DUPLEX 2205:

- **Excellent machinability**
- **High resistance to stress corrosion cracking(SCC) in chloride-bearing environments.**
- **High resistance to stress corrosion cracking(SCC) in environments containing hydrogen sulphide.**
- **High resistance to general corrosion, pitting and crevice corrosion.**
- **High mechanical strength roughly twice the proof strength of austenitic stainless steels**
- **Good hot-working properties.**
- **High resistance to erosion corrosion and corrosion fatigue.**
- **Physical properties that offer design advantages.**
- **Good weldability.**

Due to its excellent corrosion properties, Duplex 2205 is a highly suitable material for service in environments containing chlorides and hydrogen sulphide.

The material is suitable for use in production tubing and flowlines for the extraction of oil and gas from sour wells, in refineries and in process solutions contaminated with chlorides.

Duplex 2205 is particularly suitable for heat exchangers where chloride bearing water or brackish water is used as a cooling medium.

The steel is suitable for use in dilute sulphuric acid solutions and for the handling of organic acids, e.g. acetic acid and mixtures.

CHEMICAL PROPERTIES(Limiting Chemical Composition%)

Ni	C	Mn	Fe	S	Si	Cr	P	Mo	N
4.5 - 6.5	0.030 max	2.0 max	63.75 - 70.36	0.020	1.0 max	22 - 23	0.030	3.0 - 3.5	0.14 - 0.20

PHYSICAL PRPERTIES

`Density		CTE, linear		Specific Heat Capacity	
g/cm³	lb/in³	@Temperature 20.0 - 100 °C	@Temperature 68.0 - 212 °F	@Temperature 20.0 °C	@Temperature 68.0 °F
7.82	0.283	13.7 µm/m-°C	7.60 µin/in-°F	0.418 J/g-°C	0.100 BTU/lb-°F

MECHANICAL PROPERTIES

Hardness, Brinell		Hardness, Rockwell C		Tensile Strength at Break		Tensile Strength, Yield		Elongation at Break		Modulus of Elasticity	
Metric	English	Metric	English	Metric	English	Metric	English	Metric	English	Metric	English
293	293	31	31	621 MPa	90000 psi	448 MPa	65000 psi	% 25	% 25	190 GPa	27500 ksi

MECHANICAL PROPERTES DIAGRAM