

Classification

SAW Solid wire		SAW Flux
AWS A5.9	EN ISO 14343-A	EN ISO 14174
ER309L	S 23 13 L	SA FB 2

Characteristics and typical fields of application

Avesta S 309L S / Avesta C 807 is a wire-flux combination for submerged arc welding. The wire is a high-alloy 23 Cr 12 Ni primarily intended for dissimilar welding between stainless and mild steel and for surfacing low-alloy steels, offering a ductile and crack resistant weldment.

Avesta C 807 is an agglomerated basic welding flux for welding stainless high alloyed CrNi (Mo) steels. The weld seam are smooth and finely rippled without any slag residues. Besides the good slag detachability, the flux also provides good fillet weld properties. The weld metal show high degree of purity and good mechanical properties even at cryogenic temperatures.

Base Materials

Avesta S 309L S is primarily used when joining non-molybdenum alloyed stainless and carbon steel and for surfacing unalloyed or low-alloy steels.

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

	C	Si	Mn	Cr	Ni
Wire	0.02	0.40	1.8	23.3	13.5
Weld Metal	0.02	0.50	1.5	23.0	13.4

Typical mechanical properties of all-weld metal

Typical Properties	Yield strength R _e N/mm ²	Tensile strength R _m N/mm ²	Elongation (L ₀ =5d ₀)	Impact work ISO-V KV J	
	MPa	MPa	%	+20°C	-40°C
As Welded	410	550	38	85	65

Welding Recommendation

Re-drying of sub arc Flux 300-350°C, for 2 hours

Intepass temperature : Max. 150°C
Heat Input : Max. 2.0 KJ/mm

Size and Packaging

Size mm	Spooling	Weight (Kg)
2.0	Basket (K415)	25
2.4	Basket (K415)	25
3.2	Basket (K415)	25
4.0	Basket (K415)	25