BOHLER UDDEHOLM
AUSTRALIA

2205 Duplex Stainless Steel

Typical Analysis (Ave. values %)	C	Si	Mn	Cr	Ni	Mo	N
	≤0.03	1.0	2.0	22.0	5.5	3.0	0.02

NEAREST STANDARD	DIN	UNS	ASTM
	1.4462 X2CrNiMoN22 5 3	S31803	A240

DESCRIPTION	**ASSAB 2205** is a duplex stainless steel with high general, localized and stress corrosion resistance properties in addition to high strength and excellent impact toughness. **ASSAB 2205** provides pitting and crevice corrosion resistance superior to 316L or 317L austenitic stainless steels in almost all corrosion media. It also has high corrosion and erosion fatigue properties as well as lower thermal expansion and higher thermal conductivity than austenitic steels. The yield strength is about twice that of austenitic stainless steels **ASSAB 2205** is particularly suitable for applications covering the temperature range of -45°C to 320°C.

APPLICATIONS	➢ Pressure vessels, tanks, piping and heat exchangers in the chemical processing industry. ➢ Piping, tubing and handling of gas and oil. ➢ Effluent scrubbing systems. ➢ Pulp and paper industry digesters, bleaching equipment, and stock handling systems. ➢ Rotors, fans, shafts, and press rolls requiring combined strength and corrosion resistance. ➢ Cargo tanks for ships and trucks. ➢ Food processing equipment.

MECHANICAL PROPERTIES & COMPARISONS (annealed)

ASSAB 2205 provides a stainless steel with twice the yield strength of the standard austenitic alloys and an upgrade in general corrosion resistance.

Grade	Tensile Strength MPa	Yield Strength MPa	Elong %
ASSAB 2205	620	**450**	>25
304	520	210	40
316	520	210	40
317	520	210	35

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HEAT TREATMENT	Anneal	1040°C. water quench.

PHYSICAL PROPERTIES	Density (kg/dm^3)	7.80
	Modulus of elasticity 10^3 N/mm^2	200
	Thermal conductivity W/(m.K)	15
	Electric resistivity $Ohm.mm^2/m$	0.80
	Specific heat capacity J/(kg.K)	500
	Thermal expansion 10^6 m/(m.K)	13

WELDING	Use Fox CN22/9N electrodes or CN229/9N MIG (99.996% Argon) Back purging with pure Argon should be carried out. For highly stressed walled constructions the limited preheat temperature of 150ºC maximum is recommended.

SIZE RANGE	Round	31.75 to 101.6 mm

LOCATIONS

Bohler Uddeholm Australia Pty Ltd ABN 15000013052

Sydney	129-135 McCredie Rd Guildford	2161	Ph (02) 8724 5554	Fax (02) 8724 5555
Newcastle	3 Pavilion Pl Cardiff	2285	Ph (02) 4954 6611	Fax (02) 4956 5773
Albury	1 Eames St Albury	2640	Ph (02) 6041 3399	Fax (02) 6041 1820
Wollongong	40 Doyle Ave Unanderra	2526	Ph (02) 4272 6544	Fax (02) 4272 7563
Marayong	1/21 Binney Rd Marayong	2148	Ph (02) 9831 4431	Fax (02) 9671 1682
Melbourne	282-290 Greens Rd Dandenong	3175	Ph (03) 9767 5554	Fax (03) 9767 5555
Bayswater	4 Amsted Rd Bayswater	3153	Ph (03) 9739 8022	Fax (03) 9739 8033
Adelaide	1 Williams Cir Pooraka	5095	Ph (08) 8368 4554	Fax (08) 8368 4555
Brisbane	12-18 Limestone St Darra	4076	Ph (07) 3712 9554	Fax (07) 3712 9555
Townsville	9-11 Caldwell St Garbutt	4814	Ph (07) 4479 4800	Fax (07) 4725 1316
Perth	29-33 Gauge Cir Canningvale	6155	Ph (08) 9455 8672	Fax (08) 9455 8673
Kewdale	5 Beete St Welshpool	6106	Ph (08) 9350 9582	Fax (08) 9350 9683
Launceston	20 Murphy St Invermay	7248	Ph (03) 6334 3542	Fax (03) 6331 4001

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