

## Classification

AWS A5.4	EN ISO 3581-A	GB/T 983
E309L-17	E 23 12 L R	E309L-17

## Characteristics and typical fields of application

Highly alloyed low carbon rutile acid electrode designed for dissimilar welding between stainless and mild or low alloy steels. The electrode is also well suited as a buffer layer when performing overlay welding on mild steels, providing an 18 Cr 8 Ni deposit from the very first layer.

## Base Materials

**Dissimilar joint welds** of and between high-strength, mild steels and low-alloyed QT-steels, stainless, ferritic Cr- and austenitic Cr-Ni- steels, manganese steels

**Surfacing:** for the first layer of corrosion resistant weld surfacing on ferritic- perlitic steels in boiler and pressure vessel parts up to fine-grained steel S500N, as well as of high temperature steels like 22NiMoCr4-7 acc. SEW- Werkstoffblatt 365, 366, 20MnMoNi5-5 and G18NiMoC

## Typical analysis of all weld metal (Wt.-%)

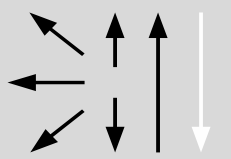
C	Si	Mn	Cr	Ni		
0.02	0.75	0.74	23.5	13.3		

Ferrite Number  $\approx$  10-15 FN WRC 92

## Mechanical properties of the weld metal

Heat Treatment	Yield strength	Tensile strength	Elongation	Impact work	
	$R_e$ N/mm <sup>2</sup>	$R_m$ N/mm <sup>2</sup>	( $L_0=4d_0$ )	ISO-V KV J	
	MPa	MPa	%	+20°C	-40°C
As Welded	440 ( $\geq$ 320)	560 ( $\geq$ 520)	35 ( $\geq$ 25)	60 ( $\geq$ 40)	45 ( $\geq$ 27)

## Operating Data

	<b>Polarity</b> DC (+) / AC	Heat Input: Max. 2.0 kJ/mm
		Interpass temperature: Max. 150°C
		Scaling Temperature : Approx. 1000°C
		Instruction for Re-drying: Re-dry for 3 h at 250-280°C before using

## Approval

ABS, DNV-GL, CWB, CE

## Size, Packing and Recommended welding parameters

Size (mm)	Kg / Pack	Kg / Box	Amperage (A)
2.50 x 350	5.00	15.00	50-80
3.25 x 350	5.00	15.00	80-120
4.00 x 450	5.00	15.00	100-160
5.00 x 450	5.00	15.00	160-220