



Premium Metal-Cored, Gas  
Shielded, Build-up Wire with  
Exceptional Resistance to Corrosion

**EnD0tec®**  
**DO\*29S**

- Low heat input for low dilution
- Maximum weld metal recovery
- Corrosion resistant at high temperatures
- Exceptional all - position weldability
- High deposition rate for reduced labor costs
- Machinable

# EnDotec® DO\*29S

EnDotec DO\*29S is designed for joining and build-up of plain carbon steel, construction grade and low alloy steels. It is a multi-component iron-base alloy containing Ni, Mo, and Cr to prevent corrosion.

Deposits are low carbon to minimize intergranular carbide precipitation, which can cause intergranular corrosion. This alloy offers good resistance to oxidation scaling and heat checking.

## TECHNICAL DATA

Typical Values	
Hardness as-deposited:	90-100 HRB
Typical Tensile Strength:	80,000 psi ( 552 N/mm <sup>2</sup> )
Current & Polarity:	DC (+) electrode positive
Power Source Type:	Constant Voltage & Integrated Wire Drive
Shielding Gases:	100% CO <sub>2</sub> (1st) 98% Ar , 2% CO <sub>2</sub> (2nd)

0.045" (1.2mm)	VOLTAGE	AMPERAGE	STICK-OUT
Spray Arc	23-27	135-190 (Short Arc)	1/2" ± 1/8" (Short nozzle)
Short Arc	25-30	150-230 (Spray Arc)	9/16" ± 1/8" (Long nozzle)

**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:** When re-building, a cushion layer is advised. For 12-14% Mn steels, use EnDotec DO\*05.

**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 (65°C) is suggested and for medium alloy steels, ~250°F (~121°C).

*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 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 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 use either grinding or single-point machine finishing.

*NOTE: For more details regarding machining deposits of DO\*29S consult with Castolin Eutectic Technical Services.*

## TYPICAL APPLICATIONS

### APPLICATIONS

Pump Castings  
Chemical Vats - Pulp Digesters  
Boiler Pumps  
Valve Castings - Chemical Hoppers  
Filters - Pasteurizers  
Plating Baskets

### INDUSTRY

Pulp & Paper  
Pulp & Paper  
Heating  
Chemical  
Agriculture  
Steel



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...

