

For welding steel such as:

Outokumpu	EN	ASTM	SS*	BS*	NF*
4301	1.4301	304	2333	304S31	Z7 CN 18-09
4307	1.4307	304L	2352	304S11	Z3 CN 18-10
4311	1.4311	304LN	2371	304S61	Z3 CN 18-10 Az
4541	1.4541	321	2337	321S31	Z6 CNT 18-10

* Obsolete national standards, replaced by EN 10088.

Characteristics

AVESTA 308L/MVR-4D is a thin-coated, rutile-acid type electrode especially developed for thin-walled pipe and sheet welding. The electrode is characterised by its good weldability in different positions and the good restraining properties.

AVESTA 308L/MVR-4D produces neat weld surfaces, offers a stable arc, good slag removal properties and produces very little spatter.

AVESTA 308L/MVR-4D is primarily intended for pipe and position welding, but can also be used as a general purpose electrode, especially for thin material.

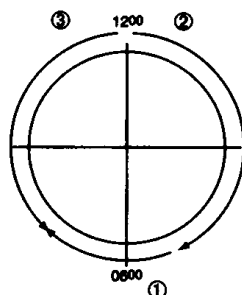
Welding directions

AVESTA 308L/MVR-4D is designed for the continuous welding of pipes.

The combination of low welding currents and good fluidity means that pipes with a wall thickness of 0.08 inch (2 mm) can be welded using an electrode with a diameter of 0.08 inch (2 mm).

Pipe welding can be performed in several different ways. One possibility is to start welding in overhead position (1), followed by vertical down on both sides from 12 o'clock position (2 and 3).

Another possibility is to start at the 7 o'clock position and weld vertical up to the 11 o'clock position on both sides. This requires an inverter power source with a remote control.



To bridge large root gaps DC- is often preferred.

Packaging and weights

Diam. inch	Diam. mm	Length mm/inch	Weight/capsule, lbs	Electrodes/capsule, approx.	Weight/carton, lbs
1/16	1.6	250 / 10	3.0	247	18
5/64	2.0	250 / 10	3.5	188	21
5/64	2.0	300 / 12	3,7	164	22
3/32	2.5	300 / 12	4.0	116	24
1/8	3.25	350 / 14	9.0	131	27

Approvals: -

Standard designations

EN 1600 E 19 9 L R
AWS A5.4 E308L-17

Typical analysis % (All weld metal)

C	Si	Mn	Cr	Ni
0.02	0.8	0.6	19.5	10.4
Ferrite		5 FN DeLong		

Mechanical properties

Typical values (IIW)

Yield strength, Rp _{0.2}	420 N/mm ²	61	ksi
Tensile strength, R _m	520 N/mm ²	75	ksi
Elongation, A ₅	35 %	30	%
Impact strength, KV			
+20°C	54 J	39	ft-lb
-40°C	38 J	28	ft-lb
Hardness approx.	210 Brinell		

Welding data

DC+/- or AC	Diam.	
	inch	Current A
	1/16	15- 40
	5/64	25- 55
	3/32	30- 85
	1/8	45-110

Interpass temperature: Max. 300°F (150°C).

Heat input: Max. 50.8 kJ/in (2.0 kJ/mm).

Heat treatment: Generally none. In special cases quench annealing at 1922°F (1050°C).

Structure: Austenite with 5-10 % ferrite.

Scaling temperature: Approx. 5162°F (850°C) (air)

Corrosion resistance: Very good under fairly severe conditions, e.g. in oxidising acids and cold or dilute reducing acids.

Welding positions

