

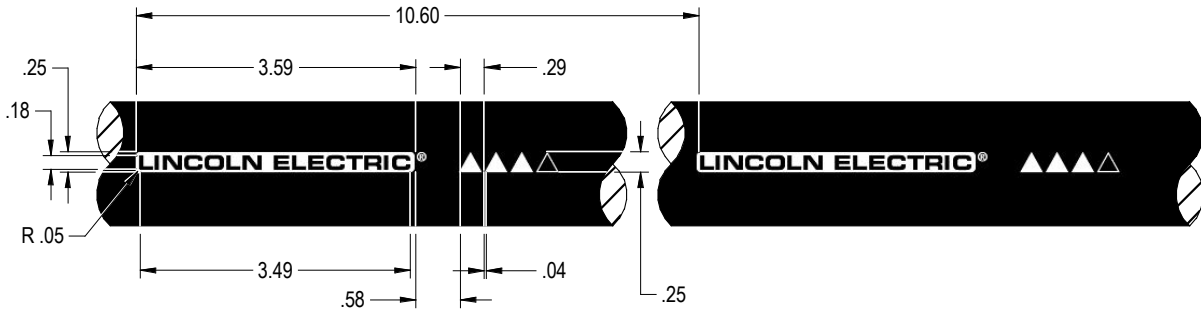
# PURCHASE SPECIFICATION

CHANGE DETAIL: New.  
ENGINEERING CONTROLLED MANUFACTURER: Yes

## SPECIFICATIONS OF MAGNUM 350 GMA CORED CABLE

1. **Function**  
Completed cable is to be suitable for use as a wire feeding conductor cable for semi-automatic GMA welding processes.
  
2. **Conductors and Core**  
The copper conductor shall consist of 2432 strands of uncoated fully annealed #34 bright copper wire. Stranding is to be 16 x 152. Four #19 control wires insulated with a .015" +/- .003" wall thickness of radiation cross-linked polyethylene are to be included in the stranding. One control lead is to have a blue jacket, the second control lead is to have a red jacket, the third control lead is to have a white jacket, and the fourth control lead is to have a black jacket. Orientation of control leads around cable is to be blue-red-white-black. The 16 major bunches and the insulated control leads are to be cabled around a center core with a right hand lay using a 7.50" +/- .50" pitch. Other stranding may be acceptable subject to the approval by Lincoln Electric Company. The stranding and pitch must give good flexibility and fatigue resistance but minimize stretch under tension for proper wire feeding. The center core is to be a .300"/.320" inside diameter x .425"/.435" outside diameter radiation cross-linked elastomer tube with an 87 +/- 5 shore "A" hardness.
  
3. **Outer Jacket**  
The jacket shall consist of one layer of properly cured radiation cross-linked thermoset elastomer, .080 min. inches thick that has a shore "A" hardness of 73/83 and an outside diameter of .785" +/- .010 inches. The jacket must not stick to the copper strands and skinning must be easy. The jacketed cable should lay straight when unreel, have suitable flexibility, abrasion resistance and oil resistance. The copper conductors must not be contaminated and remain clean so good electrical connections can be made to the copper conductors. The jacket contributes to proper wire feeding.

The outer jacket is to be printed in white every 10.60 inches as shown below.



The outer jacket shall withstand 2000 volts, 60 HZ., AC ground test potential applied to conductor and outside of jacket for 15 seconds without breakdown. The control leads shall withstand 1500 volts, 60 HZ., AC ground test potential applied to control leads and copper conductor for 1 second.

Engineering Note: Changes to this specification require compliance review for CCC

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<b>SUBJECT: Specifications of Magnum Pro 350 Cored Cable</b>			DOCUMENT NUMBER: <b>E3226-3</b>	DOCUMENT REVISION: <b>A.01</b>
DRAWN BY: jimj	ENGINEER: M. Martinez	MATERIAL DISPOSITON: -	Page 1 of 2	
APPROVED: -	APPROVAL DATE: -	PROJECT NUMBER: 5075602		

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## Mechanical Properties of Jacket

	ASTM Test Method	Units	Value
Hardness	D-2240	Shore A	78
Tensile Strength	D-412	PSI	2100
Ultimate Elong.	D-412	%	440
100% Modulus	D-412	PSI	540
Tear Strength	D-624	PPI	229
Abrasion	D-1630	NBS Index, %	60
Oxygen Index	D-286	%	26.5
Heat Resistance (168 Hrs., 250 Deg. F)	D-573		
Retained Tensile		%	90
Retained Elongation		%	82

4. Cable must remain flexible with no cracking of conductors, sheath or center core at -30 degrees C. operation and be stored at -30 degrees C.
5. Cable can be supplied in random continuous lengths in 40" x 48" x 17" tri-wall palletized containers that hold approximately 1500 feet of cable. No more than 3 pieces per 1500 ft. of cable.
6. Vendor is to label each container with Lincoln's specification number and cable length.

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