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| QUALITY                                  | <b>S235JR</b> | Wr. 1.0038   |
| REFERENCE NORM HOT ROLLED STEEL PRODUCTS |               | EN 10025-2   |
| REFERENCE NORM BRIGHT STEEL PRODUCTS     |               | UNI EN 10277 |

**CHEMICAL COMPOSITION (%)**

| Size (mm) | C (max.) | Si (max.) | Mn (max.) | P (max.) | S (max.) | N (max.) | Cu (max.) |
|-----------|----------|-----------|-----------|----------|----------|----------|-----------|
| ≤ 16      | 0,17     |           | 1,40      | 0,035    | 0,035    | 0,012    | 0,550     |
| > 16 ≤ 40 | 0,17     |           |           |          |          |          |           |
| > 40      | 0,20     |           |           |          |          |          |           |

**MECHANICAL PROPERTIES HOT ROLLED STEEL PRODUCTS (UNI EN 10025-2)**

| Size (mm)   | ReH (MPa) Min. | Size        | Rm (MPa)  | Size        | A%          |
|-------------|----------------|-------------|-----------|-------------|-------------|
| ≤ 16        | 235            | ≤ 3         | 360 ÷ 510 | ≥ 3 ≤ 40    | l 26 - t 24 |
| > 16 ≤ 40   | 225            | > 3 ≤ 100   | 360 ÷ 510 | > 40 ≤ 63   | l 25 - t 23 |
| > 40 ≤ 63   | 215            | > 100 ≤ 150 | 350 ÷ 500 | > 63 ≤ 100  | l 24 - t 22 |
| > 63 ≤ 80   | 215            | > 150 ≤ 250 | 340 ÷ 490 | > 100 ≤ 150 | l 22 - t 22 |
| > 80 ≤ 100  | 215            | > 250 ≤ 400 | 330 ÷ 480 | > 150 ≤ 250 | l 21 - t 21 |
| > 100 ≤ 150 | 195            |             |           | > 250 ≤ 400 | l 21 - t 21 |
| > 150 ≤ 200 | 185            |             |           |             |             |
| > 200 ≤ 250 | 175            |             |           |             |             |
| > 250 ≤ 400 | 165            |             |           |             |             |

**IMPACT TEST HOT ROLLED STEEL PRODUCTS (UNI EN 10025-2)**

| Size (mm)   | Temperature (C°) | KV (J) |
|-------------|------------------|--------|
| ≤ 150       | 20°              | 27     |
| > 150 ≤ 250 |                  | 27     |
| > 250 ≤ 400 |                  | 27     |

**MECHANICAL PROPERTIES BRIGHT STEEL PRODUCTS (UNI EN 10277)**

| Size (mm)    | (+SH) HOT ROLLED + PEELED |           | (+C) COLD DRAWN  |           |             |
|--------------|---------------------------|-----------|------------------|-----------|-------------|
|              | Hardness (HBW) Max.       | Rm (MPa)  | Rp0,2 (MPa) Min. | Rm (MPa)  | A5 (%) min. |
| 5 ≤ t ≤ 10   |                           |           | 355              | 470 ÷ 840 | 8           |
| 10 < t ≤ 16  |                           |           | 300              | 420 ÷ 770 | 9           |
| 16 < t ≤ 40  | 107 ÷ 152                 | 360 ÷ 510 | 260              | 390 ÷ 730 | 10          |
| 40 < t ≤ 63  | 107 ÷ 152                 | 360 ÷ 510 | 235              | 380 ÷ 670 | 11          |
| 63 < t ≤ 100 | 107 ÷ 152                 | 360 ÷ 510 | 215              | 360 ÷ 640 | 11          |

*Indicative values based on current regulations.*