

CODE: HR-510

PRODUCT NAME:

Heat Resistant Silicone Coating

DESCRIPTION:

HR-510 is a one component high performance, high temperature resistant pure silicon -Aluminum coating. It can be used as a self priming finishing coat over abrasive blast cleaned steel or may also be applied over most primers such as Silicone Intermediate coating or inorganic zinc silicate primers.

HR-510 with excellent heat resistance, adhesion and anti-corrosive properties is recommended for industrial and marine use on exteriors of steel structures exposed to high temperatures, in chemical plants, marine structures, ships, power plants, oil production and refining plants.

Its temperature resistance in dry heat is up to 600 °C when applied one coat over steel. It will resistant up to 400 °c when applied over ethyl silicate primers.

TECHNICAL DATA:

Binder	Silicone Modified resin
Pigment	Aluminum Heat Resistance Pigment
Finish	Semi Flat
Shade	Aluminum Shade (Ral 9006)
Specific gravity	1.0±0.05 Kg/Lit
Volume solids	33 ± 3 %
Flash point	26 °C
Typical dry film thickness	20-25 Microns per one coat
Number of coat	One
Substrate	Primed or Cleaned Steel Aluminum , Galvanized
Application method	Conventional or airless spray , brush , roller
Thinner / Cleaner	T-510
Weight of added thinner	Max 5%
Theoretical spreading rate (at 20 microns)	16.5 M ² /Lit
Temperature resistance	(Up to 600 °C)
Packing	4 kg or 20 kg
Full curing condition	30-40 minutes at 250 °C
Shelf life(25 °C)	6 Months

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Drying Time

Temp	Touch dry	Hard dry	<u>Over coating</u>	
			Min	Max
15°C	90 minutes	After Thermal Curing	18 hours	-----
25°C	40 minutes	After Thermal Curing	2 hours	-----
40°C	20 minutes	After Thermal Curing	1 hours	-----

Note: Drying times are dependent on applied film thickness, all data in this catalogue

Are reported at recommended DFT

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

Fresh 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-510 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-510 may be applied directly over aged HR-510 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-510 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

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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 0.015-0.017 inch than 125 Bar (1800 psi)	Total output pressure at spray tip not less
Air Spray	Nozzle orifice 1.4 -1.8mm Nozzle pressure: 2-4 Bar (29-58 psi)	
Brush	Typically 20 mic can be achieved.	
Roller	Typically 20 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.
- 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	MAX 80 %

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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