Cascadia Metals offers Electrogalvanized Steel in a variety of sizes. Electrogalvanized (electroplated) Steel is cold-rolled carbon steel with a metallic coating composed of 99.99% zinc which is uniformly applied throughout the coil by electro-deposition. The steel sheet is fed through a series of washes and rinses then into a zinc plating bath. The coating develops as positively charged zinc ions in the solution are electrically reduced to zinc metal and deposited on the positively charged sheet steel. The result is a smooth, tight-knit zinc coating on the steel that is highly ductile. The zinc coating protects the base metal by providing a barrier to corrosive elements and also by the sacrificial nature of the coating.

Compared to galvanized steel, Electrogalvanized Steel offers similar performance with lower coating thickness and a brighter, more aesthetically appealing surface. Electrogalvanized Steel offers superior surface quality, excellent corrosion resistance, and outstanding formability and paintability.

Product Benefits

Electrogalvanized Steel offers a number of benefits as compared to other construction products, specifically galvanized steel. These benefits include...

**Formability** – can be used to produce parts containing simple bends to parts with extreme deep drawing. This product is well suited for smaller components and parts.

**Appearance** – the light weight zinc coatings has no visible spangle which allows for a more uniform surface appearance.

**Paintability** – is readily paintable and used primarily for surface critical painted applications where visual smoothness is required (such as commercial applications).

**Cost Savings** – using a normal coating thickness, the initial cost of this product is less in comparison to other hot-dipped steel substrates.
**ASTM Specifications**

ASTM Designation A879 outlines the general requirements for hot-dipped Electrogalvanized Steel. Included in this specification are steel chemistry requirements, typical mechanical properties of various metallurgical grades, and the coating weight requirements for the different coating designations.

**Coating Thickness**

Coating thickness is measured as the coating weight in ounces per square foot. For example, a coating designation of 20G specifies there is a minimum coating weight of 0.20 ounces per square foot on both sides of the sheet. The most common coating thicknesses are 20G, 30G and 40G.

**Surface Treatments**

**Chemical Treatment** - A chemical surface treatment is available which consists of a thin, invisible, corrosion inhibiting, inorganic, chemical film applied on both sides of the metallic coated surface. This film is applied at the metallic coating line by dipping the steel strip into a solution of corrosion inhibiting chemicals. The chemically treated surface is much more resistant to rust which can occur in humid conditions during storage or transportation.

**RoHS Compliance** - Due to the types of products manufactured using Electrogalvanized Steel, RoHS compliant surface treatments are many times required. RoHS (Restriction of Hazardous Substances) is a European Union regulation that bans the use of certain substances, over specified concentrations, in electronic equipment. All Electrogalvanized Steel products supplied by Cascadia Metals will be RoHS compliant.

**End-Use Applications**

Typical uses for Electrogalvanized Steel include agricultural equipment, appliance parts, architectural equipment, automotive parts, electrical equipment, trailers, fencing, ceiling grids and door applications as well as hardware and smaller components.

Contact your Cascadia Metals Sales Representative today to learn how Electrogalvanized Steel can satisfy your material needs.