

ER312

MIG/GMAW and TIG/GTAW wire for dissimilar joints

Product name	IABCO ER312
Classification EN ISO	14343-A: G/W 29 9
Material No.	-
Classification AWS	A5.9: ER312
Approvals	-
Applications	<p>IABCO ER312 is used for buffer layers, dissimilar joints and difficult to weld steels.</p> <p>IABCO ER312 is also used for dissimilar joints between austenitic stainless steels (eg. 304L, 316L) and CMn or low alloy steels.</p> <p>IABCO ER312 is also used for welding difficult to weld steels such as hardenable steels, heat treatable steels, tool steels and medium/high carbon general engineering steels. IABCO ER312 is also useful for welding free machining steels with high sulphur content.</p> <p>IABCO ER312 produces high strength weld metal with comparatively low ductility and is not recommended for thick joints; for these applications IABCO ER307Si or ER309LMo may prove better options.</p>
Base materials	<p>There are no matching base materials for IABCO ER312.</p> <p>The wire is used on a variety of base materials for the applications described above.</p>
Typical analysis of wire, weight %	<p>C: 0.10</p> <p>Si: 0.4</p> <p>Mn: 1.8</p> <p>Cr: 30.0</p> <p>Ni: 9.1</p> <p>Mo: 0.2</p>
Typical heat treatment ⁽¹⁾	<p>Preheat and interpass temperature will be dependent on application and base material.</p> <p>PWHT: Not recommended for applications requiring PWHT.</p>
Mechanical properties of weld deposit ⁽²⁾	<p>0.2% proof stress, Rp0.2%: 700MPa.</p> <p>Tensile strength, Rm: 600MPa.</p> <p>Elongation, 4d/5d: 20%.</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.