Armourguard ST

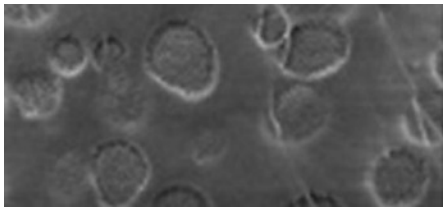
Xymertec
innovative resins & coatings

SURFACE TOLERANT EPOXY-CERAMIC METAL PRIMER & COATING WITH CUTTING EDGE POLYMER TECHNOLOGY

ARMOURGUARD ST is a recently developed two part epoxy-ceramic metal primer and coating that contains a functional liquid rubber that forms minute spherical droplets within the epoxy binder. After application the rubber reacts with the epoxy hardener rendering the coating flexible and impact resistant. The rubber increases adhesion of the coating to the substrate, decreases permeability but surprisingly, does not decrease hardness or abrasion resistance. ARMOURGUARD ST also contains a carefully selected package of corrosion inhibitors that inhibit the formation of rust beneath the coating.

- **Excellent adhesion to metallic surfaces**
- **Excellent barrier properties prevent corrosion**
- **Tremendous abrasion resistance**
- **Surface tolerant & can be applied to damp substrates**

ARMOURGUARD ST is a two part, low solvent epoxy-ceramic coating that contains 70% of solid ceramic micro-spheres and anti-corrosion additives that passivate the metal surface thus preventing corrosion.



Microscopic spherical rubber particles within the epoxy binder prevent cracking, reduce permeability and increase adhesion without decreasing hardness.

ARMOURGUARD ST is virtually impervious to water, water vapour and oxygen. Its unique formulation eliminates the requirement for separate primers and undercoats because ARMOURGUARD ST's superb barrier properties prevent oxygen and moisture reaching the substrate.

ARMOURGUARD ST is intended for use on marine and industrial steelwork above and below the waterline where the best possible protection from abrasion and mechanical damage is required combined with maximum corrosion protection. The cured coating contains the maximum possible amount of ceramic micro-spheres which form a composite with far superior adhesion, abrasion and corrosion resistance than normal epoxy coatings. Several coats can be applied to provide full protection against corrosion and abrasion. Alternatively one coat can be applied to the prepared surface followed by other coatings such as ARMOURGUARD PW or SAFEGUARD TSF or EA.

HARDENERS A choice of three hardeners are available which enable ARMOURGUARD ST to be used for diverse applications in most climatic conditions.

Epoxy coatings should be over-coated before they have fully cured so that a chemical bond develops between the coats. The degree of inter-coat bonding will reduce as the earlier coat cures.

The over-coating times shown below are dependant on the temperature of the coated surface. Dark colours applied in strong sunlight can get very hot and the over-coating time will be reduced considerably.

SYNAMIN 1058 has a short pot life and rapid cure, therefore, it has a short over-coating period.

SYNAMIN 1055 has a medium pot life and a long over-coating period.

SYNAMIN 1053 has a very long pot life and over-coating period.

SUBSTRATE PREPARATION Steel should preferably be shot or hydro-blasted and free from traces of soluble salts. It is especially important to remove all traces of salt from surfaces that have been immersed in sea water.

ARMOURGUARD ST can be applied to well prepared surfaces provided that they are free of loose or scaly rust, oil, grease or other contamination.

ARMOURGUARD ST can be applied to damp (not wet) substrates when used with SYNAMIN 1055 hardener. Puddles and large drops of water should be mopped up or blown away with compressed air before application of the coating. ARMOURGUARD ST can also be applied to sound old epoxy coatings provided they are clean and have been abraded.

MIXING Resin should be pre-mixed in the tin before the hardener is added, preferably with an electric mixer. After the hardener has been added to the tin mix for at least 2-3 minutes, pay particular attention to the sides and bottom corners of the tin to ensure that all materials are thoroughly incorporated.

When mixed, the resin and hardener will start to react, generating heat.

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This will then accelerate the reaction. The greater the mass of epoxy, the more heat will be generated and the shorter the pot life. If you require a smaller quantity or are unable to use all of the material within its pot life, weigh out resin and hardener in the proportions specified on the label using digital kitchen scales.

APPLICATION ARMOURGUARD ST can be applied with a brush, short pile roller or by high pressure airless or conventional spray equipment supplied with material from a pressure pot. For maximum protection three coats should be applied to a dry film thickness of 360 microns.

OVER-COATING TIMES						
TEMPERATURE °C	5 TO 15		15 to 25		25 +	
	Min	Max	Min	Max	Min	Max
POT LIFE SYNAMIN 1058	40 minutes	60 minutes	25 minutes	40 minutes	20 minutes	25 minutes
OVER-COATING TIME	5 hours	2 days	3 hours	1 day	90 minutes	20 hours
POT LIFE SYNAMIN 1055	50 minutes	80 minutes	35 minutes	45 minutes	25 minutes	35 minutes
OVER-COATING TIME	8 hours	3 days	6 hours	2 days	3 hours	36 hours
POT LIFE SYNAMIN 1053	90 minutes	120 minutes	60 minutes	90 minutes	45 minutes	60 minutes
OVER-COATING TIME	12 hours	5 days	6 hours	4 days	6 hours	3 days

ARMOURGUARD ST - SPECIFICATION	
Type	High solids epoxy steel primer & coating
Mix ratio	See label on tin
Solids content	94%
Ceramic content in dry film	70%
Adhesion ASTM D4541-95	19n/mm^2
Abrasion resistance ASTM D4060-95	54 mg/1000 cycles. CS10 wheel with 1kg load
Finish	Medium gloss
Weight	1.66kg/litre
Coverage	7m^2 per litre at 125 microns dry film thickness
Solvent	SYNSOL 50 for brush, roller or spray application.
Colours	Mid grey
Pack sizes	1, 2.5 and 5 litre

Please visit our web site at www.xymertec.com for details of our other products. They include resins and coatings for marine, industrial and flooring applications.

COVERAGE

It is the applicators responsibility to ensure that the correct coverage is achieved.

We recommend that the area that should be covered by one pack of coating is marked out. Adjust the application rate to ensure that the marked area is covered by the entire contents of a pack. Porous or rough substrates will require more product than regular substrates.

HEALTH & SAFETY

Please see the Safety Data Sheet for full information. All users should ensure appropriate protective measures are adhered to when applying our products.

DISCLAIMER

Customers are advised to thoroughly read and adhere to the instructions provided to ensure the products' optimum finish and performance. All information is based on results gained from experience and tests and is believed to be accurate but is given without acceptance of liability for loss or damage attributable to reliance thereon as conditions of use lie outside our control. Any deviation by the user to these instructions may affect the products performance and is therefore not advised. In this circumstance, Xymertec Ltd will not be held responsible and will be unable to offer any product replacement. Users should always carry out sufficient tests to establish the suitability of any products for their intended applications.

We aim to ensure consistency of colour in production (where applicable), however slight variations in shade may occur from batch to batch.

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