

## CONTINUOUS CAST GREY IRON – GRADE 4E

Floccast 4E grey cast iron consists of uniform eutectic graphite with a partial pearlitic structure ideally suited to high speed machining with significant improvements in tool life. Its typical fine grain size in a dense homogeneous matrix make it suitable for applications that are required to withstand high pressure without leaking.

### TYPICAL APPLICATIONS:

**Hydraulics, Pneumatics:** Pistons, slide bearings, distributor blocks.

**Machine Tools:** Bushings, guide rails, gear wheels, spur gears.

**Pumps, Compressors:** Oil pump gears, impellers, plate valves.

**Tools, Dies:** Angle plates, V-blocks.

**Automotive:** Pistons, pulleys, gears.

**General:** Gears, racks, V-pulleys pinions, clutch drums, sprockets etc.

### PRODUCTION RANGE:

Rounds: 20mm – 610mm

Squares: 25mm – 300mm

Bar length: 3 metres (10 ft) standard

Flats: up to 200mm per side

Bar length: 2 metres standard

### ANNEALING:

Heat to 780 – 850°C for ½ - 3 hours

Cool in furnace to 400°C – 500°C

**Alternatively for extreme softness:**

Heat to 850 - 900°C for 1–6 hours

Cool in furnace to 690°C, and hold for 2-3 hours then cool in furnace to room temperature

### REPAIR WELDING:

Pre-heat at 300°C, cool very slowly.

Post-weld stress relieve at 650°C.

Note: Welding details for guidance only.

### TYPICAL CHEMICAL ANALYSIS

Carbon	3.00 – 3.70%
Silicon	2.20 – 2.90%
Manganese	0.20 – 0.70%
Phosphorus	0.10%
Sulphur	0.08%

### TYPICAL MECHANICAL PROPERTIES

Tensile Strength	220 - 260 MPa
Hardness Brinell	170 – 220
Compressive Strength	700 - 800 MPa

Typical properties for guidance only

### RELATED STANDARDS:

AS 1830	T 250
ASTM A48	Classes 35 – 40
BS 1452	Grade 250
DIN 1691	GG35
JIS G 5501	FC 25

### TECHNOLOGICAL PROPERTIES:

Machinability	Excellent
Microfinish	Excellent
Rust & Acid Resistance	Very Good
Damping capacity	Very Good
Sliding	Excellent
Wear Resistance	Good
Enamelling	Good
Surface	Free of Sand

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