TECH-DRY BUILDING PROTECTION SYSTEMS PTY. LTD.
ACN 005 307 684 ABN 62 922 836 289
177-179 Coventry Street,
South Melbourne, Victoria 3205, Australia
Telephone: 61 3 9699 8202 (all hours)
Facsimile: 61 3 9696 3362
Website: www.techdry.com.au
E-mail: info@techdry.com.au

Tech-Dry®

PRODUCT INFORMATION

EMULSION GPE50P

Manufacturer's Code: RPGPE50P **Updated:** 01/01/2024

Product Name: EMULSION GPE50P

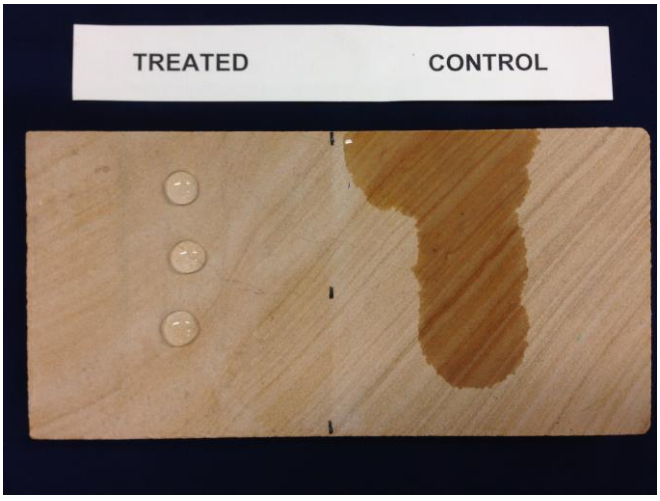
Description: EMULSION GPE50P is a new silane/siloxane emulsion. EMULSION GPE50P may be used as a water repellent penetrating sealer with enhanced surface beading effect. EMULSION GPE50P can achieve near equivalent surface beading to that of a solvent-based silane/siloxane sealer. The emulsion may also be used as a water repellent admixture to latex paint/coating to improve the water resistance of the coating film. In addition, EMULSION GPE50P not only provides good water repellent effect to the treated masonry, but also exhibits stain resistance to the treated substrate.

Recommended Uses: EMULSION GPE50P can be used as a water repellent penetrating sealer after dilution. The sealer is suitable to treat permeable natural stone, concrete, brick, tile and render. EMULSION GPE50P can deeply penetrate into the capillaries of masonry substrate rendering the surface water repellent. EMULSION GPE50P can also be used as a water repellent additive to latex paint/coating to increase the water resistance of coating film and improve the durability of coating against natural weathering.

Test & Performance: Surface Beading:

EMULSION GPE50P can achieve a near equivalent surface beading to the treated substrate compared to that of a solvent-based silane/siloxane sealer. Figure 1 shows good surface beading effect of a sandstone treated with EMULSION GPE50P at 1:9 dilution (left: treated and right control).

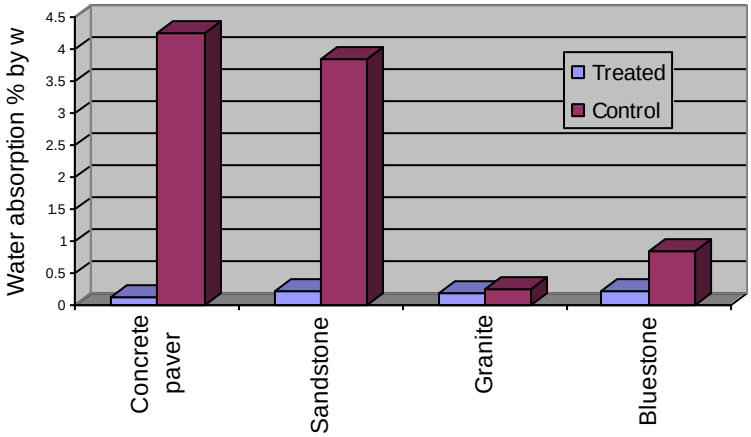
Figure 1. Surface Beading Achieved by Emulsion GPE50P



Water Resistance:

Emulsion GPE50P provides significant resistance against water absorption of treated substrate. Figure 2 shows capillary water absorption of four masonry substrates treated with EMULSION GPE50P at 1:9 dilution. The test result indicates that the capillary water absorption of all treated substrates including concrete, sandstone, granite and bluestone were significantly reduced.

Figure 2, Capillary Water Absorption



Depth of Penetration:

EMULSION GPE50P penetrates into capillaries of permeable substrate forming water repellent zone within the treated surface. Table 1 reveals that good penetration depths were achieved by EMULSION GPE50P at 1:9 dilution to the pressed concrete paver, sandstone and granite. However, only a minimum penetration depth was achieved to bluestone. Because the bluestone is a very dense substrate, a solvent-based silane/siloxane sealer may be the best sealer for bluestone for optimum penetration depth if required.

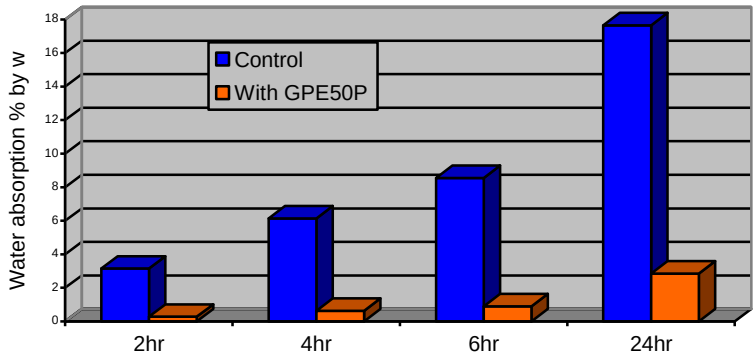
Table 1: Penetration Depth

	Penetration Depth
Pressed Concrete Paver	>20 mm
Sandstone	3 mm
Granite	2-5 mm
Bluestone	<1 mm

Admixture for paint/coating:

EMULSION GPE50P works well as a water repellent additive for paint/coating. Figure 3 shows that capillary water absorption of a cement mortar substrate coated with an acrylic primer containing 3% Emulsion GPE50P. The water absorption of the treated mortar was significantly reduced compared to that of the substrate coated with a standard primer without Emulsion GPE50P.

Figure 3. Water absorption of an acrylic primer with Emulsion GPE50P



Use Instructions:

As a water repellent sealer:

EMULSION GPE50P should be diluted with deionised water before use. Recommended dilution ratio is 1:9 (or to 5% active). Depending on application, the dilution ratio may vary from the above recommended dilution ratio. A test is highly recommended to determine the most suitable dilution ratio for the intended purpose.

The sealer can be applied by brush, roller or sprayer. However, a low pressure hand pump sprayer is preferred. Two coats are generally required. The second coat must be applied immediately after the first coat is absorbed by the surface while the surface is still wet. This is called wet-on-wet application method to ensure deep penetration of the sealer. The wet-on-wet application is also for avoiding possible poor spreading of the second coat due to the instant surface beading effect developed from the first coat after the surface is dry.

As a water repellent additive:

Depending on application, 1 to 3% Emulsion GPE50P may be added into the paint/coating to make a water repellent paint/coating. The addition rate may vary depending on intended application. A test is highly recommended to ensure the performance is achieved. The compatibility between the coating and Emulsion GPE50P should also be tested. Emulsion GPE50P may be added during in-plant paint mixing and after paint is made.

As the emulsion tends to separate over time, Emulsion GPE50P (either concentre or after dilution) should be stirred before use.

Typical Data:

Appearance:	Milky white emulsion
Solids content:	50% by weight
Specific gravity:	0.94-0.98 g/ml
pH value:	7-9
Solubility in water:	Miscible

Important Note: As application or substrate varies, it is highly recommended that a pilot test be carried out prior to use to determine the suitability of this product for intended purpose.

Handling & Storage: EMULSION GPE50P is classified as a non-hazardous material according to the criteria of Worksafe Australia. However, as with all chemical products, good industrial hygiene procedures should be followed when using this product. The product should be stored in closed containers in a cool dry place away from any ignition sources. The product has a shelf life of 6 months in a sealed container stored at a temperature below 25^{o}C.

Packaging: EMULSION GPE50P is available in 20 and 200 litre plastic drums or a 1,000 litre plastic IBCs. Other size containers are available on request.