

Classifications

EN ISO 3581-A	AWS A5.4	Mat. No.
E 29 9 R 1 2	E312-16 (mod.)	1.4337

Characteristics and typical fields of application

Stainless; wet corrosion up to 300 °C (572 °F). High resistance to hot cracking: good toughness at high yield strength. For joining and surfacing applications with matching/similar steels / cast steel grades. For fabricating tough joints on unalloyed / low alloy structural steels of higher strength, on high manganese and CrNiMn steels, between dissimilar metals e.g. between stainless or heat resistant and unalloyed/low alloy steels / cast steel grades.

Base materials

DB-approved parent metals

1.4006 – X10Cr13, 1.3401 – X120Mn12, S235 [St 37], E295 [St 50];

Useable for joint welding on limited weldable unalloyed and low alloyed steels of higher strength. Used as stress relieved buffer layer when cladding cold and warm machine tools. For joinings on high manganese steel and CrNiMn steel, as well as for combinations on steels of different chemical composition or strength.

Typical analysis of all-weld metal (wt.-%)

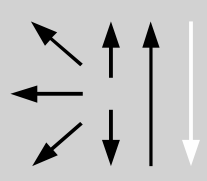
	C	Si	Mn	Cr	Ni	N
wt-%	0.10	1.1	0.8	29.0	9.0	0.1

Structure: Austenite/ferrite

Mechanical properties of all-weld metal

Heat-treatment	Yield strength R _{p0.2}	Tensile strength R _m	Elongation A (L ₀ =5d ₀)	Impact work ISO-V KV J
	MPa	MPa	%	+20 °C
aw	500	750	20	25

Operating data

	Polarity: DC (+) / AC	∅ (mm)	L mm	Amps A
		2.0	250	45 – 60
		2.5	300	50 – 80
		3.2	350	60 – 110
		4.0	350	90 – 150
		5.0	450	150 – 210

Welding instruction

Materials	Preheating	Postweld heat treatment
Stainless and heat resistant, unalloyed and low alloy steels / cast steel grades; combinations	According to parent metal	None

Approvals

DB (30.138.06), CE