



# Magnesium sacrificial anodes

Datasheet DS 012

Rev.00

Magnesium alloy sacrificial anodes are widely used in **on-shore** cathodic protection applications due to their high natural **driving voltage** that makes them the best choice to protect steel structures also in medium-to-high resistivity soils.



Magnesium alloy anodes are used both bare and **pre-packaged** in a special formulated backfill that insure superior **moisture retention**, high current delivery and uniform consumption over time.

Our company TECNOCORR S.r.l. can supply a wide range of high-quality magnesium anodes that will meet all the customer's needs.



Strict quality controls to ensure that our product is free from any defect make our anode an extremely **reliable product**.

We propose two different Magnesium alloys: standard **ASTM AZ63** for low and medium resistivity soils ( $\rho < 20 \Omega \cdot m$ ) and high-potential **HP-1** where a stronger driving voltage is needed.

Please contact our technical office for further information about our range of magnesium sacrificial anodes

Element	U.o.m.	ASTM AZ63			HP-1
		Grade A	Grade B	Grade C	
Aluminum	(%)	5.3 – 6.7	5.3 – 6.7	5.0 – 7.0	0.01 max
Zinc	(%)	2.5 – 3.5	2.5 – 3.5	2.0 – 4.0	---
Manganese	(%)	0.15 min	0.15 min	0.15 min	0.50 - 1.30
Silicon	(%)	0.10 max	0.30 max	0.30 max	0.05 max
Copper	(%)	0.02 max	0.05 max	0.10 max	0.02 max
Nickel	(%)	0.002 max	0.003 max	0.003 max	0.001 max
Iron	(%)	0.003 max	0.003 max	0.003 max	0.03 max
Others	(%)	0.30 max	0.30 max	0.30 max	0.30 max
Magnesium	(%)	Remainder at 100%			
Electrochemical properties					
Open circuit Voltage*	(V)	1.55 typ			1.75 typ
Closed circuit voltage*	(V)	1.45 – 1.50			1.58
Actual capacity	(A·h/kg)	1100 typ. (500A·h/lb)			
Consumption rate	(kg/A·y)	7.97 typ. (17.5 kg/A·y)			
Efficiency	(%)	55 typ			50 typ

\* potentials measured in respect with standard CSE electrode