

# Austenitic Cast Irons

Ductile Castings  
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## Technical Data

| Grade           | BS 3468 Designation | Material designation (BS EN 13835:2012) |        | Tensile Strength | 0.2% Proof Strength | Elongation | Compression Strength | Charpy V Impact energy value | Modulus of Elasticity | Brinell hardness | Mass Density      | Linear Expansion Coefficient (between 20 ° C and 200 ° C) | Thermal Conductivity | Specific Heat Capacity | Resistivity | Permeability (where H = 79,58 A/cm) |
|-----------------|---------------------|---|--------|------------------|---------------------|------------|----------------------|------------------------------|-----------------------|------------------|-------------------|---|----------------------|------------------------|-------------|-------------------------------------|
|                 |                     | Symbol                                  | Number | Rm<br>MPa        | Rp0.2<br>MPa        | A<br>%     | MPa                  | J                            | E<br>GPa              | HB               | g/cm <sup>3</sup> | α<br>μm/(m.K)   | λ<br>W/(m.K)         | c<br>J/(g.K)           | ρ<br>μΩ.m   |                                     |
| Engineering     | F1                  | EN-GJL-XNiCuCr15-6-2                    | 5.1500 | 170 – 210        | -----               | 2          | 700 - 840            | -----                        | 85 – 105              | 120 – 215        | 7.3               | 18.7  | 39.00                | 46 - 50                | 1.6         | 1.03                                |
|                 | S2                  | EN-GJSA-XNiCr20-2                       | 5.3500 | 370 – 480        | 210 – 250           | 7 – 20     | -----                | 11 – 24                      | 112 – 130             | 140 – 255        | 7.4 – 7.45        | 18.7  | 12.60                | 46 - 50                | 1.0         | 1.05                                |
|                 | S2M                 | EN-GJSA-XNiMn23-4                       | 5.3501 | 440 – 480        | 210 – 240           | 25 – 45    | -----                | 20 – 30                      | 120 – 140             | 150 – 180        | 7.45              | 14.7  | 12.60                | 46 - 50                | ---         | 1.02                                |
|                 | S2W                 | EN-GJSA-XNiCrNb20-2                     | 5.3502 | 370 – 480        | 210 – 250           | 8 – 20     | -----                | 11 – 24                      | 112 – 130             | 140 – 200        | 7.40              | 18.7  | 12.60                | 46 - 50                | 1.0         | 1.04                                |
|                 | S2C                 | EN-GJSA-XNi22                           | 5.3503 | 370 – 450        | 170 – 250           | 20 – 40    | -----                | 17 – 29                      | 85 – 112              | 130 – 170        | 7.40              | 18.0  | 12.60                | 46 - 50                | 1.0         | 1.02                                |
|                 | -                   | EN-GJSA-XNi35                           | 5.3504 | 370 – 420        | 210 – 240           | 20 – 40    | -----                | 10 - 18                      | 112 – 140             | 130 – 180        | 7.60              | 5.0   | 12.60                | 46 - 50                | ---         | ---                                 |
|                 | S6                  | EN-GJSA-XNiSiCr35-5-2                   | 5.3505 | 370 – 500        | 200 – 270           | 10 – 20    | -----                | 7 – 12                       | 130 – 150             | 130 – 170        | 7.45              | 15.10   | 12.60                | 46 - 50                | ---         | ---                                 |
| Special Purpose | -                   | EN-GJLA-XNiMn13-7                       | 5.1501 | 140 – 220        | -----               | -----      | 630 – 840            | -----                        | 70 – 90               | 120 – 150        | 7.40              | 17.70   | 39.00                | 46 - 50                | 1.2         | 1.02                                |
|                 | -                   | EN-GJSA-XNiMn13-7                       | 5.3506 | 390 – 470        | 210 – 260           | 15 – 18    | -----                | 15 – 25                      | 140 – 150             | 120 – 150        | 7.30              | 18.20   | 12.60                | 46 - 50                | 1.0         | 1.02                                |
|                 | S5S                 | EN-GJSA-XNiCr30-3                       | 5.3507 | 370 – 480        | 210 – 260           | 7 – 18     | -----                | 5                            | 92 – 105              | 140 – 200        | 7.45              | 12.60   | 12.60                | 46 - 50                | ---         | ---                                 |
|                 | -                   | EN-GJSA-XNiSiCr30-5-5                   | 5.3508 | 390 – 500        | 240 – 310           | 1 – 4      | -----                | 1 – 3                        | 90                    | 170 – 250        | 7.45              | 14.40   | 12.60                | 46 - 50                | ---         | 1.10                                |
|                 | S3                  | EN-GJSA-XNiCr35-3                       | 5.3509 | 370 – 450        | 210 – 290           | 7 – 10     | -----                | 4                            | 112 – 123             | 140 – 190        | 7.70              | 5.0   | 12.60                | 46 - 50                | ---         | ---                                 |