

| BARRAS CHATAS | Bitola        | Peso teórico kg/m |
|---------------|---------------|-------------------|
|               | 2,50mm x 1/2" | 0,25              |
|               | 1/8 x 3/8"    | 0,24              |
|               | 1/8 x 1/2"    | 0,32              |
|               | 1/8 x 5/8"    | 0,40              |
|               | 1/8 x 3/4"    | 0,48              |
|               | 1/8 x 7/8"    | 0,55              |
|               | 1/8 x 1"      | 0,63              |
|               | 1/8 x 1.1/4"  | 0,79              |
|               | 1/8 x 1.1/2"  | 0,95              |
|               | 1/8 x 1.3/4"  | 1,11              |
|               | 1/8 x 2"      | 1,27              |
|               | 1/8 x 2.1/2"  | 1,59              |
|               | 1/8 x 3"      | 1,90              |
|               | 1/8 x 4"      | 2,54              |
|               | 3/16 x 1/2"   | 0,47              |
|               | 3/16 x 5/8"   | 0,59              |
|               | 3/16 x 3/4"   | 0,71              |
|               | 3/16 x 7/8"   | 0,83              |



| BARRAS CHATAS | Bitola        | Peso teórico kg/m |
|---------------|---------------|-------------------|
|               | 3/16 x 1"     | 0,95              |
|               | 3/16 x 1.1/4" | 1,19              |
|               | 3/16 x 1.1/2" | 1,42              |
|               | 3/16 x 1.3/4" | 1,66              |
|               | 3/16 x 2"     | 1,90              |
|               | 3/16 x 2.1/2" | 2,37              |
|               | 3/16 x 3"     | 2,85              |
|               | 3/16 x 4"     | 3,80              |
|               | 3/16 x 5"     | 4,75              |
|               | 1/4 x 2"      | 2,53              |
|               | 1/4 x 2.1/2"  | 3,17              |
|               | 1/4 x 3"      | 3,80              |
|               | 1/4 x 4"      | 5,06              |
|               | 1/4 x 5"      | 6,33              |
|               | 1/4 x 6"      | 7,60              |
|               | 5/16 x 1"     | 1,58              |



| BARRAS CHATAS Bitola | Peso teórico kg/m |
|----------------------|-------------------|
| 5/16 x 1.1/4"        | 1,98              |
| 5/16 x 1.1/2"        | 2,37              |
| 5/16 x 1.3/4"        | 2,77              |
| 5/16 x 2"            | 3,17              |
| 5/16 x 2.1/2"        | 3,96              |
| 5/16 x 3"            | 4,75              |
| 5/16 x 3.1/2"        | 5,54              |
| 5/16 x 4"            | 6,33              |
| 5/16 x 5"            | 7,92              |
| 5/16 x 6"            | 9,50              |
| 3/8 x 1"             | 1,90              |
| 3/8 x 1.1/4"         | 2,38              |
| 3/8 x 6"             | 11,40             |



| BARRAS CHATAS | Bitola       | Peso teórico kg/m |
|---------------|--------------|-------------------|
|               | 1/2 x 1"     | 2,53              |
|               | 1/2 x 1.1/4" | 3,17              |
|               | 1/2 x 1.1/2" | 3,80              |
|               | 1/2 x 1.3/4" | 4,43              |
|               | 1/2 x 2"     | 5,06              |
|               | 1/2 x 2.1/2" | 6,33              |
|               | 1/2 x 3"     | 7,60              |
|               | 1/2 x 3.1/2" | 8,86              |
|               | 1/2 x 4"     | 10,13             |
|               | 1/2 x 5"     | 12,66             |
|               | 1/2 x 6"     | 15,19             |
|               | 5/8 x 1"     | 3,17              |
|               | 5/8 x 1.1/4" | 3,96              |



| BARRAS CHATAS | Bitola       | Peso teórico kg/m |
|---------------|--------------|-------------------|
|               | 5/8 x 1.1/2" | 4,75              |
|               | 5/8 x 1.3/4" | 5,54              |
|               | 5/8 x 2"     | 6,33              |
|               | 5/8 x 2.1/2" | 7,92              |
|               | 5/8 x 3"     | 9,50              |
|               | 3/4 x 2"     | 7,60              |
|               | 3/4 x 2.1/2" | 9,50              |
|               | 3/4 x 3"     | 11,40             |
|               | 3/4 x 3.1/2" | 13,29             |
|               | 3/4 x 4"     | 15,19             |
|               | 3/4 x 5"     | 18,99             |
|               | 3/4 x 6"     | 22,79             |
|               | 1 x 1.1/4"   | 6,33              |

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| BARRAS CHATAS |            | Peso teórico kg/m |
|---------------|------------|-------------------|
| Bitola        |            |                   |
|               | 1 x 1.1/2" | 7,60              |
|               | 1 x 1.3/4" | 8,86              |
|               | 1 x 2"     | 10,13             |
|               | 1 x 2.1/2" | 12,66             |
|               | 1 x 3"     | 15,19             |
|               | 1 x 4"     | 20,26             |
|               | 1 x 5"     | 25,32             |
|               | 1 x 6"     | 30,39             |



| BARRAS QUADRADAS |      | Peso teórico kg/m |
|------------------|------|-------------------|
| Bitola           |      |                   |
| polegada         | mm   |                   |
| 1/4"             | 6,35 | 0,32              |
| 5/16"            | 7,94 | 0,50              |
| 3/8"             | 9,53 | 0,71              |



| BARRAS QUADRADAS |       | Peso teórico<br>kg/m |
|------------------|-------|----------------------|
| Bitola           |       |                      |
| polegada         | mm    |                      |
| 1/2"             | 12,70 | 1,27                 |
| 5/8"             | 15,88 | 1,98                 |
| 3/4"             | 19,05 | 2,85                 |
| 7/8"             | 22,23 | 3,88                 |
| 1"               | 25,40 | 5,06                 |
| 1.1/8"           | 28,58 | 6,40                 |
| 1.1/4"           | 31,75 | 7,91                 |
| 1.5/16"          | 33,34 | 8,73                 |
| 1.1/2"           | 38,10 | 11,40                |
| 1.3/4"           | 44,45 | 15,51                |
| 2"               | 50,80 | 20,24                |
| 2.1/4"           | 57,15 | 25,62                |
| 2.3/8"           | 60,33 | 28,54                |
| 2.1/2"           | 63,50 | 31,62                |
| 2.5/8"           | 66,68 | 34,87                |
| 2.3/4"           | 69,85 | 38,27                |



| BARRAS QUADRADAS |       | Peso teórico |
|------------------|-------|--------------|
| Bitola           |       | kg/m         |
| polegada         | mm    |              |
| 2.7/8"           | 73,03 | 41,82        |
| 3"               | 76,20 | 45,54        |
| 3.1/8"           | 79,38 | 49,41        |
| 3.1/4"           | 82,55 | 53,44        |
| 3.1/2"           | 88,90 | 61,98        |
| 3.3/4"           | 95,25 | 71,15        |
| 4"               | 101,6 | 81,03        |





| BARRAS REDONDAS |           | Peso teórico kg/m |
|-----------------|-----------|-------------------|
| pololegada      | Bitola mm |                   |
| 1/4"            | 6,35      | 0,25              |
| 5/16"           | 7,94      | 0,39              |
| 3/8"            | 9,53      | 0,56              |
| 1/2"            | 12,70     | 0,99              |
| 9/16"           | 14,29     | 1,26              |
| 5/8"            | 15,88     | 1,56              |
| 11/16"          | 17,46     | 1,88              |
| 3/4"            | 19,05     | 2,24              |
| 7/8"            | 22,23     | 3,05              |
| 1"              | 25,40     | 3,98              |
| 1.1/8"          | 28,58     | 5,04              |
| 1.1/4"          | 31,75     | 6,22              |
| 1.5/16"         | 33,34     | 6,85              |
| 1.3/8"          | 34,93     | 7,52              |
| 1.7/16"         | 36,51     | 8,22              |
| 1.1/2"          | 38,10     | 8,95              |
| 1.9/16"         | 39,69     | 9,71              |
| 1.5/8"          | 41,28     | 10,50             |
| 1.3/4"          | 44,45     | 12,18             |



| BARRAS REDONDAS |           | Peso teórico kg/m |
|-----------------|-----------|-------------------|
| pololegada      | Bitola mm |                   |
| 1.13/16"        | 46,04     | 13,06             |
| 1.7/8"          | 47,63     | 13,98             |
| 2"              | 50,80     | 15,91             |
| 2.1/16"         | 52,39     | 16,92             |
| 2.1/8"          | 53,98     | 17,96             |
| 2.1/4"          | 57,15     | 20,14             |
| 2.5/16"         | 58,74     | 21,28             |
| 2.3/8"          | 60,33     | 22,43             |
| 2.7/16"         | 61,91     | 23,63             |
| 2.1/2"          | 63,50     | 24,86             |
| 2.9/16"         | 65,09     | 26,11             |
| 2.5/8"          | 66,68     | 27,40             |
| 2.3/4"          | 69,85     | 30,08             |
| 2.7/8"          | 73,03     | 32,87             |
| 3"              | 76,20     | 35,79             |
| 3.1/8"          | 79,38     | 38,84             |



| BARRAS REDONDAS |        | Peso teórico kg/m |
|-----------------|--------|-------------------|
| Bitola          |        |                   |
| pololegada      | mm     |                   |
| 3.1/4"          | 82,55  | 42,01             |
| 3.1/2"          | 88,90  | 48,73             |
| 3.3/4"          | 95,25  | 55,88             |
| 4"              | 101,60 | 63,58             |
| 4.1/4"          | 107,95 | 71,78             |
| 4.1/2"          | 114,30 | 80,47             |
| 4.3/4"          | 120,65 | 89,66             |
| 5"              | 127,00 | 99,80             |
| *               | 130,00 | 104,17            |
| 5.1/4"          | 133,35 | 109,50            |
| 5.1/2"          | 139,70 | 120,20            |
| 5.3/4"          | 146,05 | 131,40            |
| 6"              | 152,40 | 143,10            |



| BARRAS REDONDAS |        | Peso teórico kg/m |
|-----------------|--------|-------------------|
| Bitola          |        |                   |
| pololegada      | mm     |                   |
| 6.1/4"          | 158,75 | 155,20            |
| 6.1/2"          | 165,10 | 167,90            |
| 6.3/4"          | 171,45 | 181,10            |
| 7"              | 177,80 | 194,70            |
| 7.1/2"          | 190,50 | 223,80            |
| 8"              | 203,20 | 254,60            |
| 8.1/2"          | 215,90 | 287,40            |
| 9"              | 228,60 | 322,10            |
| 9.1/2"          | 241,30 | 359,00            |
| 10"             | 254,00 | 397,80            |



| BARRAS REDONDAS TREFILADAS |      | Bitola | Tolerância  | Peso teórico kg/m |
|----------------------------|------|--------|-------------|-------------------|
| polegada                   | mm   |        | mm          |                   |
| *                          | 3,00 |        | +0,00/-0,08 | 0,056             |
| 1/8"                       | 3,18 |        | +0,00/-0,08 | 0,062             |
| 5/32"                      | 3,97 |        | +0,00/-0,08 | 0,097             |
| *                          | 4,00 |        | +0,00/-0,08 | 0,100             |
| 3/16"                      | 4,76 |        | +0,00/-0,08 | 0,140             |
| *                          | 5,00 |        | +0,00/-0,08 | 0,154             |
| *                          | 5,50 |        | +0,00/-0,08 | 0,187             |
| *                          | 6,00 |        | +0,00/-0,08 | 0,236             |
| 1/4"                       | 6,35 |        | +0,00/-0,09 | 0,249             |
| *                          | 6,90 |        | +0,00/-0,09 | 0,294             |
| *                          | 7,00 |        | +0,00/-0,09 | 0,302             |
| *                          | 7,20 |        | +0,00/-0,09 | 0,320             |
| *                          | 7,50 |        | +0,00/-0,09 | 0,347             |
| 5/16"                      | 7,94 |        | +0,00/-0,09 | 0,388             |
| *                          | 8,00 |        | +0,00/-0,09 | 0,395             |
| *                          | 8,30 |        | +0,00/-0,09 | 0,425             |
| *                          | 8,35 |        | +0,00/-0,09 | 0,430             |
| *                          | 8,40 |        | +0,00/-0,09 | 0,435             |
| *                          | 8,90 |        | +0,00/-0,09 | 0,490             |



| BARRAS REDONDAS TREFILADAS |       | Bitola | Tolerância  | Peso teórico kg/m |
|----------------------------|-------|--------|-------------|-------------------|
| polegada                   | mm    |        | mm          |                   |
| *                          | 9,00  |        | +0,00/-0,09 | 0,499             |
| *                          | 9,20  |        | +0,00/-0,09 | 0,522             |
| 3/8"                       | 9,53  |        | +0,00/-0,09 | 0,559             |
| *                          | 9,80  |        | +0,00/-0,09 | 0,592             |
| *                          | 10,00 |        | +0,00/-0,09 | 0,616             |
| *                          | 10,20 |        | +0,00/-0,11 | 0,641             |
| *                          | 10,50 |        | +0,00/-0,11 | 0,680             |
| *                          | 10,80 |        | +0,00/-0,11 | 0,699             |
| *                          | 10,90 |        | +0,00/-0,11 | 0,733             |
| *                          | 11,00 |        | +0,00/-0,11 | 0,746             |
| 7/16"                      | 11,11 |        | +0,00/-0,11 | 0,761             |
| *                          | 11,30 |        | +0,00/-0,11 | 0,787             |
| *                          | 11,80 |        | +0,00/-0,11 | 0,858             |
| *                          | 12,00 |        | +0,00/-0,11 | 0,888             |
| *                          | 12,20 |        | +0,00/-0,11 | 0,918             |
| 1/2"                       | 12,70 |        | +0,00/-0,11 | 0,994             |
| *                          | 13,00 |        | +0,00/-0,11 | 1,040             |
| *                          | 14,00 |        | +0,00/-0,11 | 1,208             |
| 9/16"                      | 14,29 |        | +0,00/-0,11 | 1,257             |



| BARRAS REDONDAS TREFILADAS |       | Bitola | Tolerância  | Peso teórico kg/m |
|----------------------------|-------|--------|-------------|-------------------|
| polegada                   | mm    |        | mm          |                   |
| *                          | 14,35 |        | +0,00/-0,11 | 1,270             |
| *                          | 14,50 |        | +0,00/-0,11 | 1,296             |
| *                          | 14,60 |        | +0,00/-0,11 | 1,315             |
| *                          | 14,85 |        | +0,00/-0,11 | 1,360             |
| *                          | 15,00 |        | +0,00/-0,11 | 1,388             |
| 5/8"                       | 15,88 |        | +0,00/-0,11 | 1,555             |
| *                          | 16,00 |        | +0,00/-0,11 | 1,578             |
| *                          | 16,80 |        | +0,00/-0,11 | 1,741             |
| *                          | 16,90 |        | +0,00/-0,11 | 1,761             |
| *                          | 17,00 |        | +0,00/-0,11 | 1,782             |
| *                          | 17,20 |        | +0,00/-0,11 | 1,824             |
| 11/16"                     | 17,46 |        | +0,00/-0,11 | 1,879             |
| *                          | 17,90 |        | +0,00/-0,11 | 1,975             |
| *                          | 18,00 |        | +0,00/-0,11 | 1,998             |
| *                          | 18,20 |        | +0,00/-0,13 | 2,040             |
| 3/4"                       | 19,05 |        | +0,00/-0,13 | 2,237             |
| *                          | 20,00 |        | +0,00/-0,13 | 2,466             |
| *                          | 20,20 |        | +0,00/-0,13 | 2,520             |
| 13/16"                     | 20,64 |        | +0,00/-0,13 | 2,630             |



| BARRAS REDONDAS TREFILADAS |       | Bitola      | Tolerância | Peso teórico kg/m |
|----------------------------|-------|-------------|------------|-------------------|
| polegada                   | mm    | mm          | mm         |                   |
| *                          | 20,90 | +0,00/-0,13 | 2,693      |                   |
| *                          | 21,00 | +0,00/-0,13 | 2,721      |                   |
| *                          | 22,00 | +0,00/-0,13 | 2,984      |                   |
| 7/8"                       | 22,23 | +0,00/-0,13 | 3,044      |                   |
| *                          | 23,15 | +0,00/-0,13 | 3,304      |                   |
| 15/16"                     | 23,81 | +0,00/-0,13 | 3,495      |                   |
| *                          | 25,00 | +0,00/-0,13 | 3,853      |                   |
| *                          | 25,30 | +0,00/-0,13 | 3,956      |                   |
| 1"                         | 25,40 | +0,00/-0,13 | 3,977      |                   |
| *                          | 26,00 | +0,00/-0,13 | 4,168      |                   |
| 1.1/16"                    | 26,99 | +0,00/-0,13 | 4,491      |                   |
| *                          | 28,00 | +0,00/-0,13 | 4,833      |                   |
| 1.1/8"                     | 28,58 | +0,00/-0,13 | 5,040      |                   |





| BARRAS REDONDAS TREFILADAS |       | Bitola | Tolerância  | Peso teórico kg/m |
|----------------------------|-------|--------|-------------|-------------------|
| polegada                   | mm    |        | mm          |                   |
| *                          | 29,30 |        | +0,00/-0,13 | 5,294             |
| *                          | 30,00 |        | +0,00/-0,13 | 5,549             |
| 1.3/16"                    | 30,16 |        | +0,00/-0,16 | 5,608             |
| *                          | 30,30 |        | +0,00/-0,16 | 5,662             |
| 1.1/4"                     | 31,75 |        | +0,00/-0,16 | 6,216             |
| *                          | 32,00 |        | +0,00/-0,16 | 6,313             |
| 1.5/16"                    | 33,34 |        | +0,00/-0,16 | 6,858             |
| 1.3/8"                     | 34,93 |        | +0,00/-0,16 | 7,510             |
| *                          | 35,00 |        | +0,00/-0,16 | 7,554             |
| *                          | 35,40 |        | +0,00/-0,16 | 7,728             |
| *                          | 35,70 |        | +0,00/-0,16 | 7,860             |
| *                          | 36,00 |        | +0,00/-0,16 | 7,990             |
| *                          | 37,00 |        | +0,00/-0,16 | 8,440             |



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|----------------------------|-------|--------|-------------|-------------------|
| polegada                   | mm    |        | mm          |                   |
| 1.1/2"                     | 38,10 |        | +0,00/-0,16 | 8,951             |
| *                          | 38,50 |        | +0,00/-0,16 | 9,034             |
| *                          | 40,00 |        | +0,00/-0,16 | 9,865             |
| 1.5/8"                     | 41,28 |        | +0,00/-0,16 | 10,490            |
| 1.3/4"                     | 44,45 |        | +0,00/-0,16 | 12,184            |
| *                          | 45,00 |        | +0,00/-0,16 | 12,485            |
| *                          | 46,00 |        | +0,00/-0,16 | 13,050            |
| 1.7/8"                     | 47,63 |        | +0,00/-0,16 | 13,970            |
| *                          | 50,00 |        | +0,00/-0,16 | 15,414            |
| 2"                         | 50,80 |        | +0,00/-0,19 | 15,913            |
| *                          | 52,00 |        | +0,00/-0,19 | 16,670            |
| 2.1/8"                     | 53,98 |        | +0,00/-0,19 | 17,962            |
| *                          | 55,00 |        | +0,00/-0,19 | 18,650            |



| BARRAS REDONDAS TREFILADAS |       | Bitola | Tolerância  | Peso teórico kg/m |
|----------------------------|-------|--------|-------------|-------------------|
| polegada                   | mm    |        | mm          |                   |
| 2.1/4"                     | 57,15 |        | +0,00/-0,19 | 20,137            |
| *                          | 60,00 |        | +0,00/-0,19 | 22,195            |
| 2.3/8"                     | 60,33 |        | +0,00/-0,19 | 22,436            |
| 2.1/2"                     | 63,50 |        | +0,00/-0,19 | 24,860            |
| *                          | 65,00 |        | +0,00/-0,19 | 26,049            |
| 2.5/8"                     | 66,68 |        | +0,00/-0,19 | 27,409            |
| 2.3/4"                     | 69,85 |        | +0,00/-0,19 | 30,081            |
| *                          | 70,00 |        | +0,00/-0,19 | 30,210            |
| 2.7/8"                     | 73,03 |        | +0,00/-0,19 | 32,878            |
| *                          | 75,00 |        | +0,00/-0,19 | 34,680            |
| *                          | 76,00 |        | +0,00/-0,19 | 35,611            |
| 3"                         | 76,20 |        | +0,00/-0,19 | 35,799            |
| *                          | 80,00 |        | +0,00/-0,19 | 39,460            |



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|----------------------------|--------|--------|-------------|-------------------|
| polegada                   | mm     |        | mm          |                   |
| 3.1/4"                     | 82,55  |        | +0,00/-0,19 | 41,880            |
| *                          | 85,00  |        | +0,00/-0,19 | 44,550            |
| 3.1/2"                     | 88,90  |        | +0,00/-0,19 | 48,680            |
| *                          | 90,00  |        | +0,00/-0,19 | 50,000            |
| *                          | 95,00  |        | +0,00/-0,19 | 55,650            |
| *                          | 100,00 |        | +0,00/-0,19 | 61,800            |
| 4"                         | 101,60 |        | +0,00/-0,19 | 63,580            |



| BARRAS SEXTAVADAS |       | Bitola | Peso teórico kg/m |
|-------------------|-------|--------|-------------------|
| polegada          | mm    |        |                   |
| 3/16"*            | 4,76  | 0,15   |                   |
| 1/4"*             | 6,35  | 0,27   |                   |
| 5/16"*            | 7,94  | 0,43   |                   |
| 3/8"*             | 9,53  | 0,62   |                   |
| 7/16"*            | 11,11 | 0,84   |                   |
| 1/2"              | 12,70 | 1,10   |                   |
| 9/16"             | 14,29 | 1,39   |                   |
| 5/8"              | 15,88 | 1,71   |                   |
| 11/16"            | 17,46 | 2,07   |                   |
| 3/4"              | 19,05 | 2,47   |                   |
| 13/16"            | 20,64 | 2,89   |                   |
| 7/8"              | 22,23 | 3,36   |                   |
| 15/16"            | 23,81 | 3,85   |                   |
| 1"                | 25,40 | 4,39   |                   |
| 1.1/16"           | 26,99 | 4,95   |                   |
| 1.1/8"            | 28,58 | 5,55   |                   |
| 1.3/16"           | 30,16 | 6,18   |                   |



| BARRAS SEXTAVADAS |       | Peso teórico<br>kg/m |
|-------------------|-------|----------------------|
| Bitola            |       |                      |
| polegada          | mm    |                      |
| 1.1/4"            | 31,75 | 6,85                 |
| 1.5/16"           | 33,34 | 7,56                 |
| 1.3/8"            | 34,93 | 8,29                 |
| 1.7/16"           | 36,51 | 9,06                 |
| 1.1/2"            | 38,10 | 9,87                 |
| 1.5/8"            | 41,28 | 11,57                |
| 1.3/4"            | 44,45 | 13,43                |
| 2"                | 50,80 | 17,54                |

