High performance Fastener Coatings Polymet- 9700

PREMIUM Products Inc has introduced a unique water based aluminum-zinc crosslink coating. This product could be used as a base coat and as a top coat. There is no need to use multiple products as a base coat, top coat, or seal coat. This is a chrome-free product packed with aluminum and zinc flakes which form a uniform thin layer over the substrate to be coated as a barrier to protect it from corrosion.

The purpose of finishing is decorative and protection from corrosion. The cost of corrosion runs into billions of dollars per year and refinishing is also very expensive, due to material and labor cost. The most economical thing is to do it right the first time.

The key to protection from corrosion is a proper surface preparation and use of the best quality coating. For long term it is the best investment for long lasting corrosion protection.

The surface preparation is done by using a suitable cleaner and a pretreatment system. To achieve the best corrosion protection, the adhesion of coating to the metal is very important and to achieve the good adhesion of coating to the metal, a pretreatment of metal is a must. Generally used methods are degreasing in an alkaline solution, to remove the mill scale, rust, soil and oils and then phosphatising. The phosphatising process prevents metal from flash rusting and creates a better bond between metal and coating and enhances further adhesion properties.

There are number of reasons to use Polymet - 9700 coating by using the polymetalizing process. Some of the reasons are it is environmental friendly, corrosion protection, high transfer efficiency, very economical compare to other products and plating, Usability over mass produced components (nuts, bolts, clips, springs etc.)

Polymetalizing is a process used for the mass production of small parts, requiring uniform thin film to get high corrosion protection. In polymetalizing process the product is placed in a mesh basket and the basket is submerged in the polymet coating solution for a short period of time to wet the parts. Then it is spun off to remove the excess coating, which drips into a holding tank, which could be reused. This process produces uniform highly reproducible results. The parts are then dumped on a vibrating conveyer belt, which travels through an oven where the PMT (Pick Metal Temperature) is retained at 375 degrees Fahrenheit (191 degrees Celsius) for 10-15 minutes and at this temperature the crosslink reaction takes place. If it is not conveyer system, but a batch oven system then the parts should be in oven for 15 minutes after it reaches PMT of 375 degrees Fahrenheit.

The advantages of this coating are excellent corrosion resistance; it cures at lower temperature than some comparable finishes, resistance to automotive fluids, it is non flammable, low odor and easy water cleanup. It has excellent kesternich and weathering cycles at 0.3-0.5 mils (8-14 micron) dry film thickness. It covers the complex shapes thoroughly and uniformly. It is user friendly. This process achieves a transfer efficiency of about 95-98% and minimizes the waste of paint which lowers the application cost. In this process there is no risk of hydrogen embrittlements.

Further information from:

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