

## IABCO ER309

### MIG/GMAW and TIG/GTAW wire for austenitic stainless steel

Product name	IABCO ER309
Classification EN ISO	14343-A: G/W 22 12 H
Material No.	1.4833
Classification AWS	A5.9: ER309
Applications	<p>IABCO ER309 is used predominantly for welding matching composition castings. The ER309 should not be confused with ER309L which is used for dissimilar joints and buffer layers. The ER309 wire has controlled carbon and ferrite content for better resistance to service conditions above 400°C.</p> <p>The 309 cast alloys have good oxidation resistance up to ~1000°C but normally in applications where the structural strength and creep requirements are moderate. Typical applications for the 309 alloys are in furnaces, flue gas systems or ducting.</p> <p>The ER309 also has potential use for other high temperature alloys such as the 'Sicromals' and also utility ferritics when used at high temperature.</p>
Base materials	<p>Matching composition castings:</p> <p>ASTM - 309, 309S, 309H, A351 grades CH8/CH10/CH20. EN - 1.4833, X12CrNi23-12. UNS - S30900, S30908, S30909.</p>
Typical analysis of wire, weight %	<p>C: 0.08 Si: 0.4 Mn: 1.8 Cr: 23.5 Ni: 13.0</p>
Typical heat treatment <sup>(1)</sup>	Preheat, interpass temperature and PWHT will be dependent on application and base material.
Mechanical properties of weld deposit <sup>(2)</sup>	<p>0.2% proof stress, Rp0.2%: ≥350MPa. Tensile strength, Rm: ≥550MPa. Elongation, 4d/5d: ≥25%.</p>
Other products	-

**Notes** (1) Application codes and project specifications should always be referred to for specific requirements.

(2) Actual mechanical properties will be dependent on specific welding procedure (including shielding gas, flux, PWHT etc) and should always be confirmed by approval of an appropriate welding procedure.