



Bren-Technologies Sacrificial Anodes

Bren-Technologies Inc.

Founded in 2001, Bren Technologies is a leading manufacturer and supplier of corrosion protection products and technologies. Specializing in zinc and magnesium sacrificial anodes, Bren Technologies has quickly gained a solid reputation for offering a full range of quality products that; our employees are proud of; municipalities recommend, and that contractors prefer.



12lb Zinc Anode Installation



What is corrosion?

Corrosion is the deterioration of a substance (usually a metal) or its properties because of a reaction with its environment. The force that causes metals to corrode is a natural consequence of their temporary existence in metallic form. To reach a metallic state, various chemical compounds (ore) are heated, rolled and formed. This requires a great deal of energy. The energy required to form these metals begins to escape once the metals are formed, returning them to their natural state as ore. We can see this process occurring over time in the form of corrosion.

How is corrosion combated?

Corrosion is combated in many ways. The most common (and economical) way to prevent corrosion is through the use of sacrificial anodes. The use of anodes is called cathodic protection. Sacrificial anodes are usually composed of zinc or magnesium and, as their name implies, they sacrifice themselves to protect whatever metal structures they are connected to.



How are anodes supplied and used?

Magnesium anodes usually emit a larger charge but don't last as long when compared to Zinc Anodes. Magnesium anodes are available in 5, 9, 17, and 32-pound sizes.

Zinc anodes emit less of a charge but last quite a bit longer and are inexpensive when compared to magnesium anodes. Zinc anodes are available in 5, 6, 12, and 24-pound sizes.

There are many circumstances which affect the size requirements for anodes. Soil conditions, stray currents and the size of structure being protected are just a few of the factors that need to be considered when determining anode requirements.

For more information on sacrificial anodes, their typical applications, and other related products please contact Bren-Technologies directly or speak with your local sales representative.



Bren-Technologies sacrificial anodes used in conjunction with PCS petrolatum products

Bren-Technologies Anode Specifications:



General

Anode lead wires shall be a minimum of 3 meters in length and shall consist of AWG #10/7 or #12/7 stranded copper wire with type TWU or RWU-90 insulation. Magnesium anodes shall be supplied with a blue lead wire and zinc anodes shall be supplied with a white lead wire. The lead wire shall be connected to the core with silver solder. Bren-Technologies can supply sacrificial anodes in a variety of configurations to meet specific municipal requirements.

Packaged anodes shall be supplied in a water permeable cardboard tube containing a back-fill mixture of the following composition:

Ground Gypsum – $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ 75%
 Powdered Bentonite –
 $\text{Al}_4\text{Si}_8\text{O}_{20}(\text{OH})_4\text{NH}_2\text{O}$ 20%
 Anhydrous Sodium Sulfate – Na_2SO_4 5%

All anodes shall carry a label identifying the Manufacturer's name, (Bren Technologies Inc.) type of anode, and the net weight of the anode. Cardboard tubes used to package anodes shall have sufficient strength to permit normal shipping and handling without failure.

Magnesium Anodes

Magnesium anodes shall conform to ASTM B 843 Grade M1C (latest edition). Anodes shall have a minimum open circuit potential of -1.70 millivolts referenced to Cu/CuSO_4 .

Magnesium anodes shall conform to the following composition (limits are given as maximum weight percent unless shown as a range):

Aluminum 0.01
 Manganese 0.50 to 1.3
 Silicon 0.05
 Copper 0.02
 Nickel 0.001
 Iron 0.03
 Other Metallic
 Impurities (each) 0.05
 Magnesium Remainder

Zinc Anodes

Zinc anodes shall conform to ASTM. B418 Type II (latest edition). Anodes shall have a minimum open circuit potential of -1.10 millivolts referenced to Cu/CuSO_4 .

Zinc anodes shall have the following composition:

Aluminum 0.005% maximum
 Cadmium 0.003% maximum
 Iron 0.0014% maximum
 Lead 0.003% maximum
 Copper 0.002% maximum
 Zinc Remainder

Bren-Technologies also offers a full line of sacrificial zinc caps and collar anodes. Please contact us for available sizes and configurations.

WESTERN CANADA

Galaxy Plastics Ltd.
 #9-30321 Fraser Highway
 Abbotsford, BC V4X 1T3
 877 808.1088 • FAX: 877 808.1288

EASTERN CANADA

Galaxy Plastics Ltd.
 231 King Street
 Barrie, Ontario L4N 6B5
 888 431.0511 • FAX: 877 269.2468



For more information on additional products and services offered by Galaxy Plastics please visit:

galaxyplastics.com