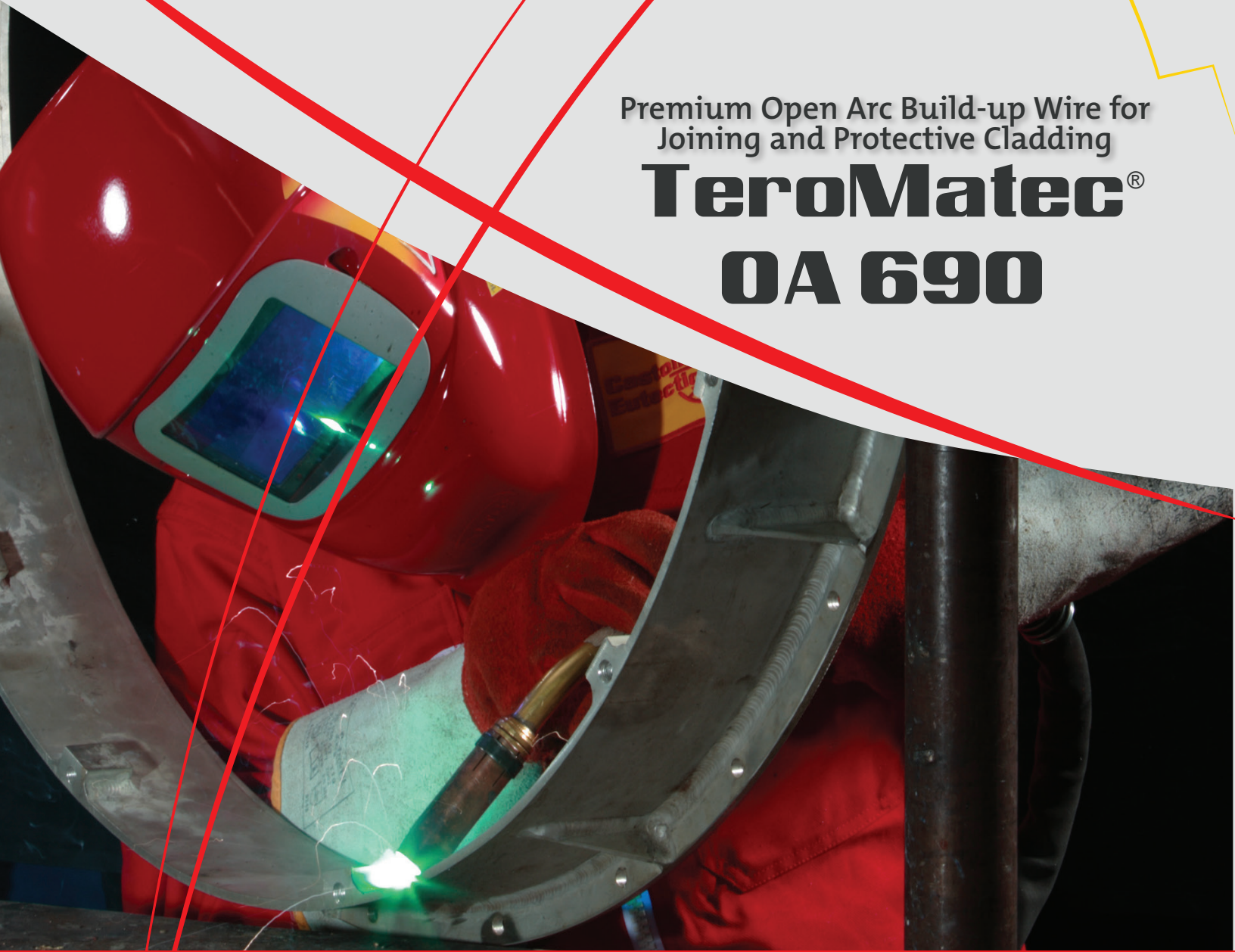




Premium Open Arc Build-up Wire for
Joining and Protective Cladding

TeroMatec®

0A 690



- High deposition rate increases efficiency
- Extremely resistant to hydrogen-delayed cracking
- Excellent heat, impact and corrosion resistance
- Good for most carbon and alloy steels including weathering and construction grades

TeroMatec® OA 690

TeroMatec OA 690 is a highly alloyed flux cored wire formulated for both joining and protective cladding of such construction steels as Cor-Ten, Man-Ten, T-1, and HY80. Weld deposits are resistant to hydrogen-delayed cracking particularly in highly stressed applications. Used as a cushion layer in applications such as cement clinker hammers and crusher rolls.

TECHNICAL DATA

Typical Values	
Tensile Strength:	105,000 psi (724 MPa)
Yield Strength:	83,000 psi (572 MPa)
Elongation (1=5d):	27%
Hardness:	90 HRB
Polarity:	DC (+) Electrode Positive
Power Source Type:	Constant Voltage and Integrated Wire Drive

Diameter (in) (mm)	CURRENT RANGE (A)		VOLTAGE RANGE (V)		WIRE EXTENSION (CONTACT TIP)	
	Globular (Large Parts)	Fine Globular (Light Parts)	Globular	Fine Globular	Globular (Short Nozzle)	Fine Globular (Short Nozzle)
7/64" (2.8)	300-350	240-330	29-32	27-31	2.5" +/- 1/4"	2.5" +/- 1/4"

Note: parameter adjustments will be needed depending upon the size, weight, and shape of the part. For optimum wear resistance, keep to the low end of the amperage and voltage ranges.

CAUTION: Although a 2-roll wire drive assembly will work the optimum for maintaining arc voltage stability and consistent and smooth wire feeding is a serrated 4-roll drive assembly. Smooth drive rolls are not recommended!

PROCEDURE FOR USE

Step 1: Remove all "old" cracked or spalled weld metal down to a sound base.

Step 2: TeroMatec OA 690 can be used for cladding and joining, it is often used as a crack arresting underlayment for hardfacing.

Step 3: Preheat the part to be hardfaced depending on its air hardenability potential and/or carbon level. For most constructional steels a nominal preheat of 150°F is suggested and for medium alloy steels, approximately 250°F. *Note: do not heat high manganese steels such as Hadfield Castings!*

Step 4: After checking that the welding conditions are optimal by testing on scrap metal, position the gun head at a 70-80° angle and use a "push" technique for downhand welding. For fully automated welding such as hardfacing cement crusher rolls, the wire should exit at about a 10° lagging angle from top dead center. Using this technique will assure a smooth and regular weld deposit profile with the optimum level of fusion. *Note: If welding is interrupted and the part cools to room temperature, you must reheat to the original preheat temperature. For hardenable steels, slow cooling with silicone blankets, vermiculite or other heat-retardant material is advised.*

Step 5: For most applications, other than a superficial grind, finishing is not required. If some level of profiling is needed, grinding or machining can be used for more precise shaping.

TYPICAL APPLICATIONS

APPLICATIONS

Manganese Steel Parts
Construction Equipmt.
Mining Equipment
Earthmoving Equipment
Bucket Parts
Crusher Rolls
Kiln Outlet Guides
Bearing Surfaces

INDUSTRY

Cement, Disposal
Construction
Mining
Quarries, Mining
Quarries, Mining
Cement
Cement
Power Generation



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