



Trusted by the best

A close-up photograph of a welding process. A welding torch is shown welding a metal joint, with bright blue and white sparks and smoke emanating from the point of contact. The background is dark and out of focus.

# MEGAFIL<sup>®</sup> Seamless Flux-Cored Welding Wires

# Hobart Filler Metals — Your Route to Full Performance in Welding



At WIA we are passionate about welding and this is reflected by our unique offering to the market. When you use Hobart's best-in-class welding consumables, you will enjoy the most advanced and productive products.

Hobart is a recognized leader in the development of filler metal technologies and has the expertise to address the toughest welding challenges. Under this brand, we have been bringing together a wealth of welding expertise and consumables with unequalled welding performance since 1917.



Special wires have been developed to meet specific requirements of demanding industries, such as offshore, oil & gas and pipe mills. Hobart welding consumables are manufactured using state-of-the-art production—especially the MEGAFIL range of seamless, low-hydrogen cored wires.



Hobart MEGAFIL® seamless flux-cored products are brought to the market supported by a dedicated team of specialists capable of providing integrated welding solutions. By partnering with WIA, you will have the deep knowledge and experience of our engineers at your side.

Contact us and discover ways to optimize your existing processes to their full potential.

**MEGAFIL® – A PRODUCT OF HOBART FILLER METALS – WELCOMES YOUR CHALLENGES**





# MEGAFIL® Characteristics and Advantages

## Minimal moisture pick-up guaranteed

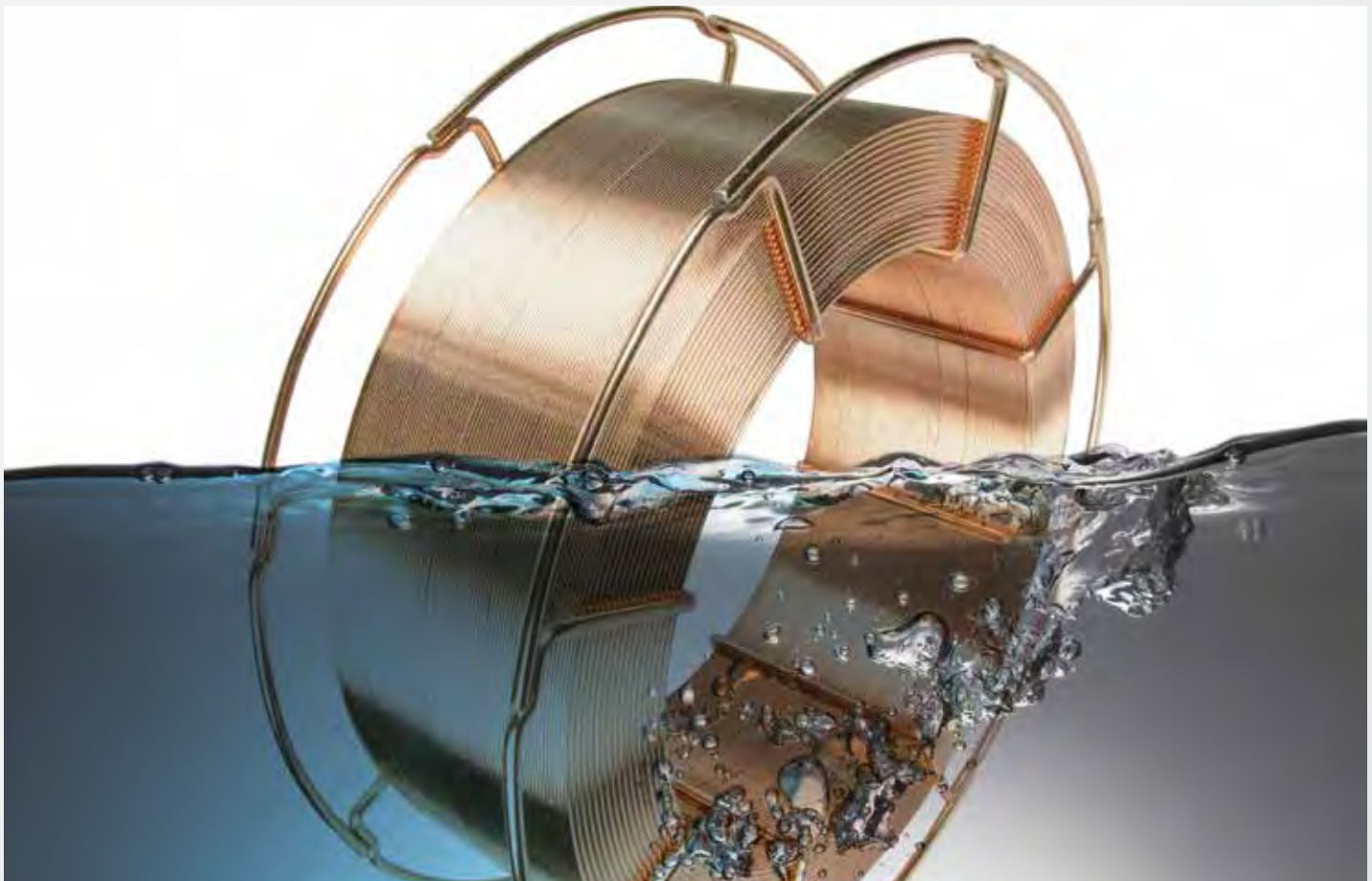
Hobart MEGAFIL seamless flux-cored wires are hermetically sealed and totally insensitive to moisture absorption, even under extreme climatic conditions such as tropical temperatures with very high relative humidity. The filling remains dry throughout the entire process of storage and use in welded fabrication, minimizing the risk of hydrogen induced cracking caused by moisture in the consumable. MEGAFIL cored wires require no special storage conditions. Re-drying prior to use is never recommended.

## The special MEGAFIL® manufacturing technology enables production of cored wires with these and other unique advantages for end users:

- **Prevention of hydrogen-induced cracking. Weld metal hydrogen content tested according to EN and AWS specifications are below 4 ml/100 g**

weld metal (H4). Typical values are below 4 ml/100 g.

- **No special storage conditions required. Can be stored like solid wires for an extended period, with a minimized risk of moisture absorption.**
- **Resistance to moisture pick-up when mounted on wire feeder, out of packaging.**
- **No discontinuities in the filling. Dependable weld metal properties.**
- **Copper coating for optimal current transfer from contact tip to wire and for reduced contact tip wear.**
- **Carefully controlled cast, helix and diameter gives good wire feeding and straight delivery at contact tip, making it ideal for robotic welding.**



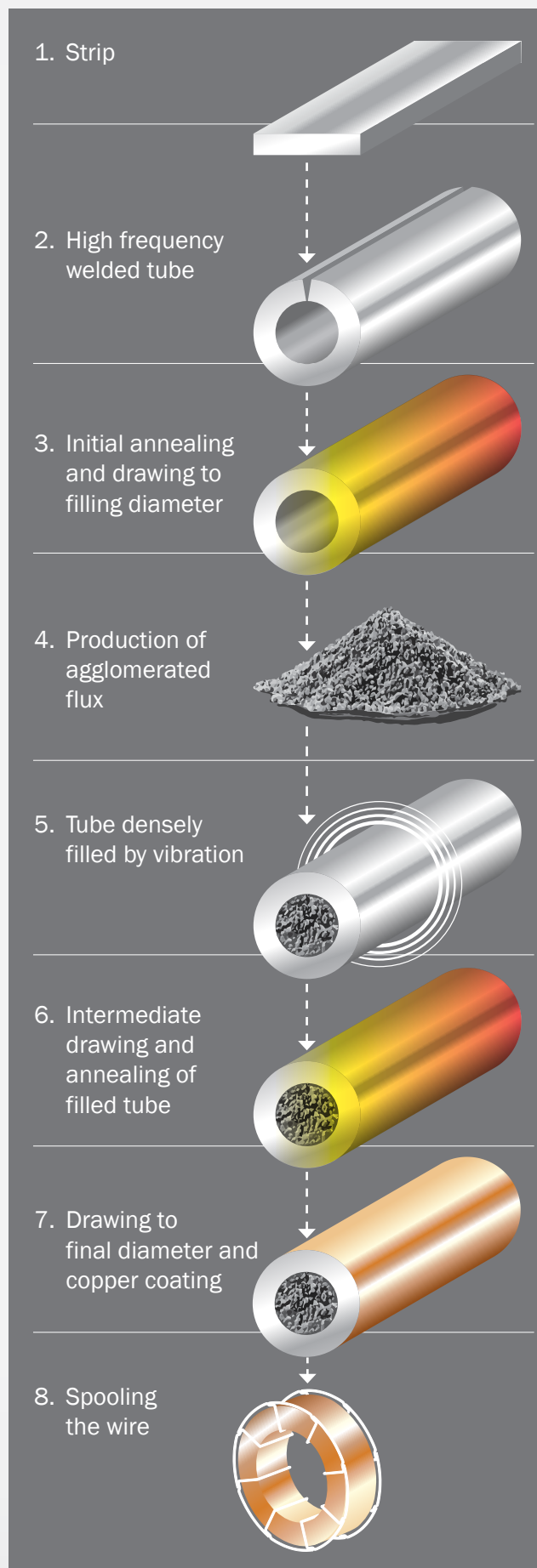
# MEGAFIL® Production Technology

The unique production technology ITW Welding GmbH utilizes to manufacture MEGAFIL® seamless flux- and metal-cored wires results in valuable product benefits for end users. Strips are folded round, closed by high frequency welding and drawn to filling diameter.



In the next step, the tube is filled with agglomerated flux by means of a vibration system. In several steps the wire is annealed, drawn to final diameter and finally copper-coated.

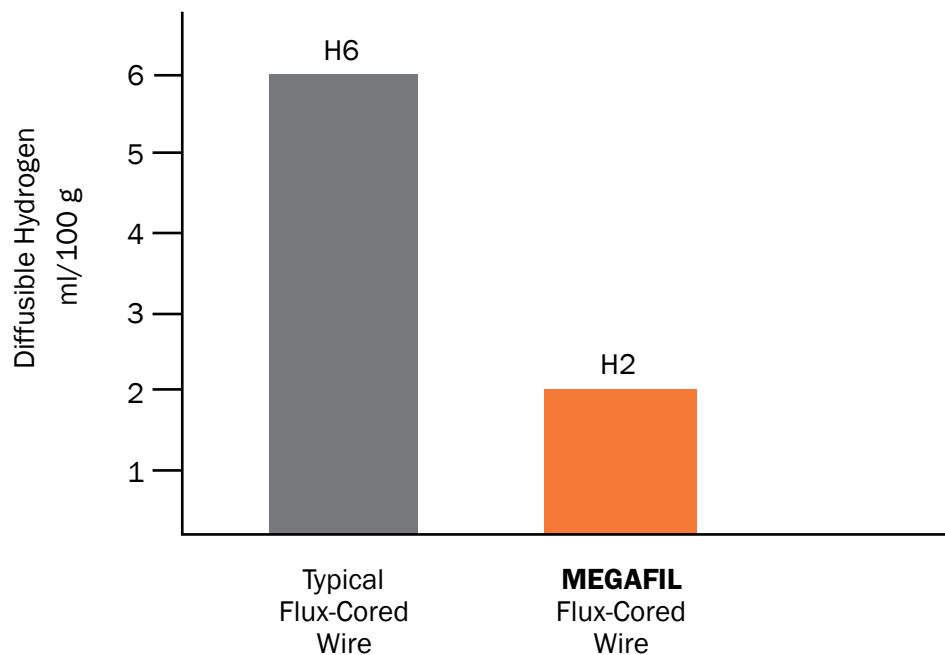
Subsequently, the wire is precision layer-wound onto various spool sizes. The result is a completely sealed cored wire with extreme resistance to moisture absorption during storage and use.



## The Low Hydrogen Answer

FLUX-CORED WIRES	AWS CLASS	DIFFUSIBLE HYDROGEN AS RECEIVED (ml/100 g)
MEGAFIL®713R	E71T-1M /-1C /-9M J /-9C /-12M/-12C H4	1.55
MEGAFIL® 819R	E81T1-Ni1M J H4 / -Ni1C H4	1.59
FLUX-CORED WIRES	AS/NZ ISO STANDARDS	DIFFUSIBLE HYDROGEN AS RECEIVED (ml/100 g)
MEGAFIL®713R	17632-B - T494T12-1M/C A-U H5	1.55
MEGAFIL® 819R	AS/NZS ISO 17632-B-T55 5 T1-1M P N2-U H5, B-T55 3 T1-1C A N2-U H5	1.59

**Standard flux-cored hydrogen values vs. MEGAFIL**



# Product Description

## MEGAFIL® 713R

### AWS E71T-1M/-1C/-9M J/-9C/-12M/-12C H4

MEGAFIL 713R is a carbon-steel gas-shielded flux-cored wire. The fast freezing slag of MEGAFIL 713R helps to achieve high deposition rates when welding out-of-position. 100% carbon dioxide and 75-80% Argon/balance carbon dioxide shielding gases can be used.

## Applications

- Automatic and mechanized welding
- Steel structures
- Offshore
- General fabrication

DIAMETERS AND PACKAGES	
Diameter	35lb (16kg) Spool
0.045" (1.2mm)	71315
1/16" (1.6mm)	71333B

TYPICAL ALL WELD METAL MECHANICAL ANALYSIS (AS WELDED)		
Mechanical Tests	100% CO <sub>2</sub>	80% Ar/20% CO <sub>2</sub>
Tensile Strength	593 MPa	607 MPa
Yield Strength	545 MPa	558 MPa
Elongation	26%	26%
CVN Impact Values	34J @ -30 °C	89J @ -30 °C 81J @ -40 °C 77J @ -46 °C

## MEGAFIL® 819R

### AWS E81T1-Ni1MJ H4 / E81T1-Ni1C H4

MEGAFIL 819R is a low-alloy gas-shielded flux-cored wire for joining high-strength low-alloy steels. The fast freezing slag of MEGAFIL 819R helps to achieve high deposition rates when welding out-of-position. The weld deposit composition contains a nominal nickel content of 1% which—when used with 75-80% argon/balance carbon dioxide mixtures—provides excellent impact toughness properties at temperatures as low as -60C. MEGAFIL 819R can also be used with 100% carbon dioxide shielding gas.

## Applications

- Automatic and mechanized welding
- Offshore
- Pipeline
- Structural steel
- Use with Argon-CO<sub>2</sub> Shielding Gas Mixtures

DIAMETERS AND PACKAGES	
Diameter	35lb (16kg) Spool
0.045" (1.2mm)	81915B
1/16" (1.6mm)	81933B

TYPICAL ALL WELD METAL MECHANICAL ANALYSIS (AS WELDED)		
Mechanical Tests	100% CO <sub>2</sub>	80% Ar/20% CO <sub>2</sub>
Tensile Strength	565 MPa	607 MPa
Yield Strength	520 MPa	558 MPa
Elongation	27%	26%
CVN Impact Values	47J @ -30 °C 20J @ -40 °C	95J @ -40 °C 68J @ -50 °C

TYPICAL ALL WELD METAL MECHANICAL ANALYSIS (PWHT 2HRS 621°C)	
Mechanical Tests	80% Ar/20% CO <sub>2</sub>
Tensile Strength	593 MPa
Yield Strength	524MPa
Elongation	25%

## Storage

Hobart MEGAFIL®seamless flux- and metal-cored wires are hermetically sealed and resistant to moisture absorption. They can be stored for an extended period of time, like solid wire. However, direct contact with any liquid must be avoided to prevent the formation of rust on the wire surface. Rust is a potential source of weld metal hydrogen, but it can also cause poor wire feeding.

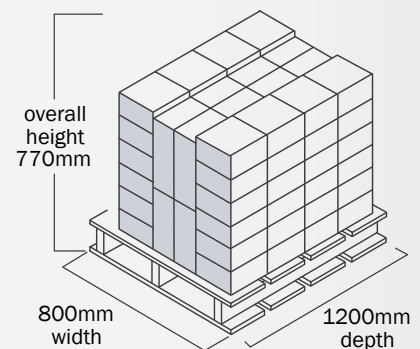
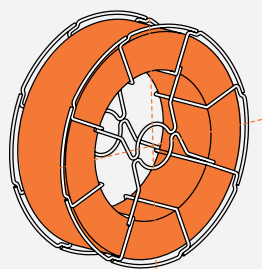
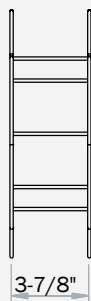
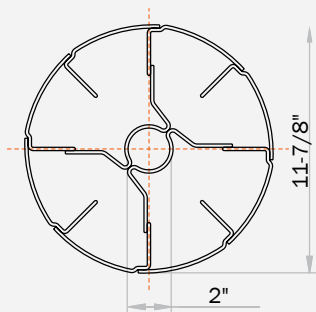
It is therefore recommended to store MEGAFIL wires in a dry area—away from weather influences — and in their original packaging. Any sudden drop in temperature should be avoided to prevent the formation of condensation. Partly used wire spools must be re-packed in their original plastic bag, carefully sealed, and stored in their original cardboard boxes.

### Summarized MEGAFIL storage and handling recommendations are:

- **Store wires under dry conditions in the original sealed packaging.**
- **Avoid contact between wire and substances such as water or any other kind of liquid, vapor, oil, grease or corrosion.**
- **Do not touch the wire surface with bare hands.**
- **Avoid exposure of the wire below dew point. Do not leave unprotected wire spools in workshops overnight.**

## Pallet & Packaging Information

### 35 LB. (16 KG) SPOOLS



Basket rim K3000  
Diameter: 11-7/8" (300 mm)  
Width: 3-7/8" (98 mm)  
Suitable for a 2" (50mm) hub

Weight: 2,240 lbs. (1016 kg)  
Spools per pallet: 64



# MEGAFIL® Seamless Flux-Cored Welding Wires



**welding.com.au**  
**1300 300 884**

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