TUNGSTEN INERT GAS
(TIG) WELDING

Gas tungsten arc welding (GTAW), also known as tungsten inert gas (TIG) welding is an arc welding process that uses a non-consumable tungsten electrode to produce the weld. The weld area is protected from atmospheric contamination by a shielding gas (usually an inert gas such as argon), and a filler metal is normally used, though some welds, known as autogenous welds, do not require it. A constant-current welding power supply produces energy which is conducted across the arc through a column of highly ionized gas and metal vapors known as a plasma.

GTAW is most commonly used to weld thin sections of stainless steel and non-ferrous metals such as aluminum, magnesium, and copper alloys. The process grants the operator greater control over the weld than competing processes such as shielded metal arc welding and gas metal arc welding, allowing for stronger, higher quality welds. However, GTAW is comparatively more complex and difficult to master, and furthermore, it is significantly slower than most other welding techniques. A related process, plasma arc welding, uses a slightly different welding torch to create a more focused welding arc and as a result is often automated.

RASI® TIG FILLER WIRES

STAINLESS STEEL FILLER WIRE FOR TIG WELDING

CLASSIFICATION AND CODING

BRAND	RASI TIG 304 L	RASI TIG 308 L	RASI TIG 309 L	RASI TIG 310	RASI TIG 312	RASI TIG 316 L	RASI TIG 347	RASI TIG 410
CODE AWS:A5.9	ER 304 L	ER 308 L	ER 309 L	ER 310	ER 312	ER 316 L	ER 347	ER 410

APPLICATIONS

RASI TIG 304 L : ASTM/AISI 304,304 L Joining To Similar Composition

RASI TIG 308 L : ASTM/AISI 304,304 L, 308, 308 L Joining To Similar Composition

RASI TIG 309 L : ASTM/AISI 309,309S and Dissimilar Composition Ss - Ms Welding. Overlays ON M.S., Low Alloy Steels/Cladding

RASI TIG 310 : Joining of Heat Resistance Dissimilar Stainless Steels

RASI TIG 312 : Joining to Dissimilar and Difficult to Weld Steels with known and Unknown Chemical Composition

RASI TIG 316 L : Joining TO 316, 316 L and for Surface Applications

RASI TIG 347 : Joining / Filling of AISI 347 and 321 material

RASI TIG 410 : Joining / Filling of 13% Chrome Steel and Equitant

SHIELDING GAS : ARGON FLOW RATE : 4 - 8 L / Min

CHEMICAL COMPOSITION OF FILLER WIRE

BRAND	C	Mn	Si	S & P	Cr	Ni	Mo
RASI TIG 308 L	0.04	1.0 - 2.5	0.3 - 0.65	0.03	19 - 22	09.0 - 11.0	0.75
RASI TIG 309 L	0.04	1.0 - 2.5	0.3 - 0.65	0.03	23 - 25	12.0 - 14.0	0.75
RASI TIG 310	0.15	1.0 - 2.5	0.3 - 0.65	0.03	25 - 28	20 - 23	0.75
RASI TIG 312	0.15	1.0 - 2.5	0.3 - 0.65	0.03	28 - 32	8.0 - 11.0	0.75
RASI TIG 316 L	0.04	1.0 - 2.5	0.3 - 0.65	0.03	18 - 20	11 - 14	2.0 - 3.0
RASI TIG 347	0.08	1.2 - 5.0	0.3 - 0.65	0.03	19 - 21	9 - 11	0.75
RASI TIG 410	0.12	0.6	0.5	0.03	11.5 - 13.5	0.6	0.75

PACKING (1000mm Cut Length)

STANDARD WIRE SIZES (Dia in MM) : 0.80 1.00 1.20 1.60 2.00 2.50 3.15

WE OFFER THE ABOVE WIRE IN SPOOL FORM ALSO FOR SIZE (Dia in MM) 0.80 1.00 1.20 and 1.60

Packing : Air Tight HDPE Packet With Polythene Sinking (Embossed with grade on each wire)
5 kg packing in plastic box and 12.50/15 kg in spool form.