

CODE: HR-513

PRODUCT NAME:

Inorganic Silicate Topcoat

DESCRIPTION:

HR-513 is a one component inorganic silicate, self cure, solvent based top coat. It can be used as a high temperature resistant topcoat, with excellent mechanical properties.

HR-513 can be used as a topcoat on zinc silicate primers in the chemicals and petrochemical, marine, offshore .Due to its inertness and inorganic nature; it has excellent resistance to radiation and can use in nuclear industry.

Its temperature resistance in dry heat is up to 400 °C when applied over ethyl silicate primers.

TECHNICAL DATA:

Binder	Inorganic ethyl silicate resin
Pigment	Special Titanium Dioxide
Finish	Flat
Shade	White, light grey
Specific gravity	1.7±0.05 Kg/Lit
Volume solid	70±3 %
Flash point	20 °C
Typical dry Film Thickness	125 Microns
Number of coat	Apply Only In One Coat
Substrate	Zinc silicate primed steel
Application Method	Conventional spray,Airless,Brush
Thinner / Cleaner	T-513
Weight of added Thinner	Max 5 %
Theoretical spreading rate at (125 mic)	5.6 M ² /Lit
Temperature resistance	Up to400 °C
Packing	4 kg or 20 kg
Shelf life(at 25 c)	12 months

HR-513 /1



Approved b



Drying Time¹

Temp	Touch dry	Hard dry	<u>Overcoating</u>		Full Cure ²
			Min	Max	
15°C	60 minutes	10 hours	Not able		5 days
25°C	40 minutes	6hours	Not able		3 days
35°C	20 minutes	4 hours	Not able		1 days

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

Note2: HR-513 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.

SURFACE PREPARATION

All Surfaces to be coated should be clean, dry and free from contamination. Prior to Paint application all surfaces should be assessed and treated in accordance with ISO 8504:1992.

Primed Surfaces

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. HR-513 is suitable for application to steelwork freshly coated with zinc silicate shop primers. If the zinc shop primer shows extensive or widely scattered breakdown, or excessive zinc corrosion products, overall sweep blasting will be necessary. Other types of shop primer are not suitable for overcoating and will require complete removal by abrasive blast cleaning. Weld seams and damaged areas should be blast cleaned to Sa2½ (ISO 8501-1:1988).

REPAIR

HR-513 may be applied directly over aged HR-513 following thorough fresh water washing and degreasing provided the coating to be overcoated is in an intact and tightly adherent condition. Loose or flaking coatings should be removed back to a firm edge and HR-513 or an appropriate primer should be used to repair the area before application of the full coat.- 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

HR-513/2

Application Method

This material is a one component coating and should always be mixed thoroughly with a power agitator before application. Stir during application to maintain uniformity of material.

Application Equipments

Air less Spray	Tip range 0.019-0.023 inch tip not less than 175 Bar (2500 psi)	Total output pressure at spray
Air Spray	Nozzle orifice 1.8-2mm Nozzle pressure: 2-5 Bar (29-72 psi)	
Brush	Typically 75 mic can be achieved.	
Roller	Typically 75 mic can be achieved.	

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.
- For satisfactory cure, air and surface temperature must be above 10 °C.
- Paint shall not be applied when wind speed is in excess of 7 m/s

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

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.

HR-513/3

