



ISO 9001:2000

MARINE COATING

Coatings for corrosion protection of steel in sea or fresh water, salt spray or salt air environment

- GENERAL** : Marine Coating is a three component water based coatings containing a liquid blend. Portland cement and fine silica sand.
- USES** : Marine Coatings are:
- Corrosion protective coatings for steel structures in sea or fresh water, salt spray or salt environment.
 - Suitable for bridge decks, ship decks, drilling platforms, sea walls of sheet piling, structural steel members with large surface areas, ballast tanks for ships, interior and exterior surfaces of water towers, above grade and sub-grade tanks and pipes and other steel structures.
 - When exposed to traffic apply a wear resistant **TAPECRETE**. Occasional pedestrian and vehicular traffic (no topping), heavy pedestrian and light vehicular traffic(1.5 mm thick topping)
- FEATURES** :
- Bond well to steel and wiped coated galvanized steel
 - Can be applied to moist surfaces
 - Eliminate construction delays, construction, welding and coating application can proceed simultaneously.
 - Allow trapped vapours to escape thereby prevent blistering of the coating.
 - Provide a non-dusting water shedding surface
 - Not affected by ultra violet light.
 - Not affected by chemicals ranging from mild acids to strong bases.
 - Do not affect the health of workman.
 - Non-flammable
 - Do not release toxic gases.
 - Most properties improve with age
- TEXTURES AND COLOURS** :
- Textures vary from rough broom to textured paint finish depending on the roughness of the subsurface and method of application.
Standard colours are cement grey and white. Other colours can be provided by adding colorant to the coating materials.
In exterior uses where colour uniformity is required the coating can be painted with an acrylic latex based exterior semi-gloss finish paint or coated with Marine Coating sealer.
- LIMITATIONS** :
- Deteriorate in the presence of strong acids. Soften in some solvents such as acetone, ketone, toluene and xylene and re-harden upon evaporation of the solvents.
Should not be applied to surfaces with temperatures below 10°C (50°F) .
Soften in boiling water.
- SURFACE PREPARATION** :
- Correct surface preparation is important for the performance of coating.
Surfaces shall be clean of loose scale, poorly bonded coatings, oil, grease and other deleterious substances.
- METHOD OF APPLICATION** :
- The component materials (the liquid blend, portland cement and Fine silica filler) are mixed at site with paddle type mixers to form a slurry of creamy, thick paint consistency. The pot life varies from 1 to 4 hours depending on air temperature and relative humidity.
Air operated gravity feed type hopper guns or spray systems, brooms, brushes or rollers are recommended for application.

CURING

Applied in two coats.

- : Air cure for 12 to 72 hours depending on ambient temperature, relative humidity and wind velocity.

Cure coating for a minimum of 72 hours when subject to continuous water exposure.

When ambient conditions result in rapid removal of water from the system apply one coat of CHL SL 305 sealer curing compound.

WARRANTY

- : Marine Coating materials and instructions for installation under a warranty program.

A warranty program explanation document is available from CTL

MIX DESIGN OF MARINE COATING

:		<u>Kg/m³</u>
	Ordinary Portland Cement	858
	Marine Coating	446
	Fine Silica Sand	858
	To be applied by brush	

PROPERTIES	STANDARD	MC-500
Physical		
Thickness	ASTM C905	0.8 – 1.0mm (32 – 40 mils)
Wet Density		2.2t/m ³
Solid content		87%
PHYSIO-CHEMICAL		
Freeze-thaw resistance		400 cycles
Wetting and drying		No damage
CHEMICAL RESISTANCE		
Alkalies		Excellent
Chlorides & sulphates	ASTM C672	Excellent
Weak acids pH>4.5		Good
Strong acids pH>4.5		Poor
Solvents		Poor
SALT SPRAY TEST (after 1400 hrs exposure)		
Loss of adhesion		None
Blistering		None
Rust bleed		None
Rust bleed		None
Under film corrosion		None
MECHANICAL		
Adhesion strength		
Elcometer adhesion test		
Dry at 20°C		2.7 Mpa(400 psi)
Wet(7 day immersion)		1.4 Mpa(200 psi)
Dry 100°C		3.0 Mpa(440 psi)
Wet(7 day immersion)		0 Mpa (0 psi)
Impact resistance	ASTM G14 Modified	18 joules (160 in.lbs)
Abrasion resistance		High
HYGROSCOPIC QUALITY		
Water absorption		
-Immersion 1200 hrs@21°		0.7%
-boiling		2.5%
THERMAL		
Coefficient of thermal expansion	ASTM C531	0.000011cm/cm°C (0.000006in/in/°F) 200°C(392°F)

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