

MIG WIRE  
PRODUCT CATALOGUE







# MIG Wire



## Code & Specification

ASME SFA/AWS A5.18 ER70S-6

## Description

**BLUME® ER70S-6** is a general purpose welding wire for fabrication of mild steel . It is well suited for general purpose, manual and semiautomatic applications in most industries. Contains deoxidizers that provide better wetting, yielding a flatter bead shape and the capability of faster travel speeds . Usually used with 100% CO<sub>2</sub> or with Argon + CO<sub>2</sub>.

## Applications

**BLUME® ER70S-6** is a wire with higher levels of Deoxidizers (Mn & Si) compared to other carbon steel wires. This wire is suitable for welding of steels with moderate amounts of scale or rust.

## Shielding Gas

100% CO<sub>2</sub> , 75% Argon and 25% CO<sub>2</sub> or 98% Argon and 2 % CO<sub>2</sub>

## Mechanical Properties

|                       | As-welded |
|-----------------------|-----------|
| Yield Point, MPa      | ≥ 420     |
| Tensile Strength, MPa | ≥ 500     |
| Elongation, %(L=4d)   | ≥ 29      |

## Charpy V-Notch Impact Properties

| Testing Temp. | As-welded (J) |
|---------------|---------------|
| -22°F (-30°C) | 47 (min)      |

## Undiluted Weld Metal Analysis (wt%)

|             |             |             |           |           |
|-------------|-------------|-------------|-----------|-----------|
| <b>C</b>    | <b>Mn</b>   | <b>Si</b>   | <b>S</b>  | <b>P~</b> |
| 0.06 - 0.15 | 1.40 - 1.85 | 0.80 - 1.15 | ≤ 0.025   | ≤ 0.025   |
| <b>Cu</b>   | <b>Ni</b>   | <b>Cr</b>   | <b>Mo</b> | <b>V</b>  |
| ≤ 0.05      | ≤ 0.15      | ≤ 0.15      | ≤ 0.15    | ≤ 0.03    |

## Suggested Welding Parameters (DC+)

| Diameter      | Flat    |           | Vertical-up |           | Overhead |           |
|---------------|---------|-----------|-------------|-----------|----------|-----------|
|               | Volts   | Amps      | Volts       | Amps      | Volts    | Amps      |
| .045" (1.2mm) | 20 - 32 | 80 - 350  | 18 - 20     | 120 - 160 | 18 - 20  | 120 - 160 |
| 1/16" (1.6mm) | 32 - 38 | 350 - 500 | 18 - 22     | 120 - 220 | 18 - 22  | 110 - 210 |

## Packaging

33 lbs (15 kgs) [Net Weight] Plastic spools with OD = 11" (270mm)

## Approvals





# Hardfacing MIG Wire



## Code & Specification

A.I.S.I H13

## Description

**BLUME® HFH13** is for hot work tool steels with excellent hot tensile properties, high hot wear resistance. Heat checking resistance.

## Applications

**BLUME® HFH13** is used in particular to repair mandrels, punches, dies, cylinder crushers, screws, hammers, pneumatic hammers, etc.

## Mechanical Properties

|                          |                             |
|--------------------------|-----------------------------|
| Hardness HRC (As Welded) | 54 - 60                     |
| Pre Heating Temperature  | 644°F - 698°F (340 - 370°C) |
| Current and Polarity     | DC+                         |

## Shielding Gas

Argon + CO<sub>2</sub>

## Undiluted Weld Metal Analysis (wt%)

|           |           |           |           |           |
|-----------|-----------|-----------|-----------|-----------|
| <b>C</b>  | <b>Mn</b> | <b>Si</b> | <b>P</b>  | <b>Cr</b> |
| 0.40      | 0.40      | 1.00      | < 0.020   | 5.20      |
| <b>Mo</b> | <b>Cu</b> | <b>S</b>  | <b>Mo</b> | <b>V</b>  |
| 1.40      | < 0.25    | < 0.020   | 1.40      | 1.00      |

## Base Materials to be Welded

X40CrMoV5-1 ; H13, BH 13; SCPH 62, STD 62

## Packaging

.040" (1.0mm) Diameter, .045" (1.2mm) Diameter & 1/16" (1.6mm) Diameter Wire in 33 lbs (15 kgs) (net) Plastic spools with OD = 11" (270mm)



# Hardfacing MIG Wire



## Code & Specification

A.I.S.I M2

## Description

**BLUME<sup>®</sup> HFM2** is a Tungsten - Molybdenum alloyed welding wire suitable for repairing high speed steels. Excellent toughness and cutting properties for a wide variety of uses.

## Applications

**BLUME<sup>®</sup> HFM2** is used for twist drills, reamers, broaching tools, metal saws, milling tools of all types, wood working tools, cold working tools, gears, punches, shears etc.

## Mechanical Properties

|                          |               |
|--------------------------|---------------|
| Hardness HRC (As Welded) | 60 - 64       |
| Pre Heating Temperature  | 662°F (350°C) |
| Current and Polarity     | DC+           |

## Shielding Gas

Argon + CO<sub>2</sub>

## Undiluted Weld Metal Analysis (wt%)

|           |           |           |           |           |
|-----------|-----------|-----------|-----------|-----------|
| <b>C</b>  | <b>Mn</b> | <b>Si</b> | <b>P</b>  | <b>Cr</b> |
| 0.90      | 0.30      | 0.25      | < 0.030   | 4.2       |
| <b>Mo</b> | <b>Cu</b> | <b>S</b>  | <b>Ni</b> | <b>V</b>  |
| 5.00      | < 0.50    | < 0.020   | < 0.25    | 1.80      |

## Base Materials to be Welded

X85WDCV06-04-02 ; V6M05Cr4V2 ; HS 6-5-2 ; M2, J438B ; X85WDCV06-04-02 ; BM2 ; SKH 51 ; R 6 M 5

## Packaging

.045" (1.2mm) Diameter Wire in 33 lbs (15 kgs) [Net Weight] Plastic spools with OD = 11" (270mm)





# Hardfacing MIG Wire



## Code & Specification

A.I.S.I M7

## Description

**BLUME<sup>®</sup> HFM7** is a molybdenum high speed tool steel solid wire similar to AISI M7 grade. This product characterised by a high hardness (57 to 64 HRC) and excellent wear resistance. It is suitable for use at elevated temperatures.

## Applications

**BLUME<sup>®</sup> HFM7** is for depositing welding of Mo-alloyed high-speed steel. Maintenance and new manufacture of high-speed steel tools. Weld deposit without soft-annealing can only be processed by grinding. To be used for cutting tools, gouges, turning chisel, broaches, taps, twist drills, reamers, milling tools, cold extrusion dies.

## Mechanical Properties

|                          |         |
|--------------------------|---------|
| Hardness HRC (As Welded) | 57 - 64 |
| Current and Polarity     | DC+     |

## Shielding Gas

Argon + CO<sub>2</sub>

## Undiluted Weld Metal Analysis (wt%)

|           |           |           |          |           |
|-----------|-----------|-----------|----------|-----------|
| <b>C</b>  | <b>Mn</b> | <b>Si</b> | <b>P</b> | <b>Cr</b> |
| 1.00      | 0.30      | 0.40      | < 0.025  | 3.80      |
| <b>Mo</b> | <b>Cu</b> | <b>S</b>  | <b>W</b> | <b>V</b>  |
| 8.60      | < 0.50    | < 0.025   | 1.80     | 1.90      |

## Base Materials to be Welded

AISI M7 and similar.

## Packaging

.045" (1.2mm) Diameter & 1/16" (1.6mm) Diameter Wire in 33 lbs (15 kgs) [Net Weight] Plastic spools with OD = 11" (270mm)



## Hard-Facing MIG Wire



### Code & Specification

A.I.S.I P-20 Mold Steel

### Description

**BLUME<sup>®</sup> HFP20** is a medium carbon low alloy steel which contains chromium and molybdenum. The Deposits are that of an AISI P-20 mold steel. The hardness is highly dependent on preheat temperature, length of time welding, and cooling rate. The deposits have similar etching, graining and colour match characteristics as P-20 when tempered to the low 30 HRC range.

### Applications

**BLUME<sup>®</sup> HFP20** is used to repair many types of P-20 tools and dies, whether they are die casting dies or plastic injection molds. It is often used for high strength joining of low alloy steels and Chrome Moly Steels.

### Shielding Gas

Argon + CO<sub>2</sub>

### Mechanical Properties

|                          |               |
|--------------------------|---------------|
| Hardness HRC (As Welded) | 34 - 38       |
| Current and Polarity     | DC+           |
| Pre Heating Temperature  | 572°F (300°C) |

### Undiluted Weld Metal Analysis (wt%)

|          |           |           |           |           |
|----------|-----------|-----------|-----------|-----------|
| <b>C</b> | <b>Mn</b> | <b>Si</b> | <b>Mo</b> | <b>Cr</b> |
| 0.35     | 0.8       | 0.50      | 0.40      | 1.70      |
| <b>P</b> | <b>S</b>  | <b>Cu</b> |           |           |
| < 0.025  | < 0.025   | 0.25      |           |           |

### Packaging

.045" (1.2mm) Diameter & 1/16" (1.6mm) Diameter Wire in 33 lbs (15 kgs) [Net Weight] Plastic spools with OD = 11" (270mm)





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