TECHNICAL INFORMATION SHEET

MAGNESIUM CUT LENGTHS

Harris Magnesium cut length TIG rods conforms to AWS A5.19 class ERAZ61A and ERAZ92A

Also AZ92A conforms to AWS A5.8 BMg-1

36" Cut Lengths

Product	Size	Stock No.
AZ61A	1/16" 3/32" 1/8" 3/16"	AZ61T30 AZ61T50 AZ61T60 AZ61T80
AZ92A	1/16" 3/32" 1/8"	AZ92T30 AZ92T50 AZ92T60

Packaging: 3 lb. tubes, four tubes per carton

CHEMICAL COMPOSITIONS[1]:

Product	Mg	Al	Be	Mn	Zn	Cu	Fe	Ni	Si	Others
AZ61A	Rem.	5.8-7.2	0.0002-0.0008	0.15-0.50	0.40-1.5	0.05	0.005	0.005	0.05	0.30
AZ92A	Rem.	8.3-9.7	0.0002-0.0008	0.15-0.50	1.7-2.3	0.05	0.005	0.005	0.05	0.30

[1]Single values shown are maximum percentages

JOINING MAGNESIUM ALLOYS WITH AZ61A AND AZ92A FILLER METALS

Joining Cast to Cast Alloys

Alloys	AZ63A	AZ81A	AZ91E	AZ92A	EZ33A	HK31A	HZ32A	K1A	QE22A
AZ63A		NR	NR	NR	NR	NR	NR	NR	NR
AZ81A	NR								
AZ91E	NR								
AZ92A	NR								
EZ33A	NR				-	-	-		-
HK31A	NR				-	-	-		-
HZ32A	NR				-	-	-		-
K1A	NR							-	
QE22A	NR				-	-	-		-
ZE41A	NR								

Joining Cast to Wroght Alloys

Alloys	AZ31B	AZ61A	AZ80A	HK31A	HM21A	HM31A
AZ81A						
AZ91E						
AZ92A						
EZ33A				-	-	-
HK31A				-	-	-
HZ32A				-	-	-
K1A						
QE22A				-	-	-
ZE41A						

Joining Wrought Alloys

Alloys	AZ31B	AZ61A	AZ80A
AZ31B			
AZ61A			
AZ80A			
HK31A			
HM21A			
HM31A			

Above combinations may be joined with AZ92A or AZ61A except where dashes appear.
Where dashes appear AZ92A can be used if it is not for a high temperature application.
NR - Not Recommended for Welding

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GTAW (TIG) – For manual AC welding, argon is generally preferred because the arch has better stability. On heavier sections the addition of helium maybe considered, and arc penetration will increase significantly. However gas flow rates may increase when helium is added.

		Direct Current, Amps[a]		Alternating Current, Amps[b]	
Electrode Diameter	Gas Cup	Straight Polarity, DCEN	Reverse Polarity, DCEP	Unbalanced Wave	Balanced Wave
0.010"	1/4"	up to 15		up to 15	up to 15
0.020"	1/4"	5-20		5-15	10-20
0.040"	3/8"	15-80		10-60	20-30
1/16"	3/8"	70-150	10-20	50-100	30-80
3/32"	1/2"	150-250	15-30	100-160	60-130
1/8"	1/2"	250-400	25-40	150-210	100-180
5/32"	1/2"	400-500	40-55	200-275	160-240
3/16"	5/8"	500-750	55-80	250-350	190-300

Note: All values are based on the use of argon as the shielding gas.
a. Use EWTh-2 electrodes.
b. Use EWP electrodes.

WARNING: PROTECT yourself and others. Read and understand this information.
FUMES AND GASES can be hazardous to your health.
HEAT RAYS, (infrared radiation) from flame or hot metal can injure eyes.

- Before use, read and understand the manufacturer's instructions, Safety Data Sheets (SDS), and your employer's safety practices.
- Keep your head out of fumes.
- Use enough ventilation, exhaust at the flame, or heat source, to keep fumes and gases from your breathing zone and the general area.
- Wear correct eye, ear, and body protection.
- See American National Standard Z49.1, *Safety in Welding, Cutting, and Allied Processes,* published by the American Welding Society, 8669 Doral Blvd., Doral, Florida 33166; OSHA Safety and Health Standards, available from the U.S. Government Office, Washington, DC 20402.

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