INORGANIC ZINC RICH PRIMER — IZ-01HS

Specification Data
Type
A two-pack, solvent based inorganic zinc rich rust preventive paint based on ethyl silicate and high purity zinc dust.

Uses
Used for steel structures of power plants, harbor facilities, bridges, water pipelines and storage tanks to extend the protection of life.

Characteristics
- High zinc loading.
- Excellent resistance to oil, mechanical damage and organic solvents.
- High slip co-efficient, can be used on faying surface.
- High anti-corrosive performance, can extend the protection of life.

Color
Gray, Red Oxide

Finish
Flat

Service Temperature
Untopcoated: Continuous 400°C(750°F); Non-Continuous 427°C(800°F)
With recommended Inorganic copolymer topcoat (NO.1569 Min.DFT 2mils)
Continuous 538°C(1000°F), Non-Continuous 649°C(1200°F).

VOC values
456 g/L; Use SP-13 thinner to thin up 5% (468 g/L).

Solids Content
By Weight Above 80% (mixture)

Zinc Content in Dry Film
By Weight Above 85%

Film
Theoretical Coverage
34 m²/Gal  9 m²/L  3.62 m²/Kg  (DFT :3 mils)

Dry Film Thickness
3-4 mils (75-100 microns).

Preceding Coats
Chlorinated Rubber, Epoxy, Vinyl, Silicone or PU system
A mist coat is required to minimize topcoat bubbling except for some topcoats (high-solids epoxy)

Performance Data

<table>
<thead>
<tr>
<th>Test Method</th>
<th>System</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>CNS 11584 K6854 Test for Inorganic Zinc Rich Primer</td>
<td>1 ct. IZ-01</td>
<td>Solids content : 80.65%  Zinc content in dry film : 86.7%</td>
</tr>
<tr>
<td>ISO 4628-6-07 ASTM D610-08 Cyclic Corrosive Test</td>
<td>Blast Steel 1 ct. IZ-01 (75 microns) 1 ct. 1569 (50 microns)</td>
<td>Chalking rating : 0.5  Rust grade : 10</td>
</tr>
<tr>
<td>ISO 4628-6-07 ASTM 4624-02 Cyclic Corrosive Test</td>
<td>Blast Steel 1 ct. IZ-01 (75 microns) 1 ct. EP-999GF (150 microns) 1 ct. UP-450 (60 microns)</td>
<td>Chalking rating : 0.5  Original adhesive strength : 5.2 MPa  Percentage of adhesive strength retention after cyclic corrosive test : 62.9%(3.27 MPa)</td>
</tr>
<tr>
<td>ASTM D5894-96 ASTM D4541-09 Type V Cyclic Corrosive Test</td>
<td>Blast Steel 1 ct. IZ-01 (75 microns) 1 ct. EP-999GF (150 microns) 1 ct. UP-450 (60 microns)</td>
<td>No cracking and peeling in appearance  Original adhesive strength : 8.0 MPa  Percentage of adhesive strength retention after cyclic corrosive test : 69.6%(5.57 MPa)</td>
</tr>
<tr>
<td>CNS 11478 K6820 (1995) Test For Heat Resistance Paint (600°C, 48hr)</td>
<td>Blast Steel 1 ct. IZ-01 (75 microns) 1 ct. 1569 (50 microns)</td>
<td>No blistering, cracking and peeling in appearance</td>
</tr>
</tbody>
</table>

EPDM42IZ01HS V1.1
**Application Instruction**

- **Surface preparation**
  
  **General**
  - Remove dirt, dust, oil and all other contaminants that could interfere with adhesion of the coating.
  - Surfaces must be clean and dry. Moisture, grease, sludge, dust, corrosive salt must be thoroughly cleaned from substrate.
  - Surface preparation standards can use SSPC-SP10 or Sa2 1/2 (ISO 8501-1:2007). Blast surface profile 1~3mils (25~75 microns) (Ref. ASTM D4417).

- **Mixing & Thinning**
  
  **Mixing**
  - Pour the zinc dust gradually into the base with constant stirring and then pass through 80 mesh filter.
  
  **Thinining**
  - Above 25°C, use HT-type SP-13 thinner to thin up 3~5%. Below 25°C, use LT-type SP-13 thinner to thin up 3~5%.

  **Mixing Ratio**
  - Base : Zinc dust = 23 : 77 (by weight)

  **Pot life**
  - 8 hours at 25°C (mixture, 77°F)

- **Equipment**
  
  **Spray Application**
  - When the relative humidity is lower than 40%, water should be sprayed on after being painted for 30 minutes to promote hardening. The dry film thickness should not exceed 150 um to avoid cracking.
  - This paint is not suitable for repairing or recoating. If the coating system used at room temp environments (lower than 250°F), please use product No.1006 (EP-03AA) for repairing. If the coating system used at high temp environments (over 250°F), please use product No.1566 for repairing.
  - When overcoating, the air in the pores will escape through the next coating and may cause blister. A mist coat then full coat can reduce this condition:
  - Spray a thin coat to fill the pores in the IZ-01 film, soon after apply to full specified film thickness to break the blisters.
  - Caution: In difficult cases it may be necessary to thin the next coat.

  **Airless Spray**
  - Pump ratio: 30:1 or greater

  **Spray**
  - Tip size: 0.017”~0.025”

  **Output PSI**: 2500~3800

  **Brush Roller**
  - For touch-up of areas less than one square foot only. Use medium bristle brush and avoid rebrushing.
  - Not recommended
Environment conditions

<table>
<thead>
<tr>
<th>Condition</th>
<th>Coating</th>
<th>Surface</th>
<th>Environment</th>
<th>Humidity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum</td>
<td>0°C (32°F)</td>
<td>0°C (32°F)</td>
<td>0°C (32°F)</td>
<td>30%</td>
</tr>
<tr>
<td>Maximum</td>
<td>45°C (113°F)</td>
<td>70°C (158°F)</td>
<td>45°C (113°F)</td>
<td>85%</td>
</tr>
</tbody>
</table>

Industry standards are for substrate temperatures to be 3°C (5°F) above the dew point. The product simply requires the substrate temperature to be above the dew point.

Curing Schedule

<table>
<thead>
<tr>
<th>Surface Temp. &amp; 50% Relative Humidity</th>
<th>Dry to Handle</th>
<th>Dry to Recoat &amp; Topcoat</th>
</tr>
</thead>
<tbody>
<tr>
<td>0°C (32°F)</td>
<td>2.5 hours</td>
<td>3 days</td>
</tr>
<tr>
<td>5°C (41°F)</td>
<td>1 hour</td>
<td>2 days</td>
</tr>
<tr>
<td>15°C (59°F)</td>
<td>45 minutes</td>
<td>1 day</td>
</tr>
<tr>
<td>25°C (77°F)</td>
<td>45 minutes</td>
<td>18 hours</td>
</tr>
<tr>
<td>35°C (95°F)</td>
<td>15 minutes</td>
<td>16 hours</td>
</tr>
</tbody>
</table>

Cleanup & Safety

Cleanup Use No.1012 Inorganic Zinc Rich Thinner (SP-13) to clean. In case of spillage, absorb and dispose of in accordance with local applicable regulations.

Safety Please read and follow all caution statements on this product data sheet and MSDS for this product.

Ventilation Proper ventilation and protective measures must be provided during application and drying to keep solvent vapor concentrations within safe limits and to protect against toxic or oxygen deficient hazards.

Package, Handling & Storage

<table>
<thead>
<tr>
<th>Shelf Life</th>
<th>Part A: Minimum 1 year under normal storage conditions</th>
<th>Part B: Minimum 2 years under normal storage conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shipping</td>
<td>Part A: 1 Gallon - 2.49kg 3 Gallon - 7.50kg</td>
<td>Part B: 1 Gallon - 8.04kg 3 Gallon - 23.58kg</td>
</tr>
<tr>
<td>Weight</td>
<td>-------------------------------------------------------</td>
<td>-------------------------------------------------------</td>
</tr>
<tr>
<td>Storage</td>
<td>5-35°C (41-95°F)</td>
<td></td>
</tr>
<tr>
<td>Temperature &amp; Humidity</td>
<td>0-90% Relative Humidity</td>
<td></td>
</tr>
<tr>
<td>Flash Point</td>
<td>Part A: 13°C (55°F)</td>
<td>Zinc Filler: NA</td>
</tr>
<tr>
<td>Storage</td>
<td>Base and zinc powder storage can not sunlight exposure or temperature exceeds 40°C.</td>
<td></td>
</tr>
</tbody>
</table>