



## LOW ALLOY BARE WIRE DATA SHEET

# exocor 80S-B6

### DESCRIPTION

**Exocor 80S-B6** is a low alloy copper-coated solid wire with 5% Cr and 0.5% Mo content that is used for the welding of creep resistant steels used at elevated temperatures. It will find applications in chemical or petro-chemical industry and in the ammonia synthesis process. It is also used for heat exchangers, boilers, piping and pressure vessels for temperature service up to 600°C. The weld metal has also been used for subsequent nitriding in the petro-chemical industries; for example in the repair of some steels used for moulds for injection-moulding of plastics.

### TYPICAL CHEMICAL VALUES

C	Mn	Si	S	P	Cr	Mo	Cu	Ni
0.07	0.50	0.40	0.008	0.008	5.80	0.55	0.12	<0.50

\*single values shown are maximum percentages

### RECOMMENDED WELDING PARAMETERS

PROCESS	SIZE	VOLTS	AMPS	SHIELDING GAS
GMAW Spray Transfer DC+ Reverse Polarity	.030	16 - 28	120 - 200	Ar + CO <sub>2</sub>
	.035	17 - 32	130 - 230	Ar + CO <sub>2</sub>
	.045	18 - 34	180 - 350	Ar + CO <sub>2</sub>
	.062	19 - 38	250 - 400	Ar + CO <sub>2</sub>
GTAW DC- Straight Polarity	.062	—	50 - 120	100% Ar
	.093	—	120 - 200	100% Ar
	.125	—	150 - 220	100% Ar
	.156	—	180 - 240	100% Ar

\* Preheat and interpass temperature 205-250°C. PWHT at 745°C for an hour.

### TYPICAL MECHANICAL PROPERTIES

\*GMAW After PWHT

Tensile Strength:	620 MPA	
Yield Strength:	500 MPA	
Elongation:	25%	
Impact Energy:	70 Joule	(+20°C)

### CLASSIFICATION

Wire chemistry has been optimized for best performance and conforms to AWS/SFA 5.28, Class **ER80S-B6** (formerly AWS/SFA 5.9, Class ER502).