

Datenblatt | Data sheet

Iron ball 1.1141

The balls with low carbon content are surface hardened (layer thickness approx. 0.8 mm).

Field of application

Bicycle components, guides and wheels for furniture, chassis, various mechanisms, mixers in non-aggressive environment, lubricators and lubricating bushes, sliding shoes, chassis, conveyor belts and rollers, drum grinding

Material

| Technical name | Alternative Name | Valid standards |
|----------------|------------------|-----------------------|
| 1.1141 | AISI 1015, C15 | ISO 3290-1 / DIN 5401 |

Chemical composition in %

| C | Si | Mn | P | S |
|-------------|-------------|-------------|---------|---------|
| 0,12 - 0,18 | 0,10 - 0,35 | 0,30 - 0,60 | ≤ 0,040 | ≤ 0,050 |

Physical / mechanical / thermal / electrical / magnetic characteristics

| Characteristic | Symbol | Unit | Type | Note | Value |
|---|-----------|---------------------------|------------|---------------------|-------|
| Density | δ | g/cm ³ | Physical | Environmental temp. | 7,82 |
| Modulus of elasticity | E | GPa | Mechanical | - | 200 |
| Specific heat | C | J/kg*K | Thermal | Environmental temp. | 468 |
| Coefficient of linear thermal expansion | α | 10 ⁻⁶ /°C | Thermal | (DT = 0 - 100 °C) | 11,8 |
| Thermal conductivity | λ | W/(m*K) | Thermal | Environmental temp. | 57,9 |
| Volume resistivity | ρ | Ω *m ⁻⁹ | Electrical | - | 155 |
| Relative magnetic permeability | μ | - | Magnetical | ferromagnetic | > 500 |

Technical characteristics

| Characteristic | Typ | Unit | Value | Unit | Value |
|-------------------------------|------------|------|-----------|---------------------|-----------|
| Hardness | Mechanical | HRB | 60 - 90 | | |
| Ultimate compressive strength | Mechanical | MPa | 200 - 300 | psi*10 ³ | 29 - 43 |
| Operating temperature | Thermal | °C | -40 - 500 | °F | -40 - 932 |

Available with

| Diameter min/max (mm) | Diameter min/max (in) | Precision grade |
|-----------------------|-----------------------|--|
| 1,500 - 300,000 | 1/16 - 12,0 | G 100 / 200 / 300 / 500 / 600 / 700 / 1000 |

This data sheet is for your information only and does not represent a contractually binding document. All the values indicated are standard values and may vary depending on the variety or manufacturer.

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