

# 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 2205 AC/DC type electrodes. The electrode is designed for welding duplex steel of the 2205 type. For light to moderate thickness material, welding should be carried out as for ordinary austenitic stainless steel. However, the somewhat lower penetration and fluidity of the weld should be considered. Very high quench rates and excessive times at red heat or above should be avoided to prevent excessive ferrite or formation of intermetallic phases.

## Welding data

DC+	Diam. mm	Current, A
	2.5	50 – 70
	3.25	70 – 110
	4.0	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	90 J	
-40°C	75 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:** 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

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## Welding positions

