



**DATA SHEET**  
**DS 129**  
**Rev. 2 dd 18/05/2015**  
**INETIG INOX 307 SI**

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**CLASSIFICATION**

AWS SPECIFICATIONS	EN SPECIFICATIONS
(AWS A 5.9: ER307)	EN ISO 14343-A: W 18 8 Mn
(AWS A 5.9M: ER307)	
(ASME SFA 5.9: ER307)	
(ASME SFA 5.9M: ER307)	

**APPROVALS**


**ALLOY TYPE**

Stainless tig rod for welding dissimilar steels.

**APPLICATIONS**

Inox tig rod designed for welding dissimilar steels and those with 13% manganese content. Suitable for heterogeneous cold welding, without preheat, of carbon, stainless, wear-resistant and armor steels. It is also used as a cushion layer and cladding intermediary layers. Resistance to hot cracking is provided by the high manganese content. In some cases this rod may offer an alternative to high nickel weld metal in joints between cast iron and stainless steels. Used as a wear-resistant material of rails which work hardens from 200 to 400 HV.

**MATERIALS TO BE WELDED**

ASTM	EN	Others
		14% Mn steels
		13-17% Cr steels

**WELDING GUIDELINES**

Preheat and interpass temperature depend on base metal hardenability. PWHT is not required.

**TECHNICAL INFORMATION**

Gas: Argon 100% (EN ISO 14175)  
 Welding positions: all positions



**WELDING PARAMETERS**

<b>Current</b>	<b>DC - Straight polarity</b>
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**PACKAGING DATA**

Diameter (mm)	1.2	1.6	2.0	2.4	3.2	4.0
<b>Length (mm)</b>	1000	1000	1000	1000	1000	1000
<b>Carton</b>	5/25 Kg	5/25 Kg	5/25 Kg	5/25 Kg	5/25 Kg	5/25 Kg

\* tolerances according to EN ISO 544 specification

All information in this data sheet is subject to change without notice.



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**TYPICAL CHEMICAL COMPOSITION OF WIRE**

C %	Mn %	Si %	Cr %	Ni %	Mo %	Cu %			
0.07	7.00	0.85	18.50	8.00	0.10	0.10			

**TYPICAL MECHANICAL PROPERTIES**

GAS		Yield strength	Tensile strength	Elongation on % 5d	Impact energy (Charpy V)				
		Rs	Rm	A 5d	+ 20°C	0°C	-20°C	-40°C	-60°C
		(MPa)	(MPa)	%	(Joule)	(Joule)	(Joule)	(Joule)	(Joule)
I1	as welded	500	660	34	-	-	-	-	-

**PRODUCTS AVAILABLE**

Process	Product	Classification AWS	Classification EN
MIG/MAG Solid wire	INEFIL INOX 307 SI	(AWS A 5.9: ER307)	EN 14343-A: G 18 8 Mn
TIG Rods			
SAW Submerged arc			
FCAW Cored wire			
SMAW Electrodes	INOX 307	AWS A 5.4: E307-16	EN 3581-A: E 18 9 Mn Mo R