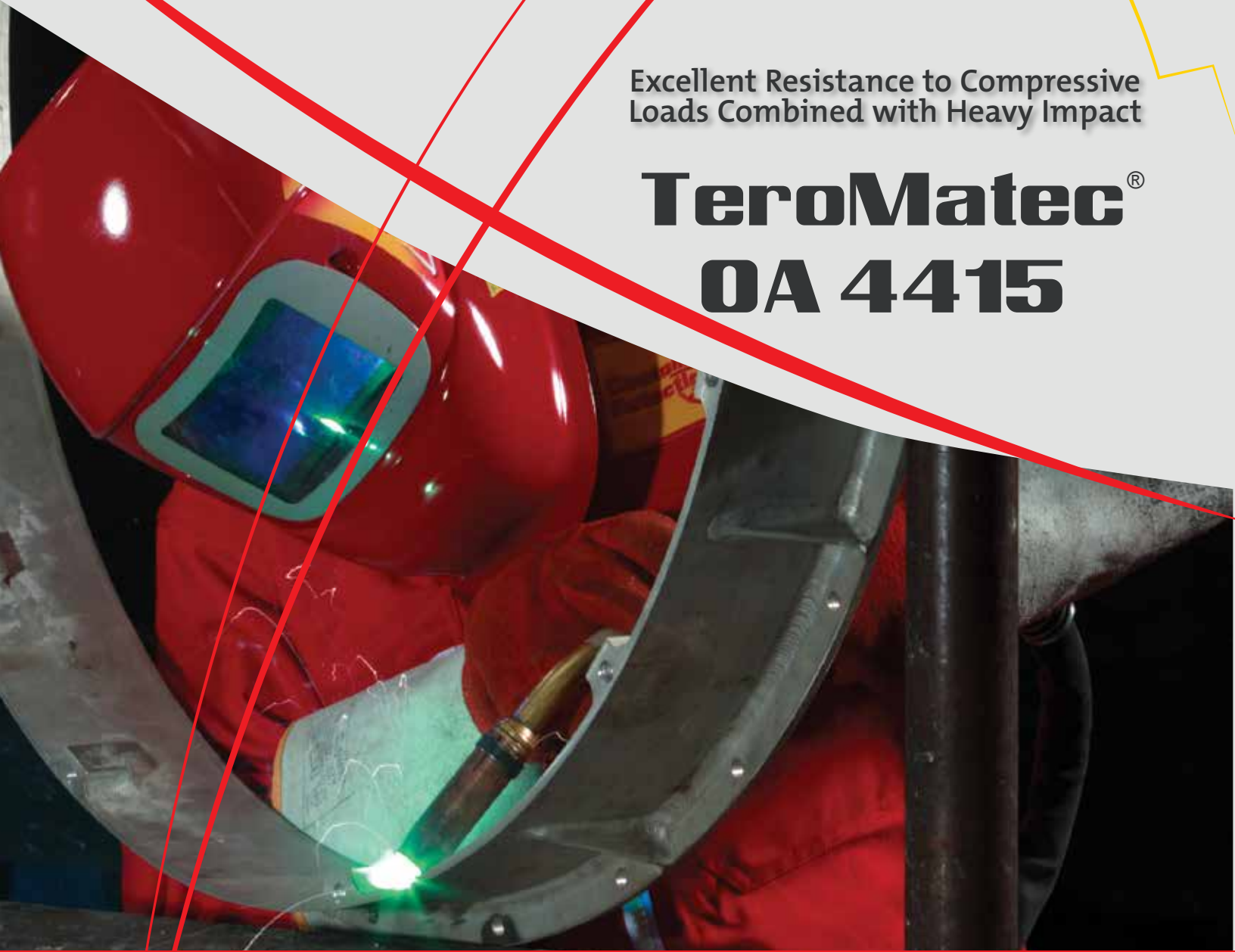




Excellent Resistance to Compressive  
Loads Combined with Heavy Impact

# **TeroMatec®**

## **0A 4415**



- Excellent resistance to pressure, abrasion, combined with heavy impact
- Forgeable grindable magnetic deposit
- Deposits are crack-resistant and heat treatable
- Recommended for on-site use

# TeroMatec® OA 4415

TeroMatec® OA 4415 is a special, self shielded, flux cored alloy wire specifically developed for outdoor maintenance and repair welding of thick, heavy components where faster weld deposition rates over traditional coated electrodes, are required. Worn or new critical parts may be cost effectively Terocote protected either manually or fully automatically to extend their useful service life and increase productivity and profitability.

Special heat treatable alloy steel for all around wear protective coatings with excellent resistance to pressure, compressive loads combined with heavy impact or low stress abrasion on carbon and alloy steel parts. Tough, forgeable, grindable, magnetic deposits. Deposits are crack resistant and heat treatable. High deposition rate and easy slag removal. Maximum service temperature 500°C (930°F). Variable electrode stick out capability improves control over heat input, dilution, deposition rate, visibility and access in tight spaces.

## TECHNICAL DATA

Typical Values	
Hardness:	55 HRC
Current polarity:	DCEP (DC+)

For thick sections and high deposition rates:

DIAMETER	AMPERAGE	VOLTAGE	STICK-OUT
1.2 mm (0.045")	140-200	25-30	25-38 mm (1 - 1.5")
1.6 mm (1/16")	160-220	25-30	25-38 mm (1 - 1.5")
2.8 mm (7/64")	300-375	26-30	51-63 mm (2 - 2.5")

For thin sections, minimum dilution and low heat input:

DIAMETER	AMPERAGE	VOLTAGE	STICK-OUT
1.2 mm (0.045")	100-140	25-30	25-38 mm (1 - 1.5")
1.6 mm (1/16")	110-160	25-30	25-38 mm (1 - 1.5")
2.8 mm (7/64")	220-300	26-30	51-63 mm (2 - 2.5")

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

## PROCEDURE FOR USE

**PREPARATION:** Clean weld area of scale and/or oxide. A nominal preheat of 65°C (150°F) is advised if part is below 5°C (40°F) or over 25 mm (1") thick. For higher carbon steels higher preheats will be needed. Do not preheat manganese steel castings above 205°C (400°F) as this will cause time-temperature embrittlement.

**TECHNIQUE:** Maintain the optimum electrode stickout and hold a 75° angle from the vertical in the direction of travel. Do not weave excessively. Wide beads can cause porosity, excessive base metal overheating, and degrade the weld deposit wear properties. Back whip craters to reduce cracking tendencies and potential out-gassing.

**POST-WELDING:** Allow parts to slow cool in still air. High carbon steels and air hardenable steels should be covered with a heat-retardant blanket or by other means. If steel composition is unknown, slow cool at a rate of 38°C (100°F) per hour.

## TYPICAL APPLICATIONS

For wear-preventive protective coating of a wide range of steel components subject to severe abrasion or erosion by mineral particles, sand, rocks, gravel etc., such as: wear plates, pneumatic conveyor systems, mixer blades, pump impellers, mold screws, coal screens, excavator bucket teeth, conveyor chutes, sand pumps, concrete mixers, asphalt handling, etc.



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