PRODUCT DATA SHEET

FLUX-CORED GAS SHIELDED WIRES

WCD 6808

MEGAFIL® 713R

SUMMARY

- Seamless flux-cored wire
- Low hydrogen weld deposit
- Fast-freezing slag
- Smooth arc characteristics
- Easy slag removal
- Good impact toughness, especially when used with an Argon-CO_2 shielding gas mixture

BENEFITS

- Very low moisture reabsorption after extended exposure
- Minimizes risk of hydrogen-induced cracking
- Excellent out-of-position performance
- Assists producing welds of consistent appearance and quality
- Reduces clean-up time, minimizes risk of inclusions
- Minimizes risk of cracking in critical applications

CLASSIFICATION

- AWS A5.20: E71T-1MJ H4, E71T-1C H4
- AS/NZS ISO: 17632-B - T494T12-1M/C A-U H5

APPLICATION

- Single or multi-pass welding
- Non-alloyed and fine grain steel
- Heavy equipment
- Pressure vessels
- Equipment repairs and modifications
- Offshore
- General fabrication
- Pipelines
- Structural fabrication

OTHER

- **Wire Type:** Fast-freezing, rutile-type, flux-cored wire
- **Shielding Gas:** 100% Carbon Dioxide (CO_2), 75-80% Argon (Ar)/Balance Carbon Dioxide (CO_2), 17-24 l/min
- **Type of Current:** Direct Current Electrode Positive (DCEP)
- **Standard Diameters:** 1.2mm and 1.6mm
- **Re-Drying:** Not Recommended
- **Storage:** Product Should be Stored in a Dry, Enclosed Environment, and in its Original Intact Packaging

TYPICAL DIFFUSIBLE HYDROGEN*

HYDROGEN EQUIPMENT	100% CO_2	80% Ar/20% CO_2
Gas Chromatography	1.5 ml/100g	1.6 ml/100g

TYPICAL ALL WELD METAL CHEMICAL ANALYSIS

Shieiding Gas	C	Mn	Si	P	S	Ni	Cu
100% CO_2	0.02	0.90	0.29	0.012	0.011	0.31	0.14
80% Ar/ 20% CO_2	0.02	1.18	0.46	0.012	0.011	0.30	0.14

CONFORMANCES & APPROVALS

- **AWS:** A5.20, E71T-1MJ H4, E71T-1C H4, E71T-9MJ H4, E71T-9C H4, E71T-12MJ H4, E71T-12C H4
- **ABS:** 100% CO_2, 3YSA, 3Y400SA H5, 82% Ar/18% CO_2, 4YSA, 4Y400SA H5
- **DNV:** 100% CO_2, IV Y40MS(H5), 75-80% Ar/Balance CO_2, IV Y40MS(H5)
- **Lloyd's Register:** 100% CO_2, 3Y40S H5, 82% Ar/18% CO_2, 3Y40S H5

TYPICAL ALL WELD METAL MECHANICAL ANALYSIS (AS WELDED)

MECHANICAL TESTS	100% CO_2	80% Ar/20% CO_2
Tensile Strength	593 MPa	607 MPa
Yield Strength	545 MPa	558 MPa
Elongation	26%	26%
CVN Impact Values	34J @ -30°C	89J @ -30°C 81 @ -40°C 77J @ -46°C

PACKAGING DATA

WIRE SIZE (MM)	PART NUMBER	PACKAGING TYPE
1.2	71315	16kg Spool
1.6	71333	16kg Spool

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OPERATIONAL DATA

WIRE SIZE (MM)	WELD POSITION	AMPS	VOLTS	WIREFEED SPEED	DEPOSITION RATE	CONTACT TIP TO WORK DISTANCE (MM)
				M/MIN	KG/HR	
1.2	All Position	160	22	5.0	2.7	16
1.2	All Position	180	23	5.4	3.2	16
1.2	All Position	200	25	6.1	3.8	19
1.2	All Position	210	25	6.3	4.1	19
1.2	All Position	230	26	8.5	4.6	19
1.6	All Position	215	24	4.1	2.5	25
1.6	All Position	245	25	4.8	3.0	25
1.6	All Position	275	26	5.7	3.5	25
1.6	Flat & Horizontal	280	27	6.0	4.2	25
1.6	Flat & Horizontal	360	28	8.4	5.4	25
1.6	Flat & Horizontal	400	30	10.9	7.5	25

• Maintaining a proper welding procedure - including pre-heat and interpass temperatures - may be critical depending on the type and thickness of steel being welded.

• See Above: This information was determined by welding using 75% Argon (Ar)/25% Carbon Dioxide (CO_2) shielding gas with a flowrate between 17-24 l/min. When welding using 100% Carbon Dioxide (CO_2) shielding gas, increase voltage by approximately one volt.

• All positions include: Flat, Horizontal, Vertical Up, and Overhead.

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