MATERIAL DATA SHEET

# STEEL GRADE

Last revised: Thu, 30 Jan 2025 10:25:33 GMT

OVAKO

## 34CrMo4 All

### General Information

SAE4130m is a low alloyed steel used in quenched and tempered condition. The nearest equivalents are 34CrMo4 in EN10083-3 or 4130 in ASTM A29 with some deviations. The material is delivered as rolled or annealed.

### Chemical composition

| Variant | Cast | Weldability | | C % | Si % | Mn % | P % | S % | Cr % | Ni % | Mo % | Cu % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SAE4130m | CC | CEV $0.66_{max}$ | Min | 0.27 | 0.15 | 0.60 | - | - | 0.60 | - | 0.15 | - |
| | | Pcm $0.41_{max}$ | Max | 0.33 | 0.35 | 0.90 | 0.030 | 0.035 | 1.00 | 0.30 | 0.25 | 0.35 |

## Mechanical Properties

| Variant | Condition | Format | Dimension [mm] | Hardness |
|---|---|---|---|---|
| SAE4130m | +AR | Round bar | 14 < 70 | < 260 HB |
| | +A | Round bar | 14 < 70 | < 223 HB |

*$Rp_{0.2}$ * $R_{eh}$, ** $R_{el}$*

## Transformation temperatures

| | Temperature °C |
|---|---|
| MS | 552 |
| AC1 | 737 |
| AC3 | 808 |

## 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 $CO_2$ 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) |
|---|---|---|---|---|
| 4130<br>ASTM A29 | Flat bar | +AR | 421 | 201 |
| SAE4130m | Flat bar | +AR | 421 | 201 |

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 resistivityAmbient 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

Via telephone: +46 8 622 1300

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