

AK ER2594

ER2594 is a highly alloyed filler metal specifically designed for welding 25Cr series super-duplex stainless steels. Its chemical composition is optimized to ensure weld properties that match those of the base metal. Superduplex steels (such as S32750) contain higher levels of chromium, molybdenum, and nitrogen than standard duplex steels (such as S32205), resulting in higher strength and superior corrosion resistance (particularly pitting and crevice corrosion). ER2594 welding wire is designed to match and maintain this high performance.

Typical Chemical Composition(%):

	C	Si	Mn	S	P	Ni	Mo	Cr	N
Requirement	0.03	1.0	2.5	0.02	0.03	8.0-10.5	2.5-4.5	24.0-27.0	0.2-0.3
Actual Result	0.015	0.42	0.56	0.010	0.017	9.0	3.8	25.3	0.23

Typical Mechanical Properties:

	Tensile strength (MPa)	Yield Stress (MPa)	Elongation (%)	Impact Values (J)
Requirement	——	——	——	——
Actual Result	850MPa	650MPa	25%	——