



Filler alloy rod for TIG process

CastoTIG[®] 45802 W

For maintenance, repair and production

Description

Aluminium-manganese filler rod.

The welded deposit can be anodised, it produces a colour similar to that of AlMg alloys. The welded deposit can be polished, formed. It resists to corrosion in a similar manner than an equivalent base metals, particularly against weathering, sea-water and drinks.

Technical data

Standards

pr EN:.....AW - 5119 / AW - AlMg5(a)
 AWS / ASME 4. 10:ER 5356
 DIN 1732:SG AlMg 5
 W. Nr.:3.3556
 AWS /ASME 5.10:ER 5356

Mechanical properties

(on prepared test piece at 20°C without annealing)

	<i>Minimum</i>
Tensile strength R_m (N/mm ²):.....	235
Yield strength $R_{p0.2}$ (N/mm ²):.....	110
Elongation A_5 (%):.....	17

Physical properties

Melting range (°C)	575 - 633
Density (kg/dm ³)	2.64

Shielding gas

Recommended gas: 100% Ar [DIN 32526 I 1]

Approvals

TÜV, DB

Applications

For the joining, rebuilding and coating, by the TIG (Tungsten Inert Gas) process, of aluminium alloys of the same and similar natures such as for example:

AlMg 1	W. Nr.: 3.3315	AlMg 2	W. Nr.: 3.3325
AlMg 3	W. Nr.: 3.3535	AlMg 5	W. Nr.: 3.3555
AlMgMn	W. Nr.: 3.3527	AlMg 3 Si	W. Nr.: 3.3245
AlMgSi 05	W. Nr.: 3.3206	AlMgSi 1	W. Nr.: 3.2315
AlZnMg 1	W. Nr.: 3.4335	G-AlMg 3 (Cu)	W. Nr.: 3.3543
G-AlMg 3	W. Nr.: 3.3541	G-AlMg 5	W. Nr.: 3.3561
G-AlMg 10	W. Nr.: 3.3591		

CastoTIG 45802 W is especially recommended for joining and maintenance applications in the building industry, in road transport, shipyards and the food-processing industry, and for parts such as windows and frames, piping systems, bridges and road and railway vehicle bodies.

Procedure for use

Preparation

The surfaces of the joint preparation and the adjoining areas have to be clean, i.e.: no oxidation, grease, paint, etc.

Bevel angles for joining: up to 2 mm of thickness: butt welding; over 2 mm of thickness: single V- or X-groove at 60°.

For plate thicknesses of less than 3 mm, tack every 50-100 mm to maintain a consistent joint gap. For greater thicknesses, tack the extremities and flanges using clamps.

Preheating

For large-section components, we recommend preheating of 150-250°C.

Welding

Polarity: ~ (AC)

Angle between torch and workpiece for a flat joint: 70 - 80°.

Angle between rod and workpiece: 15 - 30°.

Welding positions

F, HF, H, VU, O, OF.

PA, PB, PC, PF, PE, PD, according to EN439

Welding parameters

Pure tungsten electrode (W)

Welding current (A):

∅ electrode (mm.) →	1.6	2.4	3.2	4.0
∅ filler rod (mm) ↓				
1.6	50-100	70-90		
2.0		100-160		
2.5			110-145	
3.2			150-210	200-250
4.0				220-275

In principle, it is preferable to choose an electrode of a smaller diameter to realise a better arc concentration, which favours a more restricted weld pool.

Machining

The CastoTIG deposit can be machined with standard cutting tools. The deposit can also be cut by standard plasma-cutting processes.

Packaging

The CastoTIG 45802 W rods are available in lengths of 1000 mm, packed in easily-recyclable cardboard boxes.

Weight: 5 kg.

Rod diameters available (mm): 1.6; 2.0; 2.5; 3.2; 4.0.

Hinweise für die Arbeitssicherheit

Die nationalen Richtlinien und Vorschriften über Arbeitssicherheit sind zu beachten.

Allgemeine Arbeitnehmerschutzverordnung (AAV), Arbeitnehmerschutzgesetz (ASchG).

Die in dieser Information genannten technischen Produkteigenschaften basieren auf Eutectic+Castolin-Qualitätsstandards und Verarbeitungsrichtlinien. Davon abweichende Verarbeitung oder Verwendung kann die Eigenschaften und Ergebnisse beeinflussen.

Änderungen, die dem technischen Fortschritt dienen, behalten wir uns vor.



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