



## **Product Overview**

### **Unique Product Characteristics**

This product uses a variety of polymer resins and modified propionic acid emulsions as copolymers to achieve a good balance of water-based primer and surface paint. The product has an effective and durable corrosion inhibition effect and rust prevention purpose, and has superior weather resistance.

### **Advanced technology formula, scientific design scheme**

The product absorbs the essence of primer and topcoat, and the unique formula and process of penetrating, transforming and stabilizing are one, and the scientific design scheme of penetrating and transforming mechanism is the main one, taking into account the stabilizing and inert shielding as the supplementary one, which finally overcomes all the forbidden areas of primer and topcoat, and is the replacement of traditional paint.

### **Excellent safety**

The product adopts inorganic raw materials, reasonable use of nano-materials, the choice of inorganic organic modified polymers, water as diluent, paint film formation is inorganic salt layer, so no taste, no three wastes, non-flammable and non-explosive, VOC content less than 50, to ensure environmental protection and fire safety, to protect the health of workers.

### **Excellent permanent performance of paint film**

The paint film formed by this product has excellent water resistance, UV resistance, aging resistance, high temperature resistance, low temperature resistance, humidity and heat resistance, temperature change resistance, etc. It has strong flexibility of paint film, repeated bending, and is not afraid of collision of components, and has compatibility with various topcoats, and the life of paint film is 5~8 years.

### **Energy saving and cost reduction**

The product has time and labor saving, easy and fast construction, can improve the efficiency of more than 3 times, with water as diluent, the product utilization rate of 100%, each kg single brush area of about 8 ~ 10 square meters, the unit painting cost is lower.

### **Wide applicability**

This product is a high-grade water-based primer metal paint, due to the unique mechanism, scientific design, advanced technology, excellent performance, can be widely applied to all kinds of railroad vehicles, automotive vehicles, tractors, various mechanical equipment, towers and bridges, containers, oil fields, various oil and gas pipelines, oil tanks, petrochemical facilities and other steel components of the work.



## Instructions for use

### Surface requirements:

Before painting should check whether the surface of the painted parts is thoroughly dry, whether the surface is sticky with oil and ash sand and other dirt, the painted surface must not be damaged, remove oil and ash sand, the bottom surface is flat and undamaged before construction.

### Stirring and dilution:

The paint slurry should be fully stirred evenly, if the viscosity is too large, you can add tap water to dilute the appropriate amount, adjust the viscosity to 20-40S (coated-4 cups), the diluted paint slurry must be used up within 30 days.

### Construction environment:

Should choose sunny day construction. The ambient temperature is 5-50°C and the relative humidity is 80% or less, not under -3°C and the ambient humidity is more than 80%.

### Re-coating time:

Under normal ambient temperature and ambient humidity, (temperature  $23^{\circ}\text{C} \pm 2^{\circ}\text{C}$ , humidity  $50\% \pm 5$ ), two coats can be applied after 3 hours. In case of changes in ambient temperature and humidity, the drying time will be extended and shortened accordingly, and the construction of the second coat will also be extended or advanced.

### Construction method:

This product is suitable for brushing, spraying, airless spraying, but the spraying pressure should be within the range of 0.25-0.5Mpa, high pressure airless spraying, the nozzle pressure should be controlled within the range of 12-15Mpa.

### Coating tools:

Using brush coating process, you should use soft brushes with hair length of 5cm, the diameter of spraying nozzle should be 0.4-0.6mm, using high pressure airless spraying, the diameter of spray gun nozzle should be 0.4-1.3mm range. In the construction process, the painting tools must be used separately, not mixed with other paints or appliances, and cleaned with tap water after use, in order to be used repeatedly.

### Compatibility:

This product can be used directly as primer and top coat without compounding.

### Reference dosage:

About 80 grams per square meter (dry film thickness is about 30um or less).

### Packaging:

The product is packed in printed tinplate and plastic drums with the specifications of 5L, 20L and 50L.

### Product transportation:

In transportation, the product should not be inverted, broken, collided, avoid sun exposure, rain and freezing, and the stacking height should be below 2 meters. Transport temperature should be kept within the range of 0-40°C. The product is water-based, non-toxic, odorless, non-flammable and non-explosive, and belongs to the "non-dangerous goods rules".

### Product storage:

The product should be stored in a cool and ventilated warehouse with a stack height of 2 meters,

## Water-based primer and top coat metallic paint



ambient temperature 0-30℃, and ambient humidity should be kept within the range of 50-85%.

### Product shelf life:

12 months from the date of delivery for the validity period, such as after the shelf life as long as the product is not hard lump, after mixing, after inspection, technical indicators if there is no change, can still continue to use.

## Technical parameters

| Item                                           | Test method                | Technical index                                    | Remarks                  |
|------------------------------------------------|----------------------------|----------------------------------------------------|--------------------------|
| Appearance of paint                            | Red, white, various colors | Flat and smooth                                    |                          |
| Viscosity of paint                             | GB/T1723-93                | ≤120                                               | Coating-4 cup viscometer |
| Coating fineness (μm)                          | GB1724-2019                | ≤20                                                |                          |
| Pencil hardness (H)                            | GB/T6739-2006              | ≥HB                                                |                          |
| Impact strength of film (kg/cm)                | GB/T1732-2020              | 50                                                 |                          |
| Surface drying time (min)                      | GB6753.2-86                | 20                                                 |                          |
| Actual drying time (min)                       | GB1728-89                  | 24                                                 |                          |
| Solid content (%)                              | GB1725-2007                | ≥45                                                |                          |
| Covering power (m <sup>2</sup> )               | GB1726-79                  | ≤70(Big red)                                       | Big red 110 White 100    |
| Pull-off method adhesion (kg/cm <sup>2</sup> ) | GB5210-2006                | ≥5                                                 |                          |
| Salt spray resistance (h)                      | GB/T1771-2007              | No blistering, no shedding<br>Slight loss of color | Composite layer          |
| Salt water resistance (h)                      | GB/T1733-93                | No blistering, no shedding<br>Slight loss of color | Composite layer          |
| Bending resistance (mm)                        | GB6742-2007                | ≤2                                                 |                          |
| Glossiness (60℃)                               | GB9754-2007                | ≤15                                                |                          |
| Aging resistance (h)                           | GB/T14522-2008             | No blistering, no peeling<br>Slight discoloration  |                          |
| Dry film thickness (μm)                        | GB1764-89                  | ≥45                                                |                          |
| Volatile compounds (VOC)                       | HJ2537-2014                | ≤27.4                                              |                          |

Note: Due to the variety of products, the technical parameters are quite different, please refer to our website or request information for detailed parameters.

## Statement

The information provided in this product specification is based entirely on our



knowledge gained in the laboratory and in practice. However, since the use of the product is usually beyond our control, we only give a guarantee of the quality of the product itself. We reserve the right to modify this manual without prior notice. For more information, please consult our website: [www.towercoating.com](http://www.towercoating.com)

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