

TGX-308L

TGX-316L

TGX-309L

TGX-347

AWS A5.22 R308LT1-5

AWS A5.22 R316LT1-5

AWS A5.22 R309LT1-5

AWS A5.22 R347T1-5

Applications:

For root pass in one-side TIG welding of stainless steels as:

- TGX-308L : for 18%Cr-8%Ni type such as SUS 304 and low carbon 18%Cr-8%Ni type such as SUS 304L,
- TGX-316L : for 18%Cr-12%Ni-2%Mo type such as SUS 316 and low carbon 18%Cr-12%Ni-2%Mo type such as SUS316L,
- TGX-309L : for dissimilar-metal joint such as a stainless steel to a carbon steel or a low alloy steel,
- TGX-347 : for 18%Cr-8%Ni-Nb type such as SUS 347 and 18%Cr-8%Ni-Ti type such as SUS321.

Characteristics on usage:

TGX series are flux cored filler rods for TIG welding without back shielding in root pass, which produce slag to protect reverse-side bead from oxidation in the atmosphere. Therefore, welding cost for root pass in one - side welding can be decreased since back shielding gas and its purging hour are unnecessary.

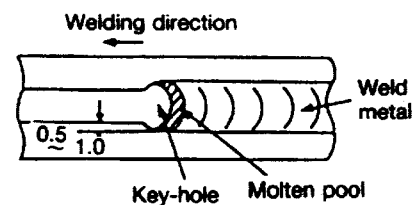
Notes on usage:

- (1) Groove preparation and proper welding current related to thickness of base metal are important for the key-hole formation during welding in order to supply slag onto reverse-side bead as shown below.
- (2) High pitch and little by little feeding of a filler rod is a must in order to melt it adequately.
- (3) Only for root pass in one-side welding, not for filling passes.

Groove preparation

GD			
TT(mm)	4	6	≥10
R(mm)	2.0	2.5	3.0

Formation of key-hole



Typical chemical composition of weld metal (%) (Shield gas: Ar)

Product name	C	Si	Mn	P	S	Ni	Cr	Mo	Nb
TGX-308L	0.018	0.80	1.66	0.023	0.005	10.31	19.62	-	-
TGX-316L	0.016	0.87	1.55	0.023	0.004	12.47	18.89	2.32	-
TGX-309L	0.017	0.81	1.52	0.022	0.006	12.62	24.26	-	-
TGX-347	0.020	0.80	1.60	0.021	0.004	10.21	19.09	-	0.66

Typical mechanical properties of weld metal (Shield gas: Ar)

Product name	0.2% OS N/mm ² (kgf/mm ²)	TS N/mm ² (kgf/mm ²)	EI %	IV, J (kgf-m)	
				0°C	-196°C
TGX-308L	450 (46)	620 (63)	47	130 (13)	60 (6.1)
TGX-316L	440 (45)	600 (61)	38	110 (11)	-
TGX-309L	530 (54)	680 (69)	32	-	-
TGX-347	460 (47)	630 (64)	48	130 (13)	-

Typical corrosion resistance of weld metal (Shield gas: Ar)

Product name	Strauss test
TGX-308L	No defect
TGX-316L	No defect
TGX-309L	-
TGX-347	No defect

Sizes available and recommended currents (DC - EN)

Product name	Size (mm)	Amp
TGX-308L	2.2 ϕ x 1000	80-90 for 3-5mm thickness base metal. 90-105 for 6mm and thicker base metal.
TGX-316L	2.2 ϕ x 1000	
TGX-309L	2.2 ϕ x 1000	
TGX-347	2.2 ϕ x 1000	