

CODE: HR-501

**PRODUCT NAME:**

**Inorganic Ethyl Silicate Zinc Shop Primer**

**DESCRIPTION:**

HR-501 is a two-component, medium-zinc, solvent, borne ethyl silicate shopprimer, designed for automatic and manual spray application. Hardwearing and highly weather-resistant. Offers cathodic protection of local mechanical damage. For relatively long time protection of blast cleaned steel plates and other structural steel during the storage, fabrication, and construction periods.

**TECHNICAL DATA:**

Binder	Inorganic ethyl silicate resin
Pigment	Zinc dust
Finish	Flat
Shade	Radish grey
Specific gravity after mixing	1.6 ± 0.1Kg/Lit
Volume solid	30 ± 2 %
Flash point	4 °C
Typical dry Film Thickness	15-30 Microns per one coat
Number of coat	Apply Only In One Coat
Mixing ratio by weight	Liquid : 50 parts Powder : 50 parts
Substrate	Blasted steel
Application Method	Conventional or airless spray, Brush
Thinner / Cleaner	T-500
Weight of added Thinner	Max30%
Theoretical spreading rate at (25 mic)	12 M <sup>2</sup> /Lit
Temperature resistance	up to 420 °C
Packing	Liquid : 10 Kg Power : 10 Kg
Shelf life*	6 Months

**\*Note:** It is dependent on storage temperature and reduces at storage temperature above 25° C.Do not store above 40 °C.Shelf life is exceeded if the liquid is gelled or if the mixed product forms gels before application.

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## Drying Time

Temp	Touch dry	Hard dry	Overcoating		Full Cure
			Min	Max	
15°C	20 minutes	1 hours	26 h	-	5 days
25°C	4 minutes	minutes 30	18 h	-	3 days
40°C	2 minutes	20 minutes	12 h	-	1 days



**Note1:** Drying times are dependent on applied film thickness; all data in this catalogue are reported at recommended DFT.

**Note2:** Several months when free from zinc salts and contamination .Zinc rich primers can form zinc salts on the surface so should not be exposed to long periods prior to overcoating.

**Note3:** HR-502 cured by solvent release and reaction with atmospheric moisture. The relative humidity, during the period of curing, should be minimum 60% and the minimum temperature 10°C.

## Pot life

Temp	15°C	25°C	40°C
Pot life	20 hours	12 hours	8 hours

**Note:** Moisture or water contamination will cause short pot life, skinning and gelling and also hardening of coating in equipment.

## SURFACE PREPARATION:

All surfaces to be coated should be clean, dry and free from contamination.

Water wash or water wash with high pressure, as appropriate, and remove all oil or grease, soluble contaminants, and other detrimental foreign matter in accordance with SSPC-SP1 solvent cleaning.

### NEWBUILDING

For optimum performance ~ Near White Blast Cleaning ~ Sa 2½ (ISO 8501-1:1988) or SSPC-SP-10 is recommended.

If oxidation has occurred between blasting and application of HR-501, the surface should be reblasted to the specified visual standard. Surface defects revealed by the blast cleaning process, should be ground, filled, or treated in the appropriate manner. A surface profile of 30-50 microns is recommended.

- Surface preparation shall not take place in the following conditions:

- A) At temperature below 5 °C
- B) When the relative humidity greater than 85%
- C) When the metal surface temperature is less than 3 °C above the dew point
- D) Outside day light hours on exterior locations

- Apply HR-501 as soon as possible after surface preparation to prevent rusting.

## Application Method

This material is a two component coating, a liquid binder base (part A) and powder component (part B). The powder (part B) should be slowly added to the liquid binder (part A). DO NOT ADD LIQUID TO POWDER. Material should be filtered prior to application and should be constantly agitated in the pot during spraying. Once the unit has been mixed it should be used within the working pot life specified. Stir during application to maintain uniformity of material.

## Application Equipments

Air less Spray	Tip range 0.015-0.021inch Total output pressure at spray tip not less than 112 Bar (1600 Psi)
Air Spray	Nozzle Orifice:1.8-2mm Nozzle pressure:2-4Bar (29-58 psi)
Brush	Typically 40-50 mic can be achieved.
Roller	Not recommended

**Flush Equipment with recommended Cleaner before and after use.**

## ENVIRONMENTAL CONDITIONS:

- To prevent moisture condensation during application, surface temperature must be at least 3 °C above the dew point.
- Never apply coatings under reverse environmental condition.
- In hot climate, material temperature should be 20 to 25 °C prior to mixing; otherwise pot life becomes very short.
- Paint shall not be applied when wind speed is in excess of 7 m/s

For satisfactory cure, air and surface temperature must be above 10 °C

Air temperature	15 to 35 °C
Surface temperature	15 to 40 °C
Material temperature	10 to 30 °C
Relative humidity	60 to 90 %

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## TOPCOATING

Overcoating time will vary depending upon the generic type of top coat and specific application conditions. (1) Allow to cure a minimum of 24 hours at greater than 70°F (21°C) and 60% relative humidity with good air circulation. Since cure times may vary with conditions, check for cure to accept topcoats by performing a solvent rub test in accordance with ASTM D4752. (2) Before top coating, clean surface thoroughly, removing all dirt, grease, oil and/or other contaminants. (3) Properly prepare welded or damaged areas and prime these recleaned areas with a suitable primer. (4) When applying topcoats a mist coat may be required. As necessary, apply a mist coat of topcoat material to help prevent solvent bubbling, followed by a full coat at proper thickness. (5) Apply only topcoats specifically recommended by Pedram Paint Group.

## HEALTH AND SAFETY:

This product is Flammable. Keep away from heat and open flame .Keep container closed .Use with adequate ventilation. Avoid prolonged and repeated contact with skin. If used in confined areas, observe the following precautions to prevent hazards of fire or explosion or damage to the health:

- 1-Circulate adequate fresh air continuously during application and drying.
- 2-Use fresh air masks and explosion proof equipment.
- 3- Prohibit all flames, sparks, welding and smoking.

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