

## Classifications

EN ISO 14343-A	AWS A5.9 / SFA-5.9	EN ISO 14174
S 19 9 L	ER308L	S A GS 2 DC

## Characteristics and typical fields of application

**Thermanit JE-308L - Marathon 801** is a wire/flux combination for submerged arc welding of stainless steel grades such as 1.4306 / 304L. Solid SAW wire of S 19 9 L / ER308L type for joining and surfacing applications with matching and similar stabilized and unstabilized austenitic CrNi(N) and CrNiMo(N)-steels and cast steel grades. Max. service temperature 350°C. Corrosion resistance similar to matching low-carbon and stabilized austenitic 18Cr-8Ni(N)-steels. The former product name of the SAW wire was "Avesta 308L/MVR".

**Marathon 801** is an agglomerated flux that ensures good welding properties with nice bead appearance and good slag detachability. The flux avoids excessive Cr-burn-out (Cr-support). For more information regarding this sub-arc welding flux, see the separate datasheet. The former product name of the SAW flux was "Avesta Flux 801".

## Base materials

1.4301 X5CrNi18-10, 1.4306 X2CrNi19-11, 1.4307 X2CrNi18-9, 1.4311 X2CrNiN18-9, 1.4312 GX10CrNi18-8, 1.4541 X6CrNiTi18-10, 1.4546 X5CrNiNb18-10, 1.4550 X6CrNiNb18-10  
UNS S30400, S30403, S30453, S32100, S34700  
AISI 304, 304L, 304LN, 302, 321, 347

## Typical analysis

wt.-%	C	Si	Mn	Cr	Ni
wire	0.015	0.45	1.6	20.0	10.0
all-weld metal	0.015	0.90	1.0	20.0	10.0

## Mechanical properties of all-weld metal - typical values (min. values)

Condition	Yield strength $R_{p0.2}$	Tensile strength $R_m$	Elongation A ( $L_0=5d_0$ )	Impact energy ISO-V KV J
	MPa	MPa	%	20°C
u	410 ( $\geq 320$ )	580 ( $\geq 550$ )	36 ( $\geq 30$ )	85 ( $\geq 65$ )

u untreated, as-welded

## Operating data

### Dimension mm

1.6

2.4

3.2

4.0

Suggested heat input is max. 2.0 kJ/mm and interpass temperature max. 150°C. Polarity: DC+

Post-weld heat treatment generally not needed. In special cases, solution annealing can be performed at 1050°C followed by water quenching.

## Approvals

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