

# ZINC COATINGS



Over 85 years  
of galvanizing  
experience  
at work  
for you.

## Only Hot-Dip Zinc coatings assure truly rust-resistant nails!

It's our exclusive, dependable and time-tested application process that makes the difference.

It's **HOW** the zinc is applied to the nail that's so exceedingly important. The performance of different kinds of zinc-coated nails varies tremendously – just ask any contractor or dealer who has been called out on nail-staining complaints.

### Dependable corrosion-resistant, steel base nails rely on two critical zinc factors – thickness and uniformity.

There are four major processes for applying zinc to steel nails.

- Hot Dipping in Molten Zinc, (Maze **STORMGUARDS**® are **double** hot-dipped)
- Tumbler or Barrel Hot Galvanizing (also called hot-galvanizing)
- Mechanical Plating (also called peen-plating)
- Electro-Plating (which makes those pretty, shiny nails – often called “EG”)

#### The Maze Nails **STORMGUARD**® Way.

##### Hot Dipping in Molten Zinc. (Maze **STORMGUARDS**® are double hot-dipped).

Hot dipping in Molten Zinc is acknowledged by most authorities as the best way to apply a heavy uniform coating to nails. In this process, the nails are completely immersed into a vat of molten zinc, similar to french-frying potatoes. This not only gives an outer coating of pure zinc, but also provides a tenacious inner coating of zinc-steel alloy. Our **STORMGUARD**® nails are further protected by a second dip into the protective zinc to preclude pinholes or imperfections – and to increase the amount of zinc on every nail. This exclusive processing by completely automated equipment insures both a heavy, uniform zinc coating and clean threads for high holding power.



Maze **STORMGUARD**® NAILS have passed the ultimate test with flying colors – over 85 years of field service with a record unmatched by any other zinc-coated nail producer. No wonder builders and contractors say that **STORMGUARDS**® are the best steel-based nails on the market – economical, easy driving, and especially designed to properly apply all types of modern roofing, siding, trim and decking.

##### Tumbler or Barrel Hot Galvanizing. (also called hot-galvanizing)

Hot-Galvanized (Tumble or Barrel Process) nails are the type most often produced by big steel mills. Unfortunately, the term “hot-galvanized” is confused by many people with “hot-dipped” nails. But “hot-galvanized” nails are **not dipped** and do not offer the same performance as do hot-dipped nails. Hot-galvanized nails are coated by sprinkling zinc chips on cold steel nails in a barrel, then rotating the hot barrel in a furnace to melt and distribute the zinc. The melting zinc washes off on the nails – somewhat like buttering popcorn – and in the same way some nails receive excess zinc and some very little. One difficulty is that the threads of ring and screw shank nails tend to fill up with zinc during this process. Also, it is difficult to deposit enough zinc on top of and under the nail heads. Because this process simply does not produce a uniform quality of coating, it has been abandoned entirely at the Maze plant. We make only hot-dip nails – “double-dipped” **STORMGUARD**® nails.



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## Mechanical Plating. (also called peen-plating)

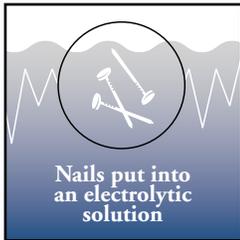
Mechanical plated nails, also called peen plated nails, are a relatively new development involving rolling cold nails around in a barrel with zinc dust, tiny glass “BB’s” and an activator fluid. The barrel rotates and the BB’s hammer or peen the zinc dust onto the nails.



Again the result is relatively clean threads but normally only a thin deposit of zinc which is further buttressed by immersion in a chromate rinse. Maze engineers evaluated this process with the inventors until their own tests shown that our exclusive **STORMGUARD**® double-dipping process was superior for coating outdoor nails. We do no mechanical plating. We “double-dip” our **STORMGUARD**® nails.

## Electro-Plating. (which makes those pretty, shiny nails)

Electro-plating of nails is performed by placing them in a basket into an electrolytic solution so that a thin film of zinc is deposited by an electrical current from zinc anodes onto the surface of the nails. Although electroplated nails are beautiful and shiny, it is not feasible economically to build up a heavy enough coating to make this type of nail dependably corrosion-resistant for outdoor use. The **thin zinc coating** soon oxidizes away so that electro-plated nails normally **rust quickly** upon exposure to the weather... just ask any experienced siding applicator. In short, plated nails have good holding power from clean threads, but they do not have the heavy zinc coating needed to avoid rusting and staining. We “double-dip” our **STORMGUARD**® nails.



**Maze recommends the process proven by so many years of actual field exposure to be the best way to put protective zinc on a strong steel base – hot-dipping!**

We market our hot-dipped line under the trademark, Maze **STORMGUARD**® – the nails we guarantee to be hot-dipped twice in molten zinc by our exclusive automated process.

Beware of so called “Hot-Dip” galvanized nails that are actually made from hot-dip galvanized wire. The ASTM spec. A-153 only covers zinc-coatings applied by the hot-dip process on iron and steel hardware articles. All Maze **STORMGUARD**® nails are double hot-dipped in molten zinc after the nails are cut and threaded so the thick, uniform zinc-coating is unbroken over the entire surface of the nail. Some companies cut corners by manufacturing their nails from hot-dip galvanized wire and claim they meet the A-153 Spec. As their nails are cut to length and the heads are formed in the nail machine, the zinc-coating is smashed and spread out very thinly on the only part of the nail left exposed after application – the head! Those nails do not offer the same degree of dependable corrosion-resistance as true hot-dip galvanized nails. So, beware of manufacturers who claim this method meets the ASTM A-153 for hot-dip galvanizing to cleverly get around building codes and industry recommendations for hot-dip galvanized nails. **Insist on genuine double hot-dip galvanized STORMGUARD® nails from Maze Nails – the company you can trust!**

If you haven't tried them, this is a good time to start!



*Over 85 years  
of galvanizing  
experience  
at work  
for you.*

### MAZE NAILS

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