

# Gas Tungsten Arc Welding

## MS T-308 Filler Rod for Stainless Steel

**Applications** Suitable for 18%Cr-8%Ni stainless steel. Used to weld base metals of similar composition in particular type 304

Brand Name		MS T-308								
Representative of diameter (mm)		1.0	1.2	1.6	2.0	2.4	2.6	3.2	4.0	5.0
Chemical composition of length		1000 mm Standard or 950 mm Upon requested.								
Chemical composition of wire (%)		C	Si	Mn	P	S	Ni	Cr	Mo	-
		≤ 0.08	≤ 0.65	1.0- 2.5	≤ 0.03	≤ 0.03	9.0- 11.0	19.5 22.0	-	-
Mechanical property of deposited metal										
Tensile strength		≥ 540 N/mm <sup>2</sup>								
0.2% Offset strength		≥ 225 N/mm <sup>2</sup>								
Elongation		≥ 35 %								
Impact test		2mm Vnotch Impact value at -196 °C 39J								
Welding position		All position								
Welding polarity		DC-EN								
Shielding gas		Ar								
Welding current		Dia. 1.2 mm			Dia. 1.6 mm			Dia. 2.4 mm		
		30-80 A			40-120 A			50-150 A		
Packing										
Inner case weight (kg)		5.00								

# Gas Tungsten Arc Welding

## MS T-308L Filler Rod for Stainless Steel

**Applications** Suitable for low carbon 18%Cr-8%Ni stainless steel. This filler metal reduces the possibility of intergranular carbide precipitation.

Brand Name		MS T-308L							
Representative of diameter (mm)	1.0	1.2	1.6	2.0	2.4	2.6	3.2	4.0	5.0
Chemical composition of length	1000 mm Standard or 950 mm Upon requested.								
Chemical composition of wire (%)	C	Si	Mn	P	S	Ni	Cr	Mo	-
	≤ 0.030	≤ 0.65	1.0-2.5	≤ 0.03	≤ 0.03	9.0-11.0	19.5-22.0	-	-
Mechanical property of deposited metal									
Tensile strength	≥ 500 N/mm <sup>2</sup>								
0.2% Offset strength	≥ 205 N/mm <sup>2</sup>								
Elongation	≥ 35 %								
Impact test	2mm Vnotch Impact value at -196 °C 39J								
Welding position	All position								
Welding polarity	DC-EN								
Shielding gas	Ar								
Welding current	Dia. 1.2 mm			Dia. 1.6 mm			Dia. 2.4 mm		
	30-80 A			40-120 A			50-150 A		
Packing									
Inner case weight (kg)	5.00								

# Gas Tungsten Arc Welding

JIS -  
AWS A5.9 ER308LSi  
DIN 8556-SG 1.4316

## MS T-308LSi Filler Rod for Stainless Steel

**Applications** Suitable for low carbon 18%Cr-8%Ni stainless steel. The arc stability, bead width and blow hole resistibility is good because of high silicon. It can be applied to multi-layer welding.

Brand Name		MS T-308LSi							
Representative of diameter (mm)	1.0	1.2	1.6	2.0	2.4	2.6	3.2	4.0	5.0
Chemical composition of length	1000 mm Standard or 950 mm Upon requested.								
Chemical composition of wire (%)	C	Si	Mn	P	S	Ni	Cr	Mo	-
	≤ 0.030	0.65-1.00	1.0-2.5	≤ 0.03	≤ 0.03	9.0-11.0	19.5-22.0	-	-
Mechanical property of deposited metal									
Tensile strength	≥ 500 N/mm <sup>2</sup>								
0.2% Offset strength	≥ 205 N/mm <sup>2</sup>								
Elongation	≥ 35 %								
Impact test	NA								
Welding position	All position								
Welding polarity	DC-EN								
Shielding gas	Ar								
Welding current	Dia. 1.2 mm			Dia. 1.6 mm			Dia. 2.4 mm		
	30-80 A			40-120 A			50-150 A		
Packing									
Inner case weight (kg)	5.00								

# Gas Tungsten Arc Welding

## MS T-308N2 Filler Rod for Stainless Steel

Applications Suitable for welding of 304N2 stainless steel

Brand Name		MS T-308N2							
Representative of diameter (mm)	1.0	1.2	1.6	2.0	2.4	2.6	3.2	4.0	5.0
Chemical composition of length	1000 mm Standard or 950 mm Upon requested.								
Chemical composition of wire (%)	C	Si	Mn	P	S	Ni	Cr	Mo	N
	≤ 0.10	≤ 0.90	1.0-4.0	≤ 0.03	≤ 0.03	7.0-11.0	20.0-25.0	-	0.12-0.30
Mechanical property of deposited metal									
Tensile strength	≥ 540 N/mm <sup>2</sup>								
0.2% Offset strength	≥ 225 N/mm <sup>2</sup>								
Elongation	≥ 35 %								
Impact test	NA								
Welding position	All position								
Welding polarity	DC-EN								
Shielding gas	Ar								
Welding current	Dia. 1.2 mm			Dia. 1.6 mm			Dia. 2.4 mm		
	30-80 A			40-120 A			50-150 A		
Packing									
Inner case weight (kg)	5.00								

# Gas Tungsten Arc Welding

JIS Z3321 Y309  
AWS A5.9 ER309  
DIN 8556-SG 1.4829

## MS T-309 Filler Rod for Stainless Steel

**Applications** Suitable for dissimilar-metal joint and underlaying on ferritic steels for overlaying stainless steel weld metals, such as joining type 304 to carbon steel.

Brand Name		MS T-309								
Representative of diameter (mm)		1.0	1.2	1.6	2.0	2.4	2.6	3.2	4.0	5.0
Chemical composition of length		1000 mm Standard or 950 mm Upon requested.								
Chemical composition of wire (%)		C	Si	Mn	P	S	Ni	Cr	Mo	-
		≤ 0.12	≤ 0.65	1.0-2.5	≤ 0.03	≤ 0.03	12.0-14.0	23.0-25.0	-	-
Mechanical property of deposited metal										
Tensile strength		≥ 540 N/mm <sup>2</sup>								
0.2% Offset strength		≥ 225 N/mm <sup>2</sup>								
Elongation		≥ 30 %								
Impact test		NA								
Welding position		All position								
Welding polarity		DC-EN								
Shielding gas		Ar								
Welding current		Dia. 1.2 mm			Dia. 1.6 mm			Dia. 2.4 mm		
		30-80 A			40-120 A			50-150 A		
Packing										
Inner case weight (kg)		5.00								

# Gas Tungsten Arc Welding

## MS T-309L Filler Rod for Stainless Steel

**Applications** Suitable for dissimilar-metal joint and underlaying on ferritic steels for overlaying stainless steel weld metals. Usage as MS M-309, but the 0.03% maximum carbon increases to intergranular corrosion.

Brand Name		MS T-309L							
Representative of diameter (mm)	1.0	1.2	1.6	2.0	2.4	2.6	3.2	4.0	5.0
Chemical composition of length	1000 mm Standard or 950 mm Upon requested.								
Chemical composition of wire (%)	C	Si	Mn	P	S	Ni	Cr	Mo	-
	≤ 0.030	≤ 0.65	1.0-2.50	≤ 0.03	≤ 0.03	12.0-14.0	23.0-25.0	-	-
Mechanical property of deposited metal									
Tensile strength	≥ 500 N/mm <sup>2</sup>								
0.2% Offset strength	≥ 205 N/mm <sup>2</sup>								
Elongation	≥ 35 %								
Impact test	2mm Vnotch Impact value at -0° C 88J								
Welding position	All position								
Welding polarity	DC-EN								
Shielding gas	Ar								
Welding current	Dia. 1.2 mm		Dia. 1.6 mm			Dia. 2.4 mm.v			
	30-80 A		40-120 A			50-150 A			
Packing									
Inner case weight (kg)	5.00								

# Gas Tungsten Arc Welding

JIS -  
AWS A5.9 ER309LSi  
DIN 8556-SG 1.4332

## MS T-309LSi Filler Rod for Stainless Steel

**Applications** Suitable for dissimilar-metal joint and underlaying on ferritic steels for overlaying stainless steel weld metals. Usage as MS M-309L, but the 0.65-1.0% silicon content improves wetting behavior in the gas shielded welding process.

Brand Name		MS T-309LSi							
Representative of diameter (mm)	1.0	1.2	1.6	2.0	2.4	2.6	3.2	4.0	5.0
Chemical composition of length	1000 mm Standard or 950 mm Upon requested.								
Chemical composition of wire (%)	C	Si	Mn	P	S	Ni	Cr	Mo	-
	≤ 0.030	0.65-1.00	1.0-2.5	≤ 0.03	≤ 0.03	12.0-14.0	23.0-25.0	-	-
Mechanical property of deposited metal									
Tensile strength	≥ 540 N/mm <sup>2</sup>								
0.2% Offset strength	≥ 225 N/mm <sup>2</sup>								
Elongation	≥ 35 %								
Impact test	2mm Vnotch Impact value at -0 °C 80J								
Welding position	All position								
Welding polarity	DC-EN								
Shielding gas	Ar								
Welding current	Dia. 1.2 mm		Dia. 1.6 mm			Dia. 2.4 mm			
	30-80 A		40-120 A			50-150 A			
Packing									
Inner case weight (kg)	5.00								

# Gas Tungsten Arc Welding

JIS Z3321 Y309Mo  
 AWS A5.9 ER309Mo  
 DIN 8556-SG 1.4459

## MS T-309Mo Filler Rod for Stainless Steel

**Applications** Suitable for welding of stainless steel to carbon steel and root runs in cladding. Addition 2.0-3.0%Mo to increase its pitting corrosion resistance in halide-containing environments.

Brand Name		MS T-309Mo								
Representative of diameter (mm)	1.0	1.2	1.6	2.0	2.4	2.6	3.2	4.0	5.0	
Chemical composition of length	1000 mm Standard or 950 mm Upon requested.									
Chemical composition of wire (%)	C	Si	Mn	P	S	Ni	Cr	Mo	-	
	≤ 0.12	≤ 0.65	1.0-2.5	≤ 0.03	≤ 0.03	12.0-14.0	23.0-25.0	2.0-3.0	-	
Mechanical property of deposited metal										
Tensile strength	≥ 540 N/mm <sup>2</sup>									
0.2% Offset strength	≥ 225 N/mm <sup>2</sup>									
Elongation	≥ 35 %									
Impact test	NA									
Welding position	All position									
Welding polarity	DC-EN									
Shielding gas	Ar									
Welding current	Dia. 1.2 mm		Dia. 1.6 mm			Dia. 2.4 mm				
	30-80 A		40-120 A			50-150 A				
Packing										
Inner case weight (kg)	5.00									



# Gas Tungsten Arc Welding

## MS T-310 Filler Rod for Stainless Steel

**Applications** Suitable for welding of similar composition (26.5%Cr-21%Ni) or clad part of a18%Cr-8%Ni stainless steel. Owing to the high contents of alloying elements, ductility maintained in welding of carbon steel where deposited metal is diluted by base metal steel.

Brand Name		MS T-310							
Representative of diameter (mm)	1.0	1.2	1.6	2.0	2.4	2.6	3.2	4.0	5.0
Representative of length	1000 mm Standard or 950 mm Upon requested								
Chemical composition of wire (%)	C	Si	Mn	P	S	Ni	Cr	Mo	-
	≤ 0.15	≤ 0.65	1.0 - 2.5	≤ 0.03	≤ 0.03	20.0-22.5	25.0-28.0	-	-
Mechanical property of deposited metal									
Tensile strength	> 540 N/mm <sup>2</sup>								
0.2% Offset strength	> 225 N/mm <sup>2</sup>								
Elongation	> 35 %								
Impact test	NA								
Welding position	All position					Welding polarity			
DC-EN						Shielding gas			Ar
Welding current	Dia. 1.2 mm		Dia. 1.6 mm			Dia. 2.4 mm			
	30-80 A		40-120 A			50-150 A			
			Packing						
Inner case weight (kg)	5.00								

# Gas Tungsten Arc Welding

JIS Z3321 Y310S  
 AWS A5.9 ER310S  
 DIN 8556-SG 1.4842

**MS T-310S Filler Rod for Stainless Steel**

Applications Suitable for welding of 310S stainless steel.

Brand Name		MS T-310S							
Representative of diameter (mm)	1.0	1.2	1.6	2.0	2.4	2.6	3.2	4.0	5.0
Representative of length	1000 mm Standard or 950 mm Upon requested								
Chemical composition of wire (%)	C	Si	Mn	P	S	Ni	Cr	Mo	-
	≤ 0.08	≤ 0.65	1.0-2.5	≤ 0.03	≤ 0.03	20.0-22.5	25.0-28.0	-	-
Mechanical property of deposited metal									
Tensile strength	> 540 N/mm <sup>2</sup>								
0.2% Offset strength	> 225 N/mm <sup>2</sup>								
Elongation	> 35 %								
Impact test	NA								
Welding position	All position								
Welding polarity	DC-EN								
Shielding gas	Ar								
Welding current	Dia. 1.2 mm		Dia. 1.6 mm			Dia. 2.4 mm			
	30-80 A		40-120 A			50-150 A			
Packing									
Inner case weight (kg)	5.00								

# Gas Tungsten Arc Welding

JIS Z3321 Y312  
 AWS A5.9 ER312  
 DIN 8556-SG 1.4337

## MS T-312 Filler Rod for Stainless Steel

**Applications** Suitable for welding of dissimilar metals such as stainless steel, carbon steel and low alloy steel. MS M-312 has excellent usability and weldability. Owing to the austenite structure containing large contents of ferrite, MS M-312 has good crack resistibility.

Brand Name		MS T-312							
Representative of diameter (mm)	1.0	1.2	1.6	2.0	2.4	2.6	3.2	4.0	5.0
Representative of length	1000 mm Standard or 950 mm Upon requested								
Chemical composition of wire (%)	C	Si	Mn	P	S	Ni	Cr	Mo	-
	≤ 0.15	≤ 0.65	1.0-2.5	≤ 0.03	≤ 0.03	8.0-10.5	28.0-32.0	-	-
Mechanical property of deposited metal									
Tensile strength	≥ 540 N/mm <sup>2</sup>								
0.2% Offset strength	≥ 225 N/mm <sup>2</sup>								
Elongation	≥ 35 %								
Impact test	NA								
Welding position	All position								
Welding polarity	DC-EN								
Shielding gas	Ar								
Welding current	Dia. 1.2 mm		Dia. 1.6 mm			Dia. 2.4 mm			
	30-80 A		40-120 A			50-150 A			
Packing									
Inner case weight (kg)	5.00								

# Gas Tungsten Arc Welding

## MS T-316

## Filler Rod for Stainless Steel

### Applications

Suitable for welding of 18%Cr-12%Ni-2%Mo stainless steel, 13%Cr steel, 17%Cr steel and high toughness steel when postheating is not recommended. Use for welding between dissimilar metal like carbon steel and stainless steel

Brand Name		MS T-316								
Representative of diameter (mm)	1.0	1.2	1.6	2.0	2.4	2.6	3.2	4.0	5.0	
Representative of length	1000 mm Standard or 950 mm Upon requested									
Chemical composition of wire (%)	C	Si	Mn	P	S	Ni	Cr	Mo	-	
	≤ 0.08	≤ 0.65	1.0-2.5	≤ 0.03	≤ 0.03	11.0-14.0	18.0-20.0	2.0-3.0	-	
Mechanical property of deposited metal										
Tensile strength	≥ 540 N/mm <sup>2</sup>									
0.2% Offset strength	≥ 225 N/mm <sup>2</sup>									
Elongation	≥ 30 %									
Impact test	2mm Vnotch Impact value at -196° C 39 J									
Welding position	All position									
Welding polarity	DC-EN									
Shielding gas	Ar									
Welding current	Dia. 1.2 mm		Dia. 1.6 mm			Dia. 2.4 mm				
	30-80 A		40-120 A			50-150 A				
Packing										
Inner case weight (kg)	5.00									

# Gas Tungsten Arc Welding

JIS Z3321 Y316L  
 AWS A5.9 ER316L  
 DIN 8556-SG 1.4430

## MS T-316L

## Filler Rod for Stainless Steel

### Applications

Suitable for welding of extra-low carbon 18%Cr-12%Ni-2%Mo stainless steel. In this filler metal reduces the possibility of intergranular chromium carbide precipitation

Brand Name		MS T-316L								
Representative of diameter (mm)	1.0	1.2	1.6	2.0	2.4	2.6	3.2	4.0	5.0	
Representative of length	1000 mm Standard or 950 mm Upon requested									
Chemical composition of wire (%)	C	Si	Mn	P	S	Ni	Cr	Mo	-	
	≤ 0.030	≤ 0.65	1.0-2.5	≤ 0.03	≤ 0.03	11.0-14.0	18.0-20.0	2.0-3.0	-	
Mechanical property of deposited metal										
Tensile strength	≥ 500 N/mm <sup>2</sup>									
0.2% Offset strength	≥ 205 N/mm <sup>2</sup>									
Elongation	≥ 35 %									
Impact test	2mm Vnotch Impact value at -196° C 39 J									
Welding position	All position									
Welding polarity	DC-EN									
Shielding gas	Ar									
Welding current	Dia. 1.2 mm		Dia. 1.6 mm			Dia. 2.4 mm				
	30-80 A		40-120 A			50-150 A				
Packing										
Inner case weight (kg)	5.00									

# Gas Tungsten Arc Welding

JIS -  
AWS A5.9 ER316LSi  
DIN 8556-SG 1.4430

## MS T-316LSi Filler Rod for Stainless Steel

**Applications** Suitable for welding of extra-low carbon 18%Cr-12%Ni-2%Mo stainless steel. Usage as MS M-316L, but the 0.65-1.0% silicon content improves wetting behavior in the gas shielded welding process.

Brand Name		MS T-316LSi							
Representative of diameter (mm.)	1.0	1.2	1.6	2.0	2.4	2.6	3.2	4.0	5.0
Representative of length	1000 mm Standard or 950 mm Upon requested								
Chemical composition of wire (%)	C	Si	Mn	P	S	Ni	Cr	Mo	-
	≤ 0.030	0.65-1.0	1.0-2.5	≤ 0.03	≤ 0.03	11.0-14.0	18.0-20.0	2.0-3.0	-
Mechanical property of deposited metal									
Tensile strength	≥ 500 N/mm <sup>2</sup>								
0.2% Offset strength	≥ 205 N/mm <sup>2</sup>								
Elongation	≥ 35 %								
Impact test	NA								
Welding position	All position								
Welding polarity	DC-EN								
Shielding gas	Ar								
Welding current	Dia. 1.2 mm		Dia. 1.6 mm			Dia. 2.4 mm			
	30-80 A		40-120 A			50-150 A			
Packing									
Inner case weight (kg)	5.00								

# Gas Tungsten Arc Welding

## MS T-16-8-2 Filler Rod for Stainless Steel

**Applications** Suitable for type 16-8-2,316 and 347 for high-pressure, high-temperature piping systems. The deposit also has good hot-ductility properties which offer greater freedom from weld or creter cracking even under restraint condition.

Brand Name		MS T-16-8-2							
Representative of diameter (mm)	1.0	1.2	1.6	2.0	2.4	2.6	3.2	4.0	5.0
Representative of length	1000 mm Standard or 950 mm Upon requested								
Chemical composition of wire (%)	C	Si	Mn	P	S	Ni	Cr	Mo	-
	≤ 0.10	≤ 0.65	1.0-2.5	≤ 0.03	≤ 0.03	7.5-9.5	14.5-16.5	1.0-2.0	-
Mechanical property of deposited metal									
Tensile strength	≥ 540 N/mm <sup>2</sup>								
0.2% Offset strength	≥ 225 N/mm <sup>2</sup>								
Elongation	≥ 35 %								
Impact test	NA								
Welding position	All position								
Welding polarity	DC-EN								
Shielding gas	Ar								
Welding current	Dia. 1.2 mm		Dia. 1.6 mm			Dia. 2.4 mm			
	30-80 A		40-120 A			50-150 A			
Packing									
Inner case weight (kg)	5.00								

# Gas Tungsten Arc Welding

## MS T-316J1L Filler Rod for Stainless Steel

Applications Suitable for welding of 316J1L stainless steel.

Brand Name		MS T-316J1L							
Representative of diameter (mm)	1.0	1.2	1.6	2.0	2.4	2.6	3.2	4.0	5.0
Representative of length	1000 mm Standard or 950 mm Upon requested								
Chemical composition of wire (%)	C	Si	Mn	P	S	Ni	Cr	Mo	Cu
	≤ 0.030	≤ 0.65	1.0- 2.5	≤ 0.03	≤ 0.03	11.0- 14.0	18.0- 20.0	2.0- 3.0	1.0- 2.5
Mechanical property of deposited metal									
Tensile strength	≥ 540 N/mm <sup>2</sup>								
0.2% Offset strength	≥ 225 N/mm <sup>2</sup>								
Elongation	≥ 35 %								
Impact test	NA								
Welding position	All position								
Welding polarity	DC-EN								
Shielding gas	Ar								
Welding current	Dia. 1.2 mm		Dia. 1.6 mm			Dia. 2.4 mm			
	30-80 A		40-120 A			50-150 A			
Packing									
Inner case weight (kg)	5.00								



# Gas Tungsten Arc Welding

JIS Z3321 Y317  
 AWS A5.9 ER317  
 DIN 8556-SG 1.4440

## MS T-317

## Filler Rod for Stainless Steel

### Applications

Suitable for welding of 317 stainless steel is utilized in severely corrosive environments where crevice and pitting corrosion are of concern

Brand Name		MS T-317							
Representative of diameter (mm)	1.0	1.2	1.6	2.0	2.4	2.6	3.2	4.0	5.0
Representative of length	1000 mm Standard or 950 mm Upon requested								
Chemical composition of wire (%)	C	Si	Mn	P	S	Ni	Cr	Mo	-
	≤ 0.08	≤ 0.65	1.0 - 2.5	≤ 0.03	≤ 0.03	13.0-15.0	18.5-20.5	3.0-4.0	-
Mechanical property of deposited metal									
Tensile strength	≥ 540 N/mm <sup>2</sup>								
0.2% Offset strength	≥ 225 N/mm <sup>2</sup>								
Elongation	≥ 30 %								
Impact test	NA								
Welding position	All position								
Welding polarity	DC-EN								
Shielding gas	Ar								
Welding current	Dia. 1.2 mm		Dia. 1.6 mm			Dia. 2.4 mm			
	30-80 A		40-120 A			50-150 A			
Packing									
Inner case weight (kg)	5.00								

# Gas Tungsten Arc Welding

## MS T-317L Filler Rod for Stainless Steel

**Applications** Suitable for welding of 317L stainless steel. Used same as MS T-317 and reduces the possibility of intergranular carbide precipitation and increases the resistance to intergranular corrosion.

Brand Name		MS T-317L							
Representative of diameter (mm)	1.0	1.2	1.6	2.0	2.4	2.6	3.2	4.0	5.0
Representative of length	1000 mm Standard or 950 mm Upon requested								
Chemical composition of wire (%)	C	Si	Mn	P	S	Ni	Cr	Mo	-
	≤ 0.030	≤ 0.65	1.0 - 2.5	≤ 0.03	≤ 0.03	13.0- 15.0	18.5- 20.5	3.0- 4.0	-
Mechanical property of deposited metal									
Tensile strength	≥ 500 N/mm <sup>2</sup>								
0.2% Offset strength	≥ 205 N/mm <sup>2</sup>								
Elongation	≥ 30 %								
Impact test	NA								
Welding position	All position								
Welding polarity	DC-EN								
Shielding gas	Ar								
Welding current	Dia. 1.2 mm		Dia. 1.6 mm			Dia. 2.4 mm			
	30-80 A		40-120 A			50-150 A			
Packing									
Inner case weight (kg)	5.00								

# Gas Tungsten Arc Welding

## MS T-321 Filler Rod for Stainless Steel

**Applications** Suitable for welding of 321 stainless steel. With Titanium added. The Titanium acts in the same way Nb(Cb) in type 347 and thus increasing resistance to intergranular corrosion

Brand Name		MS T-321							
Representative of diameter (mm)	1.0	1.2	1.6	2.0	2.4	2.6	3.2	4.0	5.0
Representative of length	1000 mm Standard or 950 mm Upon requested								
Chemical composition of wire (%)	C	Si	Mn	P	S	Ni	Cr	Mo	Ti
	≤ 0.08	≤ 0.65	1.0 - 2.5	≤ 0.03	≤ 0.03	9.0-10.5	18.5-20.5	-	9xC-1.0
Mechanical property of deposited metal									
Tensile strength	≥ 540 N/mm <sup>2</sup>								
0.2% Offset strength	≥ 225 N/mm <sup>2</sup>								
Elongation	≥ 30 %								
Impact test	NA								
Welding position	All position								
Welding polarity	DC-EN								
Shielding gas	Ar								
Welding current	Dia. 1.2 mm		Dia. 1.6 mm			Dia. 2.4 mm			
	30-80 A		40-120 A			50-150 A			
Packing									
Inner case weight (kg)	5.00								

# Gas Tungsten Arc Welding

JIS Z3321 Y347  
 AWS A5.9 ER347  
 DIN 8556-SG 1.4551

## MS T-347 Filler Rod for Stainless Steel

**Applications** Suitable for welding of 316,316L and 318 stainless steel. With Nb(Cb) added as a stabilizer and reduces the possibility of intergranular chromium carbide precipitation

Brand Name		MS T-347							
Representative of diameter (mm)	1.0	1.2	1.6	2.0	2.4	2.6	3.2	4.0	5.0
Representative of length	1000 mm Standard or 950 mm Upon requested								
Chemical composition of wire (%)	C	Si	Mn	P	S	Ni	Cr	Mo	Nb
	≤ 0.08	≤ 0.65	1.0-2.5	≤ 0.03	≤ 0.03	9.0-11.0	19.0-21.5	-	10xC-1.0
Mechanical property of deposited metal									
Tensile strength	≥ 540 N/mm <sup>2</sup>								
0.2% Offset strength	≥ 225 N/mm <sup>2</sup>								
Elongation	≥ 30 %								
Impact test	NA								
Welding position	All position								
Welding polarity	DC-EN								
Shielding gas	Ar								
Welding current	Dia. 1.2 mm		Dia. 1.6 mm			Dia. 2.4 mm			
	30-80 A		40-120 A			50-150 A			
Packing									
Inner case weight (kg)	5.00								

# Gas Tungsten Arc Welding

JIS Z3321 Y347L  
 AWS A5.9 ER347L  
 DIN 8556-SG 1.4551

## MS T-347L Filler Rod for Stainless Steel

**Applications** Suitable for welding of 316,316L and 318 stainless steel. Low carbon content than MS T-347, with Nb(Cb) added as a stabilizer and reduces the possibility of intergranular chromium carbide precipitation

Brand Name		MS T-347L							
Representative of diameter (mm)	1.0	1.2	1.6	2.0	2.4	2.6	3.2	4.0	5.0
Representative of length	1000 mm Standard or 950 mm Upon requested								
Chemical composition of wire (%)	C	Si	Mn	P	S	Ni	Cr	Mo	Nb
	≤ 0.030	≤ 0.65	1.0 - 2.5	≤ 0.03	≤ 0.03	9.0-11.0	19.0-21.5	-	10xC-1.0
Mechanical property of deposited metal									
Tensile strength	≥ 500 N/mm <sup>2</sup>								
0.2% Offset strength	≥ 205 N/mm <sup>2</sup>								
Elongation	≥ 30 %								
Impact test	NA								
Welding position	All position								
Welding polarity	DC-EN								
Shielding gas	Ar								
Welding current	Dia. 1.2 mm		Dia. 1.6 mm			Dia. 2.4 mm			
	30-80 A		40-120 A			50-150 A			
Packing									
Inner case weight (kg)	5.00								

# Gas Tungsten Arc Welding

JIS Z3321 Y410  
 AWS A5.9 ER410  
 DIN 8556-SG 1.4009

## MS T-410

## Filler Rod for Stainless Steel

### Applications

Suitable for welding of 405,410,410S stainless steel is an air-hardening steel. Preheat and posheat treatments are required to achieve welds of adequate ductility for many engineering purposes.

Brand Name		MS T-410							
Representative of diameter (mm)	1.0	1.2	1.6	2.0	2.4	2.6	3.2	4.0	5.0
Representative of length	1000 mm Standard or 950 mm Upon requested								
Chemical composition of wire (%)	C	Si	Mn	P	S	Ni	Cr	Mo	-
	≤ 0.12	≤ 0.50	≤ 0.6	≤ 0.03	≤ 0.03	≤ 0.6	11.5-13.5	≤ 0.75	-
Mechanical property of deposited metal									
Tensile strength	≥ 450 N/mm <sup>2</sup>								
0.2% Offset strength	-								
Elongation	≥ 20 %								
Impact test	2mm Vnotch Impact value at 20° C 210J								
Welding position	All position								
Welding polarity	DC-EN								
Shielding gas	Ar								
Welding current	Dia. 1.2 mm		Dia. 1.6 mm			Dia. 2.4 mm			
	30-80 A		40-120 A			50-150 A			
Packing									
Inner case weight (kg)	5.00								

# Gas Tungsten Arc Welding

JIS Z3321 Y430  
AWS A5.9 ER430  
DIN 8556-SG 1.4015

## MS T-430

## Filler Rod for Stainless Steel

### Applications

Suitable for welding of 430,405 stainless steel. The MS T-430 classification usually requires preheating and postweld heat treatment

Brand Name		MS T-430							
Representative of diameter (mm)	1.0	1.2	1.6	2.0	2.4	2.6	3.2	4.0	5.0
Representative of length	1000 mm Standard or 950 mm Upon requested								
Chemical composition of wire (%)	C	Si	Mn	P	S	Ni	Cr	Mo	-
	≤ 0.10	≤ 0.50	≤ 0.6	≤ 0.03	≤ 0.03	≤ 0.6	15.5-17.0	-	-
Mechanical property of deposited metal									
Tensile strength	≥ 450 N/mm <sup>2</sup>								
0.2% Offset strength	-								
Elongation	≥ 20 %								
Impact test	NA								
Welding position	All position								
Welding polarity	DC-EN								
Shielding gas	Ar								
Welding current	Dia. 1.2 mm		Dia. 1.6 mm			Dia. 2.4 mm			
	30-80 A		40-120 A			50-150 A			
Packing									
Inner case weight (kg)	5.00								

JIS Z3321 Y430

AWS A5.9 -

DIN -

# Gas Tungsten Arc Welding

## MS T-430MR Filler Rod for Stainless Steel

Applications Suitable for 13-17 %Cr type stainless steel for thin plate in muffler welding

Brand Name		MS T-430MR							
Representative of diameter (mm)	1.0	1.2	1.6	2.0	2.4	2.6	3.2	4.0	5.0
Representative of length	1000 mm Standard or 950 mm Upon requested								
Chemical composition of wire (%)	C	Si	Mn	P	S	Ni	Cr	Mo	Nb
	≤ 0.030	≤ 0.50	≤ 0.6	≤ 0.03	≤ 0.03	≤ 0.6	15.5-18.0	-	0.4-0.8
Mechanical property of deposited metal									
Tensile strength	≥ 450 N/mm <sup>2</sup>								
0.2% Offset strength	-								
Elongation	≥ 20 %								
Impact test	NA								
Welding position	All position								
Welding polarity	DC-EN								
Shielding gas	Ar								
Welding current	Dia. 1.2 mm		Dia. 1.6 mm			Dia. 2.4 mm			
	30-80 A		40-120 A			50-150 A			
Packing									
Inner case weight (kg)	5.00								