# ALLOY SPRING STEELS AND STABILIZER BARS



Ori Martin is able to satisfy the most stringent specifications concerning micro cleanness, surface decarburization and absence of surface defects.
Ori Martin special steels are used for the production of spiral springs with two process: cold forming of an induction pre-tempered wire and hot forming. Also torsion and stabilizer bars are common field of application of such steel grade.

Suitable for the production of coil springs and torsion bars used in the automobile and railway industries. These grades of steel must have a high yielding point and tenacity after quenching and tempering to withstand stress under flexi-torsion.

Our refining and casting techniques enable us to achieve steel with good hardenability and a high level of micro-cleanliness. Using the controlled rolling process we obtain products with a very low decarburisation level, absence of surface defects, tight tolerances and excellent characteristics of wire plasticity.

## Steel grade

| **Steel grade** | **Corresponding standard** | | | **Average chemical composition** | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Werkstoff | ORI Martin | C | Mn | Si | Cr | Ni | V |
| **Si** | 38Si7 | 1.5023 | D38S71 | 0,38 | 0,70 | 1,70 | - | - | - |
| | 48Si7 | 1.5021 | D50S72 | 0,48 | 0,65 | 1,80 | - | - | - |
| | 51Si7 | 1.5025 | D50S71 | 0,50 | 0,70 | 1,70 | - | - | - |
| | 55Si8 | | D55S81 | 0,55 | 0,80 | 1,90 | - | - | - |
| **Mn** | 38Mn6 | | B36M61 | 0,29 | 1,50 | 0,20 | - | - | - |
| **Si Cr** | 54SiCr6 | 1.7102 | D55S51 | 0,54 | 0,80 | 1,40 | 0,70 | - | - |
| | 56SiCr7 | 1.7106 | D55S71 | 0,55 | 0,70 | 1,70 | 0,20 | - | - |
| | 61SiCr7 | 1.7108 | D60F81 | 0,61 | 0,85 | 1,80 | 0,30 | - | - |
| **Si Cr V** | 45SiCrV6-2 | 1.8151 | D45F61 | 0,45 | 0,80 | 1,50 | 0,60 | - | 0,15 |
| | 54SiCrV6 | | D56F71 | 0,54 | 0,70 | 1,40 | 0,70 | - | 0,10 |
| | 61CrSiV5 | 1.2243 | D61F72 | 0,61 | 0,75 | 0,85 | 1,15 | - | 0,10 |
| | 65CrSiV7 | | D65F81 | 0,65 | 0,85 | 1,50 | 0,80 | - | 0,23 |
| **Mn Si Cr V** | 45MnSiCrV6 | | D45F66 | 0,45 | 1,30 | 1,40 | 0,60 | - | 0,15 |
| **Cr** | 55Cr3 | 1.7176 | D55C31 | 0,55 | 0,80 | 0,30 | 0,80 | - | - |
| **Cr V** | 50CrV4 | 1.8159 | D50X41 | 0,50 | 0,80 | 0,30 | 1,00 | - | 0,15 |
| | 58CrV4 | 1.8161 | D58X41 | 0,58 | 0,90 | 0,30 | 1,00 | - | 0,15 |
| **Si Cr Ni** | 52SiCrNi5 | 1.7117 | D52R51 | 0,52 | 0,85 | 1,35 | 0,85 | 0,60 | - |

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