

Technical Datasheet

Marshal - ULTRASHIELD-Z

Water based Silver colour coating system

Marshal ULTRASHIELD-Z is a specially designed organic coating for extended corrosion protection to Electroplated surface. Marshal ULTRASHIELD-Z may be applied by Dip-Spin coater (Marshal Uni-Coater ZF) or by spray method. The coating is Silver coloured, uniform, leveled and smooth in property. The coating film is incorporated with extra smoothness for reducing coefficient of friction facilitating use for fasteners.

Marshal ULTRASHIELD-Z offers 550 to 750 Hrs of SST (asper ASTM B117) for Zinc Electroplated components. It is recommended to use Alkaline Zinc Electroplating followed by Trivalent yellow passivation as base for Ultrashield –Z coating.

Marshal ULTRASHIELD-Z is a water based system , wherein viscosity can be adjusted by mineral water.

Marshal **ULTRASHIELD-Z** offers scratch resistance without changing frictional coefficient. In general film hardness is greater than 5H pencil.

ULTRASHIELD-Z has an excellent pot life so long water is present in the system. As such, the resin does not cure at room temperature for a long time.

How to use ULTRASHIELD-Z

The solution is provided in ready to use form and can be used directly with simple mixing, in case any settlement of pigment. Slow speed stirred may be employed to have uniform suspension.

Control :

1. Viscosity : It is measured by ZHAN Cup 2
Range : 35 Sec to 45 Sec @ 22 to 25 Deg C.
2. Temperature : Room (25 to 28 Deg C) : In case of range above 25 Deg C, it is recommended to use cooling coils in-order to avoid solvent evaporation, however heating is not recommended to increase the temperature to avoid fire hazard, instead viscosity should be adjusted to optimum range by addition of water. It is highly recommended to use mineral water which is free from bacteria.
3. Dwell time : Uniform coating is obtained almost instantaneously when the system is in contact with parts, however dwell time up to 30 sec should be sufficient to achieve coating.
4. Thickness : Within the stipulated viscosity range , the thickness on drying is in the range 4 to 6 microns. Second coat after curing may be obtained as desired.

Marshal laboratories

Narhe – Dhayari Road Narhe Pune 411041

Email. info@marshallab.com : Tel 9422003096

5. Curing : The resin system is best cured between 200 to 220 Deg C for 30 min. For bigger jobs the time may be increased as rise in the temperature of the part will take some time of curing. Do not over cure the coating which can lose the luster and also may cause flaking off.
6. Consumption : Consumption the system depends on the thickness and also lot on application method. Care has been taken by special additives to have enough thixotropic property. However a broad range may be established between 0.005 to 0.008 Kgs per 1 Kgs of Fasteners (M6 or M8) for a thickness around 6 to 8 Microns.
7. Pretreatment : It is strongly recommended to have the oil and stain free substrate. Blasting is highly recommended. However, where small components are subjected , either Phosphating or Zinc plating is recommended.

Product Details : **ULTRASHIELD-Z**

- Viscosity 45 to 50 Sec
- Solid Content : 40 -43 % +/- 3%
- pH : 7.5 to 8.5
- Flash Point : above 120 Deg C (open Cup)
- Always keep material stirred

Storage and Handling: **ULTRASHIELD-Z** contain organic solvent system and requires care to handle. Keep the products away from sunlight and heat preferably in dark, cool area. Use protective goggles and gloves while handling Use of mask is strongly recommended.