Section II - Stainless Steels

Metrode offers one of the largest ranges of welding consumables for all types and grades of stainless steels. This includes covered electrodes, flux cored wires, solid wires and wire flux combinations for submerged arc welding.

Martensitic stainless steel consumables

This includes consumables for not only martensitic 410, but also soft martensitic and precipitation hardening steels, offering attractive combinations of mechanical properties and corrosion resistance.

410	MMA	**13.RMP**	E410-26	E 13 R	A73
		13.1.BMP	(E410-25)	DIN : E 13 1 MPB	
	TIG/MIG	**12Cr**	ER410	13	
410NiMo	MMA	**13.4.Mo.LR**	E410NiMo-26	E 13 4 R	A77
	TIG/MIG	**ER410NiMo**	ER410NiMo	13 4	
	FCW	**Supercore 410NiMo**	E410NiMoT1-1/4	T 13 4 MP 2	
17.4.PH/ FV520	MMA	**FV520-1**	--	--	--
		17.4.Cu.R	(E630-16)	--	
	TIG	**FV520-B**	--	--	
		17-4PH	ER630	--	
	MCW	**Metcore FV520**	--	--	

Standard Austentic Stainless Steels

The stainless steels in most widespread use are **standard austenitic** types. They combine general ease of fabrication with useful properties over a wide range of temperatures. Low carbon and other grades, effectively immune to HAZ corrosion (once known as weld decay), are produced economically by continuous casting, a process which relies on a particular solidification mode that also guarantees welds their resistance to hot cracking.
Consumables in this section are intended to match these steels, and some are modified for special service properties. The majority of electrodes have rutile or acid-rutile flux coverings for ease of use, although improved basic types are gaining popularity for fixed pipework. Many types have family variants optimised for particular user requirements: **Supermet** for downhand and HV welds, **Ultramet** rutile and basic (prefix B) types for pipewelding and positional welds, **Ultramet P** for pipe root welding, **Vertamet** for higher speed vertical-down welding, and **Supercore** for flux cored wires.
For normal service **below about 400°C**, it is common to weld low carbon 304L with 308L consumables, and Ti-stabilised 321 or unstabilised 304 with Nb-stabilised 347, although either is suitable for any combination of these 19%Cr-9%Ni alloys. Similarly, 19%Cr-12%Ni-2.5%Mo type 316L can be used instead of 318 (Nb-stabilised 316) for 316 and 316Ti as well as parent 316L. **Above about 400°C 'H'** grades are usual, and these high temperature weld metals with >0.04% carbon for strength and stability are covered in Section C.

Alloy	Process	Product	Specifications		Page/s
			AWS	BS EN	
308L	MMA	**Supermet 308L**	E308L-17	E 19 9 L R	A81
		Ultramet 308L	E308L-16	E 19 9 L R	
		Ultramet 308LP	E308L-16	E 19 9 L R	
		Ultramet B308L	E308L-15	E 19 9 L R	
	TIG	**308S92**	ER308L	W 19 9 L	
	SAW	**308S92**	ER308L	S 19 9 L	
	MIG	**Supermig 308LSi**	ER308LSi	G 19 9 L Si	
	FCW	**Supercore 308L**	E308LT0-4	T 19 9 L R	
		Supercore 308LP	E308LT1-4	T 19 9 L P	