

# 2205 basic

For welding steels such as					
Outokumpu	EN	ASTM	BS	NF	SS
2205	1.4462	S32205	318S13	Z3 CND 22-05 Az	2377

### Standard designations

EN 1600 E 22 9 3 N L B  
 AWS A5.4 E2209-15

### Characteristics

AVESTA 2205 basic provides somewhat better impact properties and position welding properties than the 3D type. It is primarily designed for welding duplex steel of the 2205 type but can also be used for the welding of 2304.

The weldability of duplex steels is excellent. However, welding should be adapted to the material as far as fluidity, edge preparation, heat input etc. are concerned. For detailed recommendations, please see "How to weld duplex stainless steels" or contact Avesta Welding.

### Welding data

DC+	Diam., mm	Current, A
	2.50	50 – 70
	3.25	70 – 100
	4.00	100 – 140

### Weld deposit data

Metal recovery approx. 110 %.

### Typical analysis, % (All weld metal)

C	Si	Mn	Cr	Ni	Mo	N
0.03	0.5	1.2	23.5	9.0	3.0	0.16

Ferrite 40 FN WRC-92

### Mechanical Properties

	Typical values (IIW)	Min. values EN 1600
Yield strength $R_{p0.2}$	645 N/mm <sup>2</sup>	450 N/mm <sup>2</sup>
Tensile strength $R_m$	840 N/mm <sup>2</sup>	550 N/mm <sup>2</sup>
Elongation $A_5$	26 %	20 %
Impact strength KV		
+20°C	100 J	
-46°C	75 J	
-60°C	50 J	
Hardness, approx.	240 Brinell	

**Interpass temperature:** Max. 150°C.

**Heat input:** 0.5 – 2.5 kJ/mm

**Heat treatment:** Generally none. In special cases quench annealing at 1100 – 1150°C.

**Structure:** Duplex (austenite with approx. 40 % ferrite).

**Scaling temperature:** Approx. 850°C (air).

**Corrosion resistance:** Very good resistance to pitting and stress corrosion cracking in chloride containing environments.

**Approvals:** –

### Welding positions

Ø 2.5–4.0

