

TECHLIGHT

INNOVATION IN ILLUMINATION

Galvanized & Painted

POLE PRODUCTS

Creating Exceptional Material Performance

For additional information,
please contact us at 800.225.0727
or find your local sales representative at
www.techlight.com

Why Choose Galvanizing with Powder Coat Paint Process for your Poles?

LONG MAINTENANCE-FREE SERVICE LIFE

The **galvanizing process** has been refined and enhanced over the last 200 years. It represents the absolute best way to protect steel and ensure long-lasting, corrosion-free performance. Less costly than materials such as stainless steel and aluminum, galvanized steel delivers a significantly lower life cycle cost and requires no appreciable coating maintenance once installed.

In addition to being 100% recyclable, galvanized steel represents a sustainable material option that emits no volatile organic compounds or hazardous air pollutions in the treatment process.



PERFORMANCE OF GALVANIZED POLES

Our automated **Galvanized coatings** have a proven performance under numerous environmental conditions. The corrosion resistance of zinc coatings is determined primarily by the thickness of the coating but varies with the severity of environmental conditions.

The **predictability of the lifetime** of a coating is important for planning and financing required maintenance. Measurements of the actual rate of consumption of the galvanized coating during the first few years of service often provide good data for projecting remaining life until first maintenance. Due to the buildup of zinc corrosion products, which in many environments are adherent and fairly insoluble, the corrosion rate may slow as time progresses. Therefore, predictions of time to first maintenance that are based on initial corrosion rates of zinc coatings are often conservative.

Environments in which galvanized steel and iron are commonly used include indoor and outdoor atmospheres, the storage of hundreds of different chemicals, in freshwater, seawater, soils and/or concrete. Because of the many years galvanizing has been used for corrosion protection, a wealth of real-world, long-term exposure data on zinc coating performance in a wide variety of environments is available.

SURFACE PREPARATION

Our automated **overhead conveyor system** uses a wheelabration system for the cleansing of all our poles. This 4 wheel system produces 4000 shots per second from four different angles effectively removing all mill scale rust and leaving "white metal". As the pole exits the wheelabration stage, all by-products are blown off with our high powered air compressors.

GALVANIZING

For areas that require extra protection against the elements, Techlight offers an optional galvanized coating option. Galvanization is a chemical process used to keep steel from corroding. Before powder coating the pole, we dip all metal surfaces (internal and external) into a hot galvanization bath that allows for the molten zinc and steel to form a barrier acting as a shield for the steel surface. With the additional purchase of a galvanized coating, Techlight is proud to extend our standard warranty to 10 years from date of purchase*.

*see Warranty in the Terms and Conditions section at the end of this catalog

GALVANIZING & POST INSPECTION PROCESS

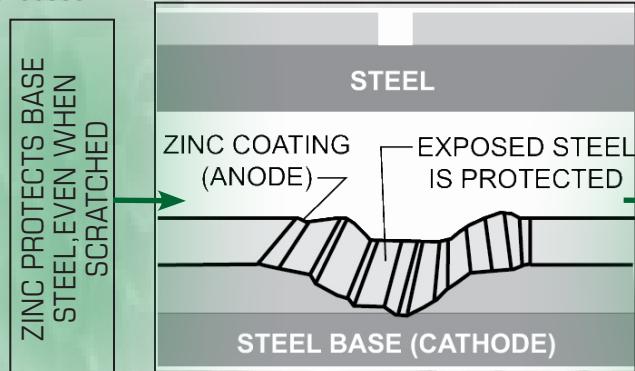


The Process

Techlight's galvanizing process uses a proprietary formulation of molten metals that produces the most consistent coating thickness available while also creating an even, enduring finish. Part of a four-step, hotdipped galvanizing process, our process meets ASTM A123, ASTM A153 and ASTM B6 requirements to deliver high quality zinc coatings on ferrous materials

Surface Preparation

Steel poles arriving at the galvanizing plant undergo a thorough inspection to ensure drainage and venting requirements are met. Once in the staging area, careful handling ensures the material is transported efficiently and effectively through the initial cleaning process.



Cleaning

A critical part of the process is cleaning which begins with a complete immersion in a hot alkali solution to remove organic compounds and dirt. Next acid pickling removes rust or scale and finally fluxing eliminates surface oxides to promote intermetallic development.

Hot-Dip Galvanizing

The steel is submerged in a bath of molten zinc until it reaches 840° F (449° C). At this point, the zinc reacts with the steel to form zinc/iron intermetallic layers on all surfaces inside and out.

Post-dip Quality Inspection

The galvanized steel is cleaned, weighed and carefully inspected. Calibrated instrumentation ensures quality standards are met and coating thickness, appearance and compliance with ASTM specifications are all reviewed before final approval.

This is what happens at a scratch on galvanized steel. The zinc coating sacrifices itself slowly by galvanic action to protect the base steel. This sacrificial action continues as long as any zinc remains in the immediate area.



POWDER COAT & CORROSION PERFORMANCE

POWDER COAT PAINT

INNOVATIVE POLE PREPARATION

Techlight is proud to introduce our durable Powder Coat Paint Finish and Galvanized pole treatments. Our innovative pole preparation system allows us to produce a higher quality pole while at the same time cutting production times. Add this to the galvanizing processes and you can now get better quality poles in a shorter time frame.

HEATED, TESTED & GUARANTEED

Once the pole has been prepared, the powder coating process is able to begin. The coating is electrostatically applied and then each pole is heated to 350° which allows for better adherence of the powder coat finish. Our finishes are performance-tested and manufactured to satisfy the most demanding project requirements. Our standard powder coat finish is available in an assortment of colors. Custom colors are available upon request.

CORROSION PERFORMANCE

CORROSION PERFORMANCE IN FRESHWATER

Galvanizing is successfully used to protect steel in freshwater exposure. "Freshwater" refers to all forms of water except seawater. Freshwater may be classified according to its origin or application. Included are hot and cold domestic, industrial, river, lake and canal waters. Corrosion of zinc in freshwater is a complex process controlled largely by impurities in the water. Even rainwater contains oxygen, nitrogen, carbon dioxide and other dissolved gases, in addition to dust and smoke particles.

CORROSION PERFORMANCE IN SEAWATER AND SALT SPRAY

Galvanized coatings provide considerable protection to steel immersed in seawater and exposed to salt spray. The factors that influence the corrosion of zinc in freshwater also apply to seawater. However, it is the dissolved salts (primarily sulfides and chlorides) in seawater that are the principal determinants of the corrosion behavior of zinc immersed in seawater. Given the high level of chloride in seawater, a very high rate of zinc corrosion might be expected. However, the presence of magnesium and calcium ions in seawater has a strong inhibiting effect on zinc corrosion in this type of environment. Accelerated laboratory test results that sometimes use a simple sodium chloride (NaCl) solution to simulate the effects of seawater exposure on galvanized steel should be viewed skeptically. Real-world results often differ significantly from accelerated laboratory tests.



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TECHLIGHT WARRANTY

TECHLIGHT POLE WARRANTY

Techlight warrants the structural integrity or its standard poles for a period of two years and the finish of its standard poles for a period of five years from the date of shipment.

OPTIONAL GALVANIZED TEN YEAR WARRANTY

Techlight warrants the structural integrity for its poles that have been treated with its optional Galvanized pole treatment for a period of 10 years and the finish for a period of five years. A galvanized treatment can be applied to any of our standard poles for an additional fee. Contact your Techlight sales representative for pricing.

HARSH ENVIRONMENT WARRANTY EXCEPTION

The use of any Techlight pole that is not purchased with a galvanized treatment and galvanized anchor bolts to be used in a harsh environment will not be warranted. Techlight warrants the structural integrity and finish for its galvanized poles and anchor bolts for a period of one year from date of shipment for any product meeting the following harsh environment location conditions:

- 1) Within 60 miles of the coast line or a body of salt water.
- 2) Corrosive environments such as a waste water reclamation facility.

Techlight is not responsible for poles ordered with inadequate EPA ratings necessary for the location where the poles will be installed. Banners, flags, streamers, signs and other items attached to poles will have an affect on the poles' ability to withstand strong winds. Techlight is not responsible for any dangerous scenarios created with the unauthorized attachment of items to a pole and accepts no responsibility for any harm or damage that may be caused by their addition.

All warranties exclude defects resulting from improper handling, storage, installation, acts of God, fire, vandalism or civil disturbances. Furthermore the pole warranty specifically excludes fatigue failure or similar phenomena resulting from induced vibration, harmonic oscillation or resonance associated with the movement of air current around the product.

The following conditions will void the pole product and finish warranty:

- 1) Grouted pole bases without weep holes.
- 2) Base plate sitting directly on concrete or other corrosive surfaces.
- 3) Missing pole cap and/or hand hole covers where the pole is allowed to fill with debris.

Further, Techlight will not warranty the integrity of any custom made pole to fit existing anchor bolts in the field and accepts no liability for any collateral damage caused by the use of anchor bolts that may or may not be structurally unsound or improperly installed.



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