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MATERIAL DATA SHEET

DUCTILE CAST IRON

Commonly known as:- 3D; 65-45-12

Typical Applications:- Items requiring resistance to corrosion and thermal and mechanical shock in marine, automotive, hydraulics, pump bodies, glands, moulds, gears, sprockets, impellers and rotors.

Chemical Composition %

Element		Nominal
Carbon	C	3.2 – 3.7
Silicon	Si	2.3 – 3.1
Manganese	Mn	0.4 max
Phosphor	P	0.07 max
Sulphur	S	0.02 max
Iron	Fe	Balance

Mechanical Properties (typical)	< 120 mm dia	>120 mm dia
Ultimate Tensile Strength	450 MPa	400 MPa
Elongation	10 % min	8 % min
Typical Hardness	160 – 210 BHN	
Machinability	Excellent	

Similar Specifications:- AS 1831-1985 400-250-12; BS 2789 SNG 27/12; ASTM A.536 65-45-12; DIN 1693 GGG40; JIS FC D45

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