Welding wire

PRODUCT PROPERTIES

INOXFIL, S.A. presents welding material with optimum chemical compositions, mechanical properties and dull or bright surface finish.

Its excellent level of roughness and friction confers fluidity and effective behavior that is adapted to each client in order to ensure a high degree of reliability and excellent arc stability in all processes of semiautomatic and automatic welding.

The packaging also covers all possible customer needs.

▪ DIAMETERS RANGE

TYPE OF WELDING	DIAMETERS (mm)							
	0,80	1,00	1,20	1,60	2,00	2,40	3,20	4,00
MIG/MAG (GMAW)	■	■	■	■				
TIG		■	■	■	■	■	■	
SUMERGED ARC					■	■	■	■
ELECTRODES*	1,60 - 5,00							

*The material is supplied in wire coils or cut wire, subsequently coated before its final use

▪ Rm RANGE (Ultimate tensile stregth range)

TIPE OF WELDING	Rm (Ultimate tensile stregth range) Nw/mm²
MIG/MAG (GMAW)	1000- 1700
TIG	1000- 1700
MUMERGED ARC	800- 1000
ELECTRODES*	800- 1000

▪ PACKAGING

PRODUCT	PACKING	CAPACITY (Kg)
MIG/MAG (GMAW)	Plastic spool / metal SD-300/BS300	15
	Blue, black etc., metallic spools (BS 300)	15
	Metallic coil (2X), and wooden conic coil (2XM)	350- 300
TIG	Diameter pipes 50	5
	Rectangular box	5
SUMMERGED ARC	Metallic spools K415	500- 1000
ELECTRODES	Rolls	25

AWS: A5.9	EN 14343-A	ACX	Steel Nº
ER 308L	19 9 L	603	1.4316
ER 308LSi	19 9 LSi	605	1.4316
ER 316L	19 12 3 L	653	1.4430
ER 316LSi	19 12 3 LSi	655	1.4430
ER 307LSi	18 8 Mn	682	1.4370
ER 430Nb	-	525	1.4511
ER 309L	23 12 L	709	1.4332
ER 309LSi	23 12 LSi	732	1.4332
ER 2209	22 9 3 NL	609	1.4462
ER 318Si	19 12 3 Nb Si	618	1.4576
ER 310	25 20	610	1.4842
ER 347Si	19 9 Nb Si	647	1.4551

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- **GENERAL CONDITIONS**

The wire is supplied in dull or bright finish, free of surface defects, with very low values of Ra (Roughness) and friction, clean surface without traces of residual lubricants. In some cases it may appear lubricant coated, specially designed to improve the material behavior in the winding and guiding process (optimal weld cord flow), minimizing the consumption of nozzles, and avoiding excess of projections in the cord.

Properties
ER308L is a CrNi type , for submerged arc welding (SAW) and welding with rods (TIG). Its use for stainless steels 18Cr8Ni type is recommended. It is a low carbon wire welding providing good resistance to intergranular corrosion, eliminating the precipitation of chromium carbides.
ER 308LSi is a welding wire for MIG / MAG (GMAW) recommended for steels containing approximately 19Cr10Ni, such as AISI 304, 304L. The high silicon content improves arc stability, fluidity and appearance of the weld seam .Resistance of welding to hot crack sensitivity (hot cracking) is better with higher than with lower silicon content.
ER 316L is a CrNiMo welding wire type, for submerged arc welding (SAW) and welding with rods (TIG) , recommended for welding AISI 316, AISI 316L types. Its low carbon eliminates the possibility of the formation of chromium carbides and increases the resistance to intergranular corrosion of the weld.
ER 316 LSi is recommended for MIG / MAG (GMAW) welding of corrosion resistant steels like 18Cr12Ni3Mo and other similar steels such as AISI types 316L. Resistance of welding to hot crack sensitivity (hot cracking) is better with higher than with lower silicon content. The high silicon content improves arc stability, fluidity and appearance of the weld seam.
EN 1.4370 (ER 307LSi) welding wire is recommended for MIG / MAG (GMAW) welding of dissimilar steels such as 18-8 steel with carbon steel and for joining steels difficult to weld. This type of material is used mainly in the automotive industry in welded joints of exhaust systems. Manganese improves the characteristics of resistance to mechanical friction, provides excellent toughness and high impact strength, abrasion and corrosion resistances. It allows a good finish of the cord without projections.
EN 1.4511 (430Nb ER) is a welding wire of ferritic structure basically used in the automotive industry for welding exhaust system. Its use is recommended for ferritic stainless steels welding.
ER 309 L welding wire is commonly used for welding similar alloys, but in some cases it can be used to weld the type 18Cr8Ni to bases of the same or similar metal, where severe conditions of use exist, and corrosion problems may appear, thereby requiring high alloyed weld metal. This type can also be used to weld types 18Cr8Ni with carbon steel or low alloy steels, dissimilar metals.
This type of steel is similar to ER 309L but with a higher silicon content in chemical composition. The high silicon content improves arc stability, fluidity and appearance of the weld seam. ER 309LSi can be used, as ER 309L, welding types 18Cr8Ni with carbon steel or low alloy steels, dissimilar metals.
The duplex type ACX 609, is a highly alloyed wire with Cr and Mo , specially designed for carrying out welds of similar duplex types. The properties of the duplex types and in particular the Cr and Mo contents of this alloy provide in the welding seam an excellent high resistance to general, pitting and stress corrosion.
The type 19 12 3 NbSi welding wire is stabilized type with Nb, used for MIG welding and welding with rods (TIG) It is a suitable wire for welding CrNiMo ,and CrNiMo with Ti or Nb materials, and it is recommended in environments where good resistance to corrosion is needed, as for food and chemical industries.
Type 25 20 / ER 310 is a welding wire designed for welding similar austenitic refractory types 25Cr / 20Ni is used to resist corrosion and oxidation at high temperatures, it can withstand flacking up to 1000ºC and it can be used for MIG welding (GMAW), TIG (GTAW),and submerged arc welding (SAW).
Type 19 9 Nb Si is a welding wire, stabilized with Nb, and designed for welding austenitic stainless steels 18Cr / 10Ni stabilized with Nb or Ti types, that can also be used to weld unstabilized types. It is indicated for places where you need an excellent resistance to intergranular corrosion, the Nb content gives this property.