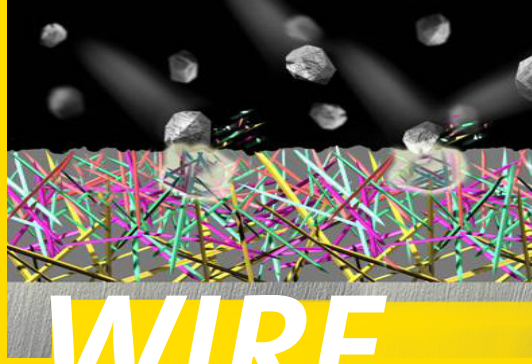
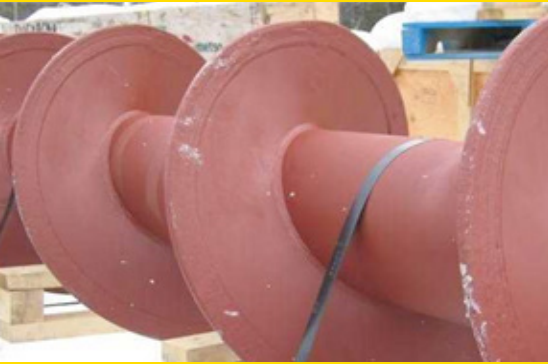


Premium Open Arc Wearfacing Wire for Combating High Stress Abrasion

# TeroMatec® OA 4652



## WIRE

- High deposition rate reduces time needed to complete jobs
- Excellent wear resistance under sliding abrasion
- Extremely fine complex carbides in a martensitic matrix enhances wear resistance



## DESCRIPTION:

TeroMatec OA 4652 is a highly effective hardfacing wire for resisting low-stress abrasion typically encountered in solids-handling equipment such as conveyors, chutes, vibrating screens, etc. Deposits of OA 4652 contain a fine dispersion of complex carbides contained in a wear-resistant martensitic matrix. This metallurgical structure, coupled with high hardness, provides the optimum resistance to wear under sliding abrasion conditions.

## TECHNICAL DATA:

Hardness as deposited: HRC 62-68 (1 pass)  
Current polarity: DC (+) Electrode Positive  
Power Source: Constant voltage and Integrated wire drive

## TYPICAL APPLICATIONS & INDUSTRY:

### APPLICATIONS

- Ash Handling Equipment
- Mineral & Ore Handling Equipment
- Coal Grinding Parts
- Ash Chutes
- Conveyor Screws - Pug Mill Augers
- Bucket Teeth, Bucket Edges/Inside

### INDUSTRY

Thermal Power  
Cement, Mining  
Thermal Power  
Thermal Power  
Cement, Power  
Quarries, Mining

## WELDING PROCEDURE & TECHNIQUE:

### Caution:

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

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

**Step 2:** TeroMatec OA 4652 is 1 pass maximum, it is often field practice to deposit a base-coat depending on the type of wear, severity, and the total amount of build-up required.

*Note 2: When re-building 12-14% Mn steels use TeroMatec OA 3205 as a cushion layer, and for other alloy steels, TeroMatec OA 690 is recommended. A 2-pass minimum is advised when less-thick deposits are required.*

**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, ~250°F.

*Note 3: 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 cylindrical parts, 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 being welded cools to room temperature, make sure to reheat to the original preheat temperature. For hardenable steels slow cooling is advised using silicone blankets, vermiculite, or other environmentally suitable heat-retardant material.*

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

## OPEN ARC PARAMETERS

7/64" (2.8MM)	VOLTAGE	AMPERAGE	STICK-OUT
Globular	27-32	280-400 (Large parts)	1.25" ± 1/4" (Short nozzle)
Fine Globular	27-30	220-280 (Lighter parts)	1.25" ± 1/4" (Short nozzle)

*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*

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