# GGG-80 (EN 0.7080) Ductile Cast Iron Casting Material

## Introduction

GGG-80 is a ductile cast iron grade covered by DIN 1693-1. Typical family applications include gear and transmission components, hubs, brackets, machine housings and pump-related castings.

## Manufacturing Process

Sand Casting
Shell Molding Casting
Lost Foam Casting

## Equivalent Materials

| Standard | Material Grade |
|---|---|
| NBN 830-02 | FNG80-2 |
| IS 1865 | SG800/2 |
| SAE J434 | D800 |
| AS 1831 | 800-2 |
| NF A32-201 | FGS800-2 |
| ISO 1083 | ISO 1083/JS/800-2/S |
| BS 2789 | 800/2 |
| NS11 301 | SJK-800 |
| GB 1348 | QT800-2 |
| EN 1563 | EN-GJS-800-2 |
| UNI 4544 | GS800-2 |
| JIS G5502 | FCD800 |
| UNF | FGE80-2 |
| SS 14 07 | 0864-03 |
| ASTM A536 | 120-90-02 |
| GB/T 1348 | QT800-2 |

## Reference Standards

| Standard | Standard Title | Edition | Specification | Identifier |
|---|---|---|---|---|
| DIN 1693-1 | Cast Iron with Nodular Graphite — Unalloyed and Low Alloy Grades | 1973-10 | GGG-80 | — |

## Physical Properties

| Property | Value / Unit | Note | Source |
|---|---|---|---|
| Density | 7.2 kg/dm3 | Approximate density for weight calculations, not a guaranteed density limit | DIN 1693-1 |

## Chemical Composition

No specified chemical composition limits in DIN 1693-1

## Heat Treatment

### DIN 1693-1–1973-10

Supplied as cast or heat-treated; no mandatory numerical heat-treatment cycle specified.

## Mechanical Properties

### Core Mechanical Properties

### DIN 1693-1 — 1973-10 · Table 1 — Normative

| Property | Separately cast test piece |
|---|---|
| **Tensile Strength** | >= 800 N/mm2 |
| **Yield Strength (Rp0.2)** | >= 500 N/mm2 |
| **Elongation** | >= 2 % |

Separately cast U or Y test piece; tensile specimen per DIN 50125; A5 elongation

## Welding Conditions

N/A

## Applications

For ductile cast iron DIN 1693-1 GGG-80, typical cast components in this material family include gear and transmission components, hubs, brackets, machine housings and pump-related castings. Applications include agricultural, construction and general industrial machinery. Lifting, low-temperature and pressure-retaining duties require the relevant component-specific requirements; ordinary family uses do not establish those capabilities.

Last Updated: 2026-11-06

# Casting Quality Industrial

As a professional manufacturer in China, We Casting Quality focus on Metal Parts OEM industry, and provide solutions and services in Metal Casting field as following:

Sand Casting

Investment Casting, Lost Wax process

Shell Casting

Lost Form Casting

Permanent Mold Casting

CNC Machining

CAD Design

Tools/Mold Design

## Material Supplied

Cast Iron Castings (Grey Iron, Malleable Iron, Ductile Iron)

Carbon Steel and Alloy Steel Castings

Stainless Steel and Duplex Stainless Steel Castings

Aluminum Castings

Bronze and Brass Castings

Titanium and Cobalt Alloy Castings

## What We Can Do

**Design Ability**

Our engineers will help you to improve the designs based on casting technology, then The simulation software will be processed to verify the casting pouring system. Pro/E, Solidworks, AutoCAD and ProCast are available in Casting Quality Industrial.

**Saving Cost**

Some manufacture processes may lead high cost. We will analyses the designs and advise the suitable methods to our customers. The best solution will be adopted.

**Quality Control**

From the raw material selecting to bulk production processing, all procedures will follow PPAP program if necessary. The certificates will be provided including chemistry, hardness, mechanical property or NDT testing.

**Production Capacity**

The max iron/steel castings can reach 30tons in weight, meanwhile the minus casting is around 1gram only.

We also have prototyping and 3D scanning ability for sample plan.

**Logistic Service**

The products will be delivered directly to customer’s workshop, which will save plenty of work for clients.

**Contact with Us Immediately:**

Mark Wang

Email: mark@castingquality.com

WhatsApp: +861396488078

Website: www.castingquality.com

CASTING QUALITY