

**CODE: VS-490-S**

**PRODUCT NAME:**

**Vinyl Ester Glass Flake**

**DESCRIPTION:**

VS-490-S is a two component, heavy duty vinyl ester coating reinforced with glass flake to increase chemical and abrasion resistance. It has excellent resistance to organic and inorganic acid solutions and many aliphatic solvents. The coating system consists of a primer and one or two topcoats, with a nominal dry film thickness of 400-800 microns. VS-490-S can be applied over concrete and metal surfaces with proper surface preparation... It is suitable coating for the internal lining of chemical storage tanks and vessel where acidic chemicals.

VS-490-S has also found extensive use in a number of industry sectors, including refineries, pulp and plants and chemical plants where it has been widely used for coating steel work in corrosive environments where frequent contact with aggressive chemicals, eg, acids is likely to occur.

**TECHNICAL DATA:**

Binder	Vinyl Ester
Pigment	Glass Flake
Finish	Semi gloss-Flat
Shade	Black, Grey ,Red Brown,
Specific gravity after mixing	1.8 ±0.1 Kg/Lit
Volume solids	98± 3 %
Flash point	80 °C
Typical dry film thickness	750-1500 mic
Number of coat	One or Two
Mixing ratio by weight	Base : 100 parts Hardener : 2-5 parts
Substrate	Primed surfaces
Application method	Airless or conventional spray, Roller, Brush
Theoretical spreading rate ( at 1000 mic)	1 M <sup>2</sup> /Lit
Temperature Resistance	Continues:100°C Noncontiguous; 140°C
Thinner / Cleaner	Not applicable
Packing	Base : 25 kg Hardener : 0.5 -1 kg
Shelf life	6 Months

## Mechanical Properties

Flexural strength	Approx.8400 psi
Tensile Elongation	2-3%
Tensile strength	Approx.5000 psi
Adhesion to metal	2500 psi
Adhesion to concrete	370 psi (concrete fails)



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## Drying Time

Temp	Touch dry	Hard dry	Overcoating		Full cure
			Min	Max	
15°C	5hours	10 hours	10 hours	-	13 days
25°C	4 hours	7 hours	7 hours	-	7 days
40°C	3 hours	5 hours	5 hours	-	4 days



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

## Pot life

Temp. of paint	15°C	25°C	40°C
Pot life	60 minutes	30minutes	15 minutes

## 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. Oil or grease should be removed in accordance with SSPC-SP1 solvent cleaning

### Primed surfaces

VS-490-S can be applied over approved primers. The primer surface should be dry and free from all contamination, and VS-490-S must be applied within the overcoating intervals specified.



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## Concrete Surfaces

Concrete should be cured for a minimum of 28 days prior to coating. The moisture content of the concrete should be below 6% .All surfaces should be clean, dry

All Cracks in the concrete shall be filled by VS-480, before applying topcoat.

Surface preparation shall not take place in following conditions:

- 1-At temperature below 5 °C.
- 2-When the relative humidity greater than 50-60%.
- 3-When the metal surface temperature is less than 3 °C above dew point.
- 4- Out side day light hours on exterior locations

## REPAIR:

- Damaged concrete must be cut back to sound material e.g. by use of pneumatic tools.
- All concrete contaminated with acids, chlorides, etc. must be remove.
- Repair layer must not be applied in thickness exceeding 12 Cm, but if thicker layers are required, then application may be built up layer by layer, leaving 1 hour between each coat.
- If overcoating with itself or other coatings, surface must be kept free of condensation, moisture and direct sunlight between coats.
- Remove dust, dirt and contamination before recoating.

## Application Method

Material is supplied in two containers as a unit. Always mix a complete unit in the proportion supplied. Once the unit has been mixed it must be used within the working Pot life specified.

- 1-Agitate part A with a power agitator.
- 2-Combined entire contents of curing agent (part B) With Base (Part A) and mix thoroughly with power agitator.

## Application Equipments

Air less Spray	Tip range 0.036-0.043inch Total output pressure at spray tip not less than 211Bar (3000 psi)
Air Spray	Not Recommended
Brush	Typically 250-300 mic can be achieved
Roller	Typically 250-300 mic can be achieved



### ENVIRONMENTAL CONDITIONS:

- To prevent moisture condensation during application, surface temperature must be at least 3 °C above 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	10 to 40 °C
Surface temperature	10 to 50 °C
Material temperature	15 to 40°C
Relative humidity	Max80 %

### 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.