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## ASTM A536 100-70-03, EN-GJS-700-2, GGG70, Ductile Iron Chemical Composition, Mechanical and Physical Properties

ASTM A536 100-70-03 (EN-GJS-700-2, GGG70) is a type of high tensile strength ductile cast material grade. It has comparatively high tensile strength, and good abrasive resistance. So it can produce mechanical parts with high duty.

Our dandong foundry has producing this material grade for many years, and herein, we share the chemical composition and physical properties.

### 1. Equivalent Material Grades of Ductile Iron ASTM A536 100-70-03

The equivalent grades of ASTM A536 100-70-03 are EN-GJS-700-2, GGG70, ISO 700-2, QT700-2, FGE70-2, FNG70-2, SJK-700. Although some required elongation 3%, and some required 2%, but they are the same, so they could be taken as the equivalent grades.

### 2. Chemical Composition of Ductile Iron ASTM A536 100-70-03

C: 3.60-3.90, Si: 1.70-1.90, Mn: 0.30-0.50, P: < 0.06, S: < 0.03, Mg: 0.035-0.050. However, it is the standard of inspection, unless there is special requirement. All foundries could adjust their chemical composition to meet the mechanical requirements of standards.

### 3. Mechanical & Physical Properties of Ductile Iron ASTM A536 100-70-03

**Tensile Strength  $\geq$  700 MPa. Yield Strength  $\geq$  420 MPa. Elongation  $\geq$  3%.**

As for equivalent grades EN-GJS-700-2, GGG70, ISO 700-2, QT700-2, FCD700, GS700-2, FGS700-2, their elongation  $\geq$  3%.

There is no strict stipulation to the hardness of ASTM A536 100-70-03, however, normal hardness (Brinell Hardness) without heat treatment.

### 4. Main Application of Ductile Iron ASTM A536 100-70-03

Because of the high tensile strength, hardness and good abrasive resistance, this grade of ductile iron is widely used in crank shaft, axle, camshaft, main shaft of milling machine and lathe machine, high duty manhole cover, etc.

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