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 2331 Topaz Drive, Hatfield, PA 19440

Rockwell B Hardness Conversion

Approximate Conversion Numbers for Non-austenitic Steels

| Rockwell | | | Superficial Rockwell | | | Brinell | Vickers | Knoop | Tensile Strength |
|--------------------|--------------------|-------------------|----------------------|---------------------|---------------------|----------------------|-----------------|--------------------|-------------------------|
| 1/16" Ball | Diamond Penetrator | | Diamond Penetrator | | | 10 mm Ball | Diamond Pyramid | Diamond Penetrator | Steel |
| B Scale 100 kgf | A Scale 60 kgf | F Scale 60 kgf | 15T Scale 15 kgf | 30T Scale 30 kgf | 45T Scale 45 kgf | 3000 kgf Hardness | 10 kgf | 500 gf & over | Equiv. 1000 lb sq in |
| 100 | 62 | | 93 | 83 | 73 | 240 | 240 | 251 | 116 |
| 99 | 61 | | 93 | 83 | 72 | 234 | 234 | 246 | 112 |
| 98 | 60 | | 93 | 82 | 71 | 228 | 228 | 241 | 109 |
| 97 | 60 | | 92 | 81 | 70 | 222 | 222 | 236 | 106 |
| 96 | 59 | | 92 | 80 | 69 | 216 | 216 | 231 | 103 |
| 95 | 58 | | 92 | 80 | 68 | 210 | 210 | 226 | 101 |
| 94 | 58 | | 91 | 79 | 67 | 205 | 205 | 221 | 98 |
| 93 | 57 | | 91 | 78 | 66 | 200 | 200 | 216 | 96 |
| 92 | 56 | | 91 | 78 | 65 | 195 | 195 | 211 | 93 |
| 91 | 56 | | 90 | 77 | 64 | 190 | 190 | 206 | 91 |
| 90 | 55 | | 90 | 76 | 63 | 185 | 185 | 201 | 89 |
| 89 | 55 | | 90 | 76 | 62 | 180 | 180 | 196 | 87 |
| 88 | 54 | | 89 | 75 | 61 | 176 | 176 | 192 | 85 |
| 87 | 53 | | 89 | 74 | 60 | 172 | 172 | 188 | 83 |
| 86 | 53 | | 89 | 74 | 59 | 169 | 169 | 184 | 81 |
| 85 | 52 | | 88 | 73 | 58 | 165 | 165 | 180 | 80 |
| 84 | 52 | | 88 | 72 | 57 | 162 | 162 | 176 | 78 |
| 83 | 51 | | 88 | 72 | 56 | 159 | 159 | 173 | 77 |
| 82 | 51 | | 87 | 71 | 55 | 156 | 156 | 170 | 75 |
| 81 | 50 | | 87 | 70 | 54 | 153 | 153 | 167 | 74 |
| 80 | 50 | | 87 | 70 | 53 | 150 | 150 | 164 | 72 |
| 79 | 49 | | 86 | 69 | 52 | 147 | 147 | 161 | |
| 78 | 48 | | 86 | 68 | 51 | 144 | 144 | 158 | |
| 77 | 48 | | 86 | 68 | 50 | 141 | 141 | 155 | |
| 76 | 47 | | 85 | 67 | 49 | 139 | 139 | 152 | |
| 75 | 47 | 100 | 85 | 66 | 48 | 137 | 137 | 150 | |
| 74 | 46 | 99 | 85 | 66 | 47 | 135 | 135 | 147 | |
| 73 | 46 | 99 | 84 | 65 | 46 | 132 | 132 | 145 | |
| 72 | 45 | 98 | 84 | 64 | 45 | 130 | 130 | 143 | |
| 71 | 45 | 97 | 84 | 64 | 44 | 127 | 127 | 141 | |
| 70 | 44 | 97 | 83 | 63 | 43 | 125 | 125 | 139 | |
| 69 | 44 | 96 | 83 | 62 | 42 | 123 | 123 | 137 | |



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| B Scale 100 kgf | A Scale 60 kgf | F Scale 60 kgf | 15T Scale 15 kgf | 30T Scale 30 kgf | 45T Scale 45 kgf | 3000 kgf Hardness | 10 kgf | 500 gf & over | Equiv. 1000 lb sq in |
| 68 | 43 | 96 | 83 | 62 | 41 | 121 | 121 | 135 | |
| 67 | 43 | 95 | 82 | 61 | 40 | 119 | 119 | 133 | |
| 66 | 42 | 95 | 82 | 60 | 39 | 117 | 117 | 131 | |
| 65 | 42 | 94 | 82 | 60 | 38 | 116 | 116 | 129 | |
| 64 | 41 | 93 | 81 | 59 | 37 | 114 | 114 | 127 | |
| 63 | 41 | 93 | 81 | 58 | 36 | 112 | 112 | 125 | |
| 62 | 40 | 92 | 81 | 58 | 35 | 110 | 110 | 124 | |
| 61 | 40 | 92 | 81 | 57 | 34 | 108 | 108 | 122 | |
| 60 | 40 | 91 | 80 | 56 | 33 | 107 | 107 | 120 | |
| 59 | 39 | 91 | 80 | 56 | 32 | 106 | 106 | 118 | |
| 58 | 39 | 90 | 80 | 55 | 31 | 104 | 104 | 117 | |
| 57 | 38 | 90 | 79 | 54 | 30 | 103 | 103 | 115 | |
| 56 | 38 | 89 | 79 | 54 | 29 | 101 | 101 | 114 | |
| 55 | 37 | 88 | 79 | 53 | 28 | 100 | 100 | 112 | |
| 54 | 37 | 88 | 78 | 52 | 27 | | | 111 | |
| 53 | 36 | 87 | 78 | 52 | 26 | | | 110 | |
| 52 | 36 | 87 | 78 | 51 | 25 | | | 109 | |
| 51 | 35 | 86 | 77 | 50 | 24 | | | 108 | |
| 50 | 35 | 85 | 77 | 50 | 23 | | | 107 | |
| 49 | 35 | 85 | 77 | 49 | 22 | | | 106 | |
| 48 | 34 | 84 | 76 | 48 | 21 | | | 105 | |
| 47 | 34 | 84 | 76 | 48 | 20 | | | 104 | |
| 46 | 33 | 83 | 76 | 47 | 19 | | | 103 | |
| 45 | 33 | 83 | 75 | 46 | 18 | | | 102 | |
| 44 | 32 | 82 | 75 | 46 | 17 | | | 101 | |
| 43 | 32 | 81 | 75 | 45 | 16 | | | 100 | |
| 42 | 32 | 81 | 74 | 44 | 15 | | | 99 | |
| 41 | 31 | 80 | 74 | 44 | 14 | | | 98 | |
| 40 | 31 | 80 | 74 | 43 | 13 | | | 97 | |
| 39 | 30 | 79 | 73 | 42 | 12 | | | 96 | |
| 38 | 30 | 79 | 73 | 42 | 11 | | | 95 | |
| 37 | 30 | 78 | 73 | 41 | 10 | | | 94 | |



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| B Scale 100 kgf | A Scale 60 kgf | F Scale 60 kgf | 15T Scale 15 kgf | 30T Scale 30 kgf | 45T Scale 45 kgf | 3000 kgf Hardness | 10 kgf | 500 gf & over | Equiv. 1000 lb sq in |
| 36 | 29 | 77 | 72 | 40 | 9 | | | 93 | |
| 35 | 29 | 77 | 72 | 40 | 8 | | | 92 | |
| 34 | 28 | 76 | 72 | 39 | 7 | | | 91 | |
| 33 | 28 | 76 | 71 | 38 | 6 | | | 90 | |
| 32 | 27 | 75 | 71 | 38 | 5 | | | 89 | |
| 31 | 27 | 75 | 71 | 37 | 4 | | | 88 | |
| 30 | 27 | 74 | 70 | 36 | 3 | | | 87 | |

NOTE: For a more accurate comparison, see ASTM E 140