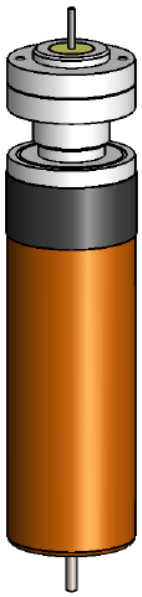
Cathelco

Technical Specification Document

Anti-Fouling Anodes
Iron Omni Anodes



A corrosion suppression anode.
Also known as a Soft Iron of Ferrous Anode (FE).

Often combined/paired with a marine growth prevention system (MGPS) anode (Copper).

Contains in-built cathode.

Anti-Fouling Anodes – Iron Omni Anodes

Material Specification

Grade	BS EN 1561
Standard	Unibar 250
Standard Designations and Specifications	UCB: Unibar 250 EN-1561-GJL-250 GG25 Meehanite GD250

Physical Properties	
Diameter Tolerances	For a 40 mm ø copper bar ±1.6 mm For a 50 mm ø copper bar ±1.6 mm
Density	7.2 g/cm^3.
Grade Properties	Between 92.35-94.5% Fe composition. Ferritic-Pearlitic Flake Cast Iron. Offers a good combination of strength and wear resistance.
Corrosion Resistance	Rated moderate to good in most environments and atmospheres
Natural Voltage: (between anode and sea chest/strainer with anode submerged in sea water)	Zero in relation to the hull.
Anode Consumption	1 Amp for 1 hr will dissolve 1.041 g/hr. 1 Amp for 1 yr will dissolve 9.11 Kg/yr.

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Chemical Composition		
Element	Min %	Max %
C – Carbon	2.90	3.65
Mn – Manganese	0.40	0.70
Si – Silicon	1.80	2.90
P - Phosphorus	-	0.30
S - Sulphur	-	0.10
Others/Alloying		Residual
Fe - Iron		Balance

Mechanical Properties	
Tensile Strength (MPa) min	155
Hardness (HB)	180-220

Weight		
Diameter (mm)	Weight (Kg/mm)	Weight (Kg/m)
40	0.009	9.0
50	0.0142	14.2

Material Compatibility

Do not use on Aluminium components or pipework.
Suitable for use with Cupronickel (CuNi) and Aluminium Bronze alloy vessel materials (i.e. those alloys containing 5-11% aluminium and copper only, also those containing some additions of iron, nickel, manganese or silicon).
The Cupronickel (CuNi) pipes should also be conditioned at the start of their life as the pipe work will form its own natural film which the Iron Anodes replace as it is used naturally.