



# Elgamatic 100

GMAW - MIG MAG  
Un-alloyed

Date: 2023-07-06  
Revision: 13

### Description:

Elgamatic 100 is a copper coated, manganese-silicon double deoxidised mild steel wire for use with a CO<sub>2</sub> or Ar/CO<sub>2</sub> gas shield. The carefully controlled wire metallurgy and surface finish ensure high quality welds and reliable wire feed for mechanised welding systems. Elgamatic 100 is suitable for all general engineering and structural steels.

### Welding current:

DC+

### Wire composition, wt. %

|         | C    | Si   | Mn   | P     | S     | Cu   |
|---------|------|------|------|-------|-------|------|
| Min     | 0,06 | 0,80 | 1,40 |       |       |      |
| Typical | 0,08 | 0,85 | 1,45 | 0,010 | 0,015 | 0,05 |
| Max     | 0,12 | 1,00 | 1,60 | 0,025 | 0,025 | 0,35 |

### Shielding gas:

C1, CO<sub>2</sub>, 12-18 l/min

M21, 80% Ar + 20% CO<sub>2</sub>, 12-18 l/min

### Chemical composition, wt. %

|         | C    | Si  | Mn  |
|---------|------|-----|-----|
| Min     |      |     |     |
| Typical | 0,07 | 0,8 | 1,4 |
| Max     |      |     |     |

### Mechanical properties

|                       | <u>Specified</u> | <u>Typical</u> |
|-----------------------|------------------|----------------|
| Yield strength, Re:   | ≥ 420 MPa        | 470 MPa        |
| Tensile Strength, Rm: | 500-640 MPa      | 550 MPa        |
| Elongation, A5        | ≥ 22%            | 26%            |
| Impact energy, CV:    | -20°C • >47 J    | -20°C • 85 J   |
|                       | -29°C • >27 J    | -29°C • 50 J   |

### Classification:

|                |                                   |
|----------------|-----------------------------------|
| EN ISO 14341-A | G 42 2 M21 3Si1<br>G 42 2 C1 3Si1 |
| AWS A5.18      | ER70S-6                           |

### Approvals:

TÜV  
DB  
DNV  
CE

### Note

The typical values are based on M21  
Also available in AUTOPAC, a twist-free pay-off pack. For more information about Part no, type of spool and winding, please study the price list.

### Product data:

| Diam.mm | Dip Current A | Dip Voltage V | Spray Current A | Spray Voltage V |
|---------|---------------|---------------|-----------------|-----------------|
| 0,8     | 50-90         | 16-18         | 120-160         | 22-26           |
| 1,0     | 80-150        | 17-20         | 180-230         | 24-30           |
| 1,2     | 110-180       | 18-22         | 240-300         | 26-33           |

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