

This page is mainly introduced the EN S650MG Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of EN S650MG, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

## Datasheet for Steel Grades Structure Steel EN S650MG

| EN S650MG Standard Number: |                 |              |
|----------------------------|-----------------|--------------|
| ITEM                       | Standard Number | Descriptions |

| EN S650MG Chemical composition (mass fraction) (wt.%) |      |      |         |       |    |    |         |    |       |
|---|------|------|---------|-------|----|----|---------|----|-------|
| Chemical  |      |      | Min.(%) |       |    |    | Max.(%) |    |       |
| C   | Si   | Mn   | P       | S     | Cr | Ni | Mo      | V  | Ta    |
| 0.12  | 0.60 | 2.00 | 0.025   | 0.015 |    |    |         |    |       |
| W   | N    | Cu   | Co      | Pb    | B  | Nb | Al      | Ti | Other |
|   |      |      |         |       |    |    |         |    |       |

### Euronorm Structural steel, EN S650MG

| EN S650MG Physical Properties |         |                          |
|-------------------------------|---------|--------------------------|
| Tensile strength              | 115-234 | $\sigma_b$ /MPa          |
| Yield Strength                | 23      | $\sigma_{0.2} \geq$ /MPa |
| Elongation                    | 65      | $\delta_5 \geq$ (%)      |
| $\psi$                        | -       | $\psi \geq$ (%)          |
| Akv                           | -       | $Akv \geq$ /J            |
| HBS                           | 123-321 | -                        |
| HRC                           | 30      | -                        |

| EN S650MG Mechanical Properties |         |                          |
|---------------------------------|---------|--------------------------|
| Tensile strength                | 231-231 | $\sigma_b$ /MPa          |
| Yield Strength                  | 154     | $\sigma_{0.2} \geq$ /MPa |

|            |         |                      |
|------------|---------|----------------------|
| Elongation | 56      | $\delta 5 \geq (\%)$ |
| $\psi$     | -       | $\psi \geq (\%)$     |
| Akv        | -       | $Akv \geq J$         |
| HBS        | 235-268 | -                    |
| HRC        | 30      | -                    |

### EN S650MG Heat Treatment Regime

| Annealing | Quenching | Tempering | Normalizing | Q & T |
|-----------|-----------|-----------|-------------|-------|
| √         | √         | √         | √           | √     |

### EN S650MG Range of products

| Product type    | Products                                 | Dimension                  | Processes                                   | Deliver Status  |
|-----------------|--|----------------------------|---|---|
| Plates / Sheets | Plates / Sheets                          | 0.08-200mm(T)*W*L          | Forging, hot rolling and cold rolling       | Annealed, Solution and Aging, Q+T, ACID-WASHED, Shot Blasting |
| Steel Bar       | Round Bar, Flat Bar, Square Bar          | Φ8-1200mm*L                | Forging, hot rolling and cold rolling, Cast | Black, Rough Turning, Shot Blasting,                          |
| Coil / Strip    | Steel Coil /Steel Strip                  | 0.03-16.0x1200mm           | Cold-Rolled & Hot-Rolled                    | Annealed, Solution and Aging, Q+T, ACID-WASHED, Shot Blasting |
| Pipes / Tubes   | Seamless Pipes/Tubes, Welded Pipes/Tubes | OD:6-219mm x WT:0.5-20.0mm | Hot extrusion, Cold Drawn, Welded           | Annealed, Solution and Aging, Q+T, ACID-WASHED                |

**We can produce Structure Steel the specifications follows:**