OK Aristorod 12.50 (ER70S-6)

Tech Data Sheet

Welding Process
GMAW (MIG)

Classifications/Approvals
CWB CSA W48; ER49S-6
ABS 3SA,3YSA
BV SA3YM
DNV III YMS
DB 42.039.29
AWS SFA5.18; ER70S-6
GL 3YS
LR 3S 3YS
VdTUV 10052

Welding Position
All Position

Filler Metal Type
Mild Steel

Shielding Gas
Argon-Based Mix (MIG Only)
100% CO2

OK AristoRod 12.50 is a MIG wire featuring ESAB's proprietary ASC (Advanced Surface Characteristics) technology. The unique wire surface of AristoRod improves feedability and arc stability, provides extended corrosion resistance and arc starting properties, and reduces contact tip wear. AristoRod 12.50 contains sufficient levels of manganese and silicon to provide a fluid weld puddle with superb wetting action. The high levels of manganese and silicon also make AristoRod 12.50 a good choice for welding over moderate to high levels of rust and mill scale. Shielding gas choices for AristoRod 12.50 include 100% CO2, argon/CO2 mixtures, argon/O2 mixtures, and other argon based mixed gas blends. AristoRod 12.50 is used to weld carbon steels typically used in structural, automotive, agricultural and heavy equipment, and other general fabrication.

Available Parts				
Part No.	**Size**	**Length**	**Weight**	**Package**
1A5009949A	.035	900 in.	900	Octagon Marathon Pack
1A5009691A	.035		40	Spool
1A5011949A	.045	900 in.	900	Octagon Marathon Pack
1A5011691A	.045		40	Spool
1A5013949A	.052	900 in.	900	Octagon Marathon Pack
1A5013691A	.052		40	Spool

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Deposition Table				
Electrode Diameter	Amps	98% Ar 2% O2 *98% Eff.	75% Ar 25% CO2 *96% Eff.	Straight CO2 *96% Eff.
.030 in.	75	2.0	1.9	1.8
.030 in.	100	2.6	2.6	2.5
.030 in.	150	4.1	4.0	3.9
.030 in.	200	6.8	6.7	6.5
.035 in.	80	2.2	2.1	2.0
.035 in.	100	2.7	2.7	2.6
.035 in.	150	4.2	4.1	4.0
.035 in.	200	6.2	6.0	5.9
.035 in.	250	9.0	8.8	8.6
.045 in.	100	2.1	2.0	1.9
.045 in.	125	2.8	2.8	2.7
.045 in.	150	3.6	3.5	3.4
.045 in.	200	5.6	5.5	5.3
.045 in.	250	7.8	7.6	7.4
.045 in.	300	10.2	10.0	9.7
.045 in.	350	13.2	12.9	12.5
1/16 in.	250	6.5	6.4	6.2
1/16 in.	275	7.7	7.6	7.3
1/16 in.	300	9.0	8.8	8.5
1/16 in.	350	11.3	11.0	10.7
1/16 in.	400	14.0	13.7	13.3
1/16 in.	450	17.4	17.1	16.5

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Typical Mechanical Properties	
Shielding Gas	
90% Ar/10% CO2	
Yield Strength	66 ksi
Tensile Strength	82 ksi
Elongation in 2"	27 %
Reduction of Area	56 %
CVN (@-20°F)	82
75% Ar/25% CO2	
Yield Strength	66 ksi
Tensile Strength	82 ksi
Elongation in 2"	28 %
Reduction of Area	61 %
CVN (@-20°F)	44
100% CO2	
Yield Strength	65 ksi
Tensile Strength	78 ksi
Elongation in 2"	25 %
Reduction of Area	70 %
CVN (@-20°F)	27
Typical Undiluted Weld Metal Analysis	
90% Ar/10% CO2	
C	0.08 %
Mn	1.22 %
Si	0.730 %
P	0.013 %
S	0.012 %
Cu	0.01 %
75% Ar/25% CO2	
C	0.08 %
Mn	1.19 %
Si	0.68 %
P	0.012 %
S	0.012 %
Cu	0.02 %
100% CO2	
C	0.07 %
Mn	1.00 %
Si	0.56 %
P	0.012 %
S	0.011 %
Cu	0.01 %