

## MIGWELD AlMg4,5Mn

MIG/MAG Wires [GMAW]

Aluminium alloys

| CLASSIFICATION:  | APPROVALS: | APPLICATION:                        |
|--|------------|-------------------------------------|
| EN ISO 18273-A : S Al5183<br>DIN 1732 : SG-AlMg4,5Mn<br>AWS A-5.10 : ER 5183<br>W.Nr. : 3.3548 |            | Shipbuilding&Offshore<br>Automobile |

- The material is designed for welding high-strength aluminum alloys, including those used in lowtemperature applications.
- Welding wire for aluminum alloys with the addition of manganese and a maximum magnesium content of up to 5%.
- Excellent weldability, the weld is free of pores.
- Good strength combined with resistance to corrosion caused by seawater.
- Not recommended for operation at elevated temperatures (stress corrosion cracking).

### Base material



| DIN 1725-1/2  | W.Nr.  | Int.Reg./Cast. Nr |
|---|--------|-------------------|
| AlMgSi1   |        |                   |
| AlMg5   | 3.3555 | 6082              |
| AlMg4,5Mn   | 3.3547 | 5083              |
| AlMg3   | 3.3535 | 5754              |
| G-AlMg5Si   | 3.3261 |                   |
| G-AlMg5   | 3.3561 | B535.0            |
| G-AlMg3Si   | 3.3241 | 512.0             |
| G-AlMg3   | 3.3541 |                   |
| AlMg2Mn0,8  | 3.3527 | 5049              |
| AlZnMg1   |        |                   |
| AlZnMgCu0,5   | 3.4345 | 7022              |
| AlMgSi0,5   | 3.3206 | 6063              |
| G-AlMg10  |        |                   |
| G-AlMg5Si   |        |                   |
| AlMg4   | 3.3545 | 5086              |
| AlMgSi07  | 3.3210 | 6005              |
| AlSi1MgMn   | 3.2315 | 6082              |
| AlMg1SiCu   | 3.2311 | 6061              |
| AlZn4,5Mg1  | 3.4335 | 7020              |
| 5086, 5019, 6060, 6005, 6082,<br>6061, 7020, EN AC 51300, EN<br>AC51400 |        |                   |

### Typical chemical composition %

|           |           |           |           |             |
|-----------|-----------|-----------|-----------|-------------|
| <b>Mn</b> | <b>Cr</b> | <b>Fe</b> | <b>Al</b> | <b>Inne</b> |
| 0,62      | 0,11      | 0,18      | rest      | Mg 4,96     |

### Typical mechanical properties

|   |     |
|---|-----|
| <b>Yield strength Re [N/mm<sup>2</sup>]</b>   | 125 |
| <b>Tensile strength Rm [N/mm<sup>2</sup>]</b> | 275 |
| <b>Elongation A5 [%]</b>                      | 17  |

|   |   |
|---|---|
| <b>Hardness</b>                             | 45-75[HB] /   |
| <b>Wire/rod type</b>                        | solid   |
| <b>Heat treatment</b>                       | Thicker elements should be heated to 150 [°C]                                     |
| <b>Welding current</b>                      |  |
| <b>Welding positions</b>                    |  |
| <b>Additional description</b>               | Melting point 565-638 [°C]  |
| <b>Shielding gases acc. to EN ISO 14175</b> | I1 - Ar / I3 - Ar + >0-95% He /   |
| <b>Remarks</b>                              | Shielding gas flow 8-15[l/min]  |

#### Welding parameters and packing

| ∅   | Welding current [A] |
|-----|---------------------|
| 1,2 | 140-260             |

#### METALWELD-FIPROM POLSKA spółka z o.o.

ul. Mikołajczyka 57, 41-200 Sosnowiec

+48 (32) 297 75 50 - 51

+48 (32) 297 75 88

export@metalweld.pl