COLD DRAWN SQUARES

Standard Lengths 10/12 Ft. C-1018



| <i>Size in Inches</i> | <i>Lbs./Ft.</i> | <i>Size in Inches</i> | <i>Lbs./Ft.</i> |
|---------------------------|-----------------|---------------------------|-----------------|
| 3/16 | .12 | 1 1/4 | 5.31 |
| 1/4 | .21 | 1 1/2 | 7.65 |
| 5/16 | .32 | 1 3/4 | 10.41 |
| 3/8 | .48 | 2 | 13.60 |
| 7/16 | .65 | 2 1/2 | 21.25 |
| 1/2 | .85 | 3 | 30.60 |
| 5/8 | 1.33 | 3 1/2 | 41.65 |
| 3/4 | 1.91 | 4 | 54.50 |
| 7/8 | 2.60 | 5 | 85.00 |
| 1 | 3.40 | 6 | 122.40 |
| 1 1/8 | 4.30 | | |

Also Available

| | |
|----------------|------|
| 5/16 (C-12L14) | .32 |
| 7/8 (C-1042) | 2.60 |
| 1 (C-1215) | 3.40 |

BARS & FLATS PROCESSING SERVICES

- Production Cutting, Shearing
- Sawing
- Miter Cutting
- Bending & Forming
- Fabrication
- Welding

Note: See Equipment and Services on pages 66-68 for details.