

Duplex Steel (D6)



Duplex alloys are designed with extreme corrosion resistance in mind. Made up of austenitic and ferritic content, they offer high strength while retaining generally good weldability.

D6 Duplex can often be referred to as grades "2205" or "1.4462"

Chemical Content	%
Chromium (Cr)	21-23
Nickel (Ni)	4.5-6.5
Molybdenum (Mo)	2.5 - 3.5
Manganese (Mn)	0 - 2
Silicon (Si)	0 - 1
Nitrogen (N)	0.1 - 0.22
Phosphorus (P)	0 - 0.03
Carbon (C)	0 - 0.03
Sulphur (S)	0 - 0.02

Physical Properties	Nominal Value
Density	7805 kg/m ³
PREN Value	35
Temperature Range	-80°C to 300°C
Modulus of Elasticity	200 GPa
Electrical Resistivity	0.85 x10 ⁻⁶ Ω .m
Thermal Conductivity	19.0 W/m.K
Thermal Expansion	13.7 x10 ⁻⁶ /K

Mechanical Properties	Nominal Value
Proof Stress	450 Min MPa
Tensile Strength	650 to 880 MPa
Elongation A50 mm	25 Min %
Hardness Brinell	270 Max HB

The information provided in this datasheet is based upon average values and is intended for guidance purposes only. Vital Parts assumes no responsibility or liability for the accuracy of the information contained on this datasheet. Product samples are available for the to determine the suitability of the product for any application.