

CA-101S × UC-309/309L

For welding of 22%Cr-12%Ni stainless Steel and mild steel to stainless steel

UC-309 : AWS ER309
UC-309L : AWS ER309L

Applications

Welding of 22%Cr-12%Ni stainless steel and dissimilar joints such as stainless steel to mild steel or low alloy steel. 19%Cr-9%Ni type hardsurfacing of mild steel or low alloy steel. Welding of 18%Cr-8%Ni stainless clad steel.

Characteristics

CA-101S × UC-309/309L is a bonded type flux which contains appropriate quantity of alloy elements. UC-309 is suitable for welding dissimilar metals such as mild steel because of large quantity of alloy elements. It provides better crack resistibility due to properly controlled ferrite content in austenitic structure.

Notes on usage

In the case welding dissimilar metals such as clad steel or mild steel to stainless steel. If the penetration is excessive, it may result in crack formation. Therefore, select appropriate groove design, welding conditions and wire position.

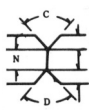
Typical chemical composition of weld metal (%)

Flux × Wire	C	Mn	Si	Ni	Cr	Remarks		
						Welding method	Base metal	PT (mm)
CA-101S × UC-309	0.06	1.17	0.87	12.13	23.91	Both side single-layer	SUS 309	15
CA-101S × UC-309L	0.03	1.22	0.85	12.22	24.09			

Typical mechanical properties of weld metal

Flux × Wire	TS N/mm ² (MPa)	EL %	IV (J)
			0°C
CA-101S × UC-309	608	39	74
CA-101S × UC-309L	594	40	79

Typical welding conditions

PT (mm)	Dia. (mT.)	Pass	Amp.	Volt.	Speed (cm/min)	Groove dimension					
						A (mm)	B (mm)	N (mm)	C (°)	D (°)	
11	4.0	1	450	33	55		3	3	5	90	90
		2	500	33	60						
19	4.8	1	650	35	30	6	6	7	90	90	
		2	800	35	35						