Castolin Eutectic®
Eutectic Castolin

Premium Open Arc Wearfacing Wire

TeroMatec® OA 4923

- High deposition rate reduces time needed to complete jobs
- Ultra-hard carbide in tough martensitic matrix enhances wear properties
- Extreme resistance to spalling
- Industry‘s choice for combatting abrasion, impact and pressure

TeroMatec® OA 4923

TeroMatec® OA 4923 contains a fine dispersion of ultra-hard titanium carbides in a tough, martensitic matrix, providing excellent resistance to combined wear by abrasion, impact and/or pressure.

This flux-cored alloy wire is specially developed for on-site maintenance and repair welding of thick, heavy components where faster weld deposition rates are desired. In addition, OA 4923 can be used for manual or fully automatic hardfacing operations.

TECHNICAL DATA

Typical Values	
Hardness 1 / 2 / 3 Passes:	45 / 50 / 55 HRC
Typical carbide hardness:	Knoop 2,500
Power Source Type:	Constant voltage & Integrated Wire Drive
Current polarity:	DCEP (DC+)

1/16" (1.6mm)	AMPERAGE	VOLTAGE	WIRE STICKOUT*
Globular	190-210	25-27	1/2" ± 1/8"
Fine Globular	150-190	24-27	

*Use of short nozzle is recommended

7/64" (2.8mm)	AMPERAGE	VOLTAGE	WIRE STICKOUT*
Globular	350-380	27-31	1.5" ± 1/8"
Fine Globular	200-250	26-29	

*Use of short nozzle is recommended. 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

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!

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

Step 2: TeroMatec OA 4923 is 1 inch 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: 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 hardenabilty potential and/or carbon level. For most constructional steels a nominal preheat of 150°F (65°C) is suggested and for medium alloy steels, ~250°F (120°C).
Note: When preparing manganese steels, such as hadfield castings, do not preheat!

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 "pull" technique. 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 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.

TYPICAL APPLICATIONS

APPLICATIONS	INDUSTRY
Crusher Hammer - Clinker Crusher	Cement
Secondary Crushers - Crusher Bars	Cement, Mining
Earthmoving Equipment	Quarries, Mining
Bucket Teeth - Bucket Liners	Quarries, Mining
Crusher Rolls	Cement
Dredge Pump Components	Dredging
Knives - Hammers - Shredders	Recycling, Refuse
Debarker Drums	Pulp & Paper

Castolin Eutectic®
Eutectic Castolin

Eutectic Corporation:
N94 W14355 Garwin Mace Dr.
Menomonee Falls WI, 53051 USA
+1 800. 558. 8524 • eutectic.com

Eutectic Canada:
428, rue Aimé-Vincent, Vaudreuil-Dorion,
Québec J7V 5V5 Canada
+1 800. 361. 9439 • eutectic.ca

Follow Us On...

02-2021