



Marine Electrode Technical Specifications

Physical Properties:

| Property | Typical Value | Unit | Test Method |
|--|-----------------------|--------|--|
| Physical State | Black Solid | | |
| Odor | None | | |
| Water Permeability | 1.72×10^{-7} | cm/sec | ASTM 5084 (2.6 psi) |
| Flammability | No ignition | | Exposed to a propane torch (~2000 °C) for 60 seconds |
| Electrical Corrosion Resistance | | | |
| Copper | 100 | % | SAE Inc. Standard 100 |
| Steel | 98.09 | | |
| Galvanized Steel | 99.91 | | |
| Compatibility | | | |
| Copper | Yes | | SAE Inc. Standard 100 |
| Steel | Yes | | |
| Galvanized Steel | Yes | | |
| Environmental Impact | Neutral | | Ontario Regulation 558/00 (Leachate Testing) |
| Freeze-Thaw Withstand | 30 | years | SAE Inc. Standard 102 |

Electrical Properties:

| Property | Typical Value | Unit | Test Method |
|--------------------|---------------|--------------------------|-----------------------|
| Resistance | 0.031 | Ω | SAE Inc. Standard 105 |
| Resistivity | 30.39 | $\Omega \cdot \text{cm}$ | SAE Inc. Standard 105 |



Leachate (TCLP) Results:

Leachate Data (TCLP Procedure) based on Regulation 558 performed by Testmark Laboratories Ltd.

| Constituent | Marine Electrode TCLP Concentration (mg/L) | USEPA Maximum Contaminant Level (mg/L) |
|------------------------------|--|--|
| Arsenic | < 0.010 | 0.010 |
| Barium | 1.490 | 2.000 |
| Boron | 1.067 | 2.000 [†] |
| Chromium | 0.026 | 0.100 |
| Mercury | < 0.001 | 0.002 |
| Selenium | 0.013 | 0.050 |
| Silver | < 0.01 | 0.100* |
| Uranium | < 0.01 | 0.030 |
| Fluoride | 0.190 | 2.000* |
| Nitrate (as Nitrogen) | < 0.01 | 10.000 |
| Nitrite (as Nitrogen) | < 0.05 | 1.000 |
| Cyanide | < 0.05 | 0.200 |

† No MCL established; value shown is USEPA's Lifetime Drinking Water Health Advisory.

* No MCL established; value shown is USEPA's secondary drinking water standard.

Note: < denotes less than method detection limit (MDL).

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