

## STEEL GRADE

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## 22Mn5\* All

### General Information

2630, also known as Hydax 25 has high sulfur content to further improve the machinability of M-steel. Mechanical properties fulfil the requirements of the standard EN 10025-2 steel grade S355J0.

### M-Steel®

The basis for the concept is that non-metallic inclusions are modified and controlled with calcium treatment in a way to minimize tool wear and to maximize chip control in machining operations. Our M-Steel treatment can be applied to any steel grade.

### Chemical composition

| Variant | Cast | Di | Weldability             |     | C %  | Si % | Mn % | P %   | S %   |
|---------|------|----|-------------------------|-----|------|------|------|-------|-------|
| 2630    | CC   | 1  | CEV 0.47 <sub>max</sub> | Min | 0.18 | 0.15 | 1.00 | -     | 0.090 |
|         |      |    | Pcm 0.31 <sub>max</sub> | Max | 0.26 | 0.55 | 1.60 | 0.035 | 0.150 |

## Mechanical Properties

| Variant | Condition | Format    | Dimension [mm] | Yield strength min [MPa] | Tensile strength [MPa] | Elongation A <sub>5</sub> [%] | Reduction of area Z <sub>min</sub> [%] | Hardness | Impact (ISO-V) strength <sub>min</sub> |
|---------|-----------|-----------|----------------|--------------------------|------------------------|-------------------------------|--|----------|--|
| 2630    | +AR       | Round bar | 25 < 40        | 345*                     | 490-630                | 22                            | 45                                     | < 180 HB | 0 °C 27 J (long)                       |
|         |           | Round bar | 40 < 80        | 335*                     | 490-630                | 21                            | 45                                     | < 180 HB | 0 °C 27 J (long)                       |
|         |           | Round bar | 80 < 200       | 315*                     | 490-630                | 20                            | 45                                     | < 180 HB | 0 °C 27 J (long)                       |

*RP<sub>0.2</sub> \* R<sub>eh</sub>, \*\* R<sub>el</sub>*

Billets and block material also available. Mechanicals as in round bars ø 80 - 200 mm

## Transformation temperatures

|     | Temperature °C |
|-----|----------------|
| MS  | 396            |
| AC1 | 718            |
| AC3 | 823            |

## SUSTAINABILITY-ENVIRONMENTAL IMPACT DATA

At Ovako sustainability and reduction of our environmental impact is a major focus in everything we do.

Further information is found [here](#).

| Steel works | Hofors | Smedjebacken | Imatra |
|-------------|--------|--------------|--------|
| CO2e/kg     | 120    | 62           | 76     |

To get the full picture of our products environmental impact we have to look at all of our CO<sub>2</sub> emission sources.

Not only the steel work Scope 1-2 itself, but all operations downstream in our production, heating and heat treatment furnaces etc (full scope 1-2) as well as all the emission from input material, eg. alloys, scope 3.

| Steel Grade    | Format    | Condition | Scope 1-3 (CO2e kg /1000 kg steel) | Climate compensated Net emission = Scope 3 (CO2e kg /1000 kg steel) Scope 1 - 2 = 0 (compensated) |
|----------------|-----------|-----------|------------------------------------|---|
| Hydax 25, 2630 | Round bar | +AR       | 794                                | 268   |

All above data are to be seen as typical values for the specified format and condition. Detailed information about your specific product please contact your sales contact.

### Other properties (typical values)

| Youngs module (GPa)           | Poisson´s ratio (-)                       | Shear module (GPa)                               | Density (kg/m3)                                  |
|-------------------------------|---|--|--|
| 210                           | 0.3                                       | 80   | 7800   |
| Average CTE 20-300°C (µm/m°K) | Specific heat capacity 50/100°C (J/kg °K) | Thermal conductivity Ambient temperature (W/m°K) | Electrical resistivity Ambient temperature (µΩm) |
| 12                            | 460 - 480                                 | 40 - 45  | 0.20 - 0.25                                      |

### Contact us

Would you like to know more about our offers? Don´t hesitate to contact us:

Via e-mail: [info@ovako.com](mailto:info@ovako.com)

Via telephone: +46 8 622 1300

For more detailed information please visit <http://www.ovako.com/en/Contact-Ovako/>

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