



# Cromarod 316L

SMAW - (Stick) - MMA  
Stainless Steel

Date: 2002-04-19  
Revision: 19

## Description:

Cromarod 316L is a rutile flux coated AC/DC electrode intended for welding the low carbon, molybdenum alloyed, acid resisting austenitic stainless steels of similar composition (316L). Operability is excellent with a smooth low spatter arc producing an exceptionally good weld bead appearance. Fillet welds have a smooth surface, slightly concave profile with excellent toe line blend-in and a self-releasing slag. The electrode is all positional up to and including 3.25 mm diameter. Cromarod 316L is suitable for welding normal carbon 316 type grades and also Nb or Ti stabilised steels, provided service temperatures are below 400°C. For 316 material grades used at elevated temperatures, Cromarod 318 is recommended.

## Welding positions:



## Coating type:

Rutile

## Welding current:

DC +, AC 0CV > 39V

## Ferrite content:

FN 6 (WRC-92)

## Corrosion resistance

Good resistance to general and intergranular corrosion in the more severe environments e.g. dilute hot acids. Good resistance to chloride pitting corrosion.

## Scaling temperature:

Approx. 850°C in air.

## Redrying temperature:

350°C, 2h

## Chemical composition, wt.%

	C	Si	Mn	P	S	Cr	Ni
Min			0,5			17,0	11,0
Typical	0,02	0,8	0,7	0,02	0,02	18,5	12,0
Max	0,030	0,90	2,0	0,025	0,025	20,0	13,0

	Mo	Cu	V	Nb
Min	2,5			
Typical	2,7	0,1		
Max	3,0	0,5	0,1	0,1

## Mechanical properties

	<u>Specified</u>	<u>Typical</u>
Yield strength, Rp0.2%:	≥ 350 N/mm <sup>2</sup>	490 N/mm <sup>2</sup>
Tensile Strength, Rm:	≥ 510 N/mm <sup>2</sup>	600 N/mm <sup>2</sup>
Elongation, A5	≥ 30%	32%
Impact energy, CV:	-20°C • ≥ 50	-20° • 55 J -120°C • 45 J

## Product data

Diam.mm	Length mm	Product code	Current A	Voltage V	Kg weld metal/kg electrodes	No. of electrodes/kg weld metal	Kg weld metal/hour arc time	Burn-off time/electrode (sec.)
1,60	300	74401600	25-45	29	0,53	233	0,5	29
2,00	300	74402000	35-60	29	0,63	137	0,7	33
2,50	300	74402500	40-80	29	0,64	85	1,1	35
3,25	350	74403200	80-120	29	0,64	44	1,5	43
4,00	350	74404000	100-160	30	0,65	30	2,1	56
4,00	450	74404045	100-160	30	0,65	23	2,1	71
5,00	450	74405000	170-230	30	0,65	14	2,8	83

## Classification:

EN 1600-97	E 19 12 3 L R 12
AWS A5.4-92	E 316L-17
BS 2926-84	19.12.3 L R
DIN 8556-86	E 19 12 3 L R 23
NF A81-343-79	EZ 19.12.3 L R 23

## Approvals:

DNV, LR, BV	
ABS	
DB	Kennblatt Nr. 30.042.02
CL, UDT, SVK	
Inspecta	
TÜV	

## Note

Core wire:
P ≤ 0.020 %
S ≤ 0.015 %
N ≤ 0.080 %