Clopay Building Products Company

TECHNICALLY SPEAKING

Steel Corrosion Protection

Galvanizing, Paint, and Assembly Process

Clopay' quality products start with the highest grade of raw materials. Specifying decimal thickness minimums ensure strength, dent resistance, and durability of our product. Furthermore, longevity of the product is significantly related to the level of corrosion protection (galvanizing and paint) on the base steel.

Clopay utilizes the best corrosion protection processes available and in turn provide our customers with industry leading rust and corrosion warranties. In addition, our patented fastening/assembly process help protect surfaces on our product from bare metal exposure and subsequent rust and corrosion.

Galvanizing: Galvanizing is a process, which involves the application of a layer of zinc to the surface of bare metal. The zinc protects the surface in two ways:

1) As long as the coating is unbroken, the zinc acts as a barrier between the base steel and the atmosphere.
2) When the base steel becomes exposed the zinc acts as a protector; oxygen reacts with the zinc more quickly than the iron in the steel slowing the rust process.

Hot Dipped Galvanizing: Under typical atmospheric conditions, the protection given by the zinc is directly proportional to the weight of the coating. G-90 galvanizing (.9 oz per sq. ft.) will provide twice the protection of G-45 (.45 oz per sq. ft.) galvanizing on bare metal. Hot dipped galvanizing is the process of running bare steel through a bath of molten zinc. (1200 F- 1400 F) and then air or steam wiped to the desired deposition and spangle. Electrogalvanizing enables the zinc coating to be applied and bonded to the steel through an electroplating process. The advantage of the electroplating is that the bond between the two metals is actually stronger than the hot-dipped process, but the hot-dipped process allows heavier concentrations of zinc to be applied. The heavier concentrations provide more protection. Hot dipped G-40 galvanizing (.4 oz per sq. ft.) is about 4 times the protection provided by the typical electrogalvanizing process.

One Full Mil Paint Exterior Paint: In sectional door manufacturing, galvanizing only affords one level of corrosion protection. A much higher level of protection is achieved with the addition of a paint system. This combination of galvanizing and paint systems provide the durable systems that enable Clopay Building Products Co. to offer products that will easily withstand the exposure to the atmosphere better than G-90 galvanizing as proven in the salt spray chamber (ASTM) Clopay uses a two step primer/top-coat application. The primer coat is applied at approximately .2 mills thick. This primer is designed to provide superior adhesion to the metal and to provide maximum corrosion resistance. An .8 mil colorfast, ultraviolet light resistant, durable topcoat is applied to complete the protective coating.

Tog-L-Lok™ Fastening System: Drilling holes in or welding the painted surfaces can quickly compromise all of the protection on the surface of the metal. Clopay uses a patented system which mechanically joins metals with a single press stroke. This joining system produces a clean, strong, leak proof joint, and since it does not break the surface, allows Clopay Building Products co. to provide industry leading warranties.