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STONEBINDER-AL (PU4844/60) ALIPHATIC STONE BINDER

DESCRIPTION

PU4844/60 is a two component, solvent free, fast curing binder for bonding stone. PU4844/60 is based on aliphatic polyurethane technology to give enhance UV performance.

PU4844/60 can be used with any of the approved stone mixes tested in our laboratory. If alternative aggregates are required, we offer a UV testing service at our laboratory. We strongly urge our customers to make use of this service prior to installing with an unapproved aggregate.

*Note: The system will only be as strong as the weakest component. Therefore aggregate choice is important. The suitability in a given application of weaker aggregates such as crushed glass should be considered carefully.

PRODUCT APPLICATION

Surface Preparation - Concrete/ MOT Type 1

The concrete/ MOT Type 1 should be dry. A primer should be used when applying to concrete (please contact us to discuss suitable primers)

Installation of System – for detailed information please refer to our installer method statement

We have a range of stone mixes available that have been approved on strength testing with this product. Please request the additional literature for any further information and note that we recommend these mixes alone and any alterations made may have a damaging effect on the overall strength of the stone binder system.

1. The system can be applied to concrete, asphalt, or compacted MOT Type 1.
2. The surface must be free from contamination or water prior to PU4844/60 STONEBINDER application, as such cleaning/drying may be required.
3. The PU4844/60 A component resin should be mixed using a slow speed, high torque, helical blade mixer until uniform.
4. PU4844 B component resin is then added and mixed thoroughly at slow speed for 2 minutes until uniform. The best method for this would be a rotary cement type mixer.
5. The level of binder used will change for larger particles sizes and/or more irregular particle shapes but the standard mixing ratio we recommend is a 6.5% by weight addition of resin, taking the stone weight as 100%.
6. The aggregate and the binder should be mixed together, using a rotary mixer or low speed paddle mixer, until all of the aggregate is covered with the binder.
7. The mixture is then applied to the surface using a trowel. Pressure must be applied to the PU4844/60 STONEBINDER mix whilst trowelling to ensure leveling and adequate compression for the required mechanical properties.

8. The surface should be allowed to cure for 4 hours at 20^{O}C, this will be longer if the temperature is lower. IF TEMPERATURE IS <15^{O}C (OVERNIGHT), ACCELERATOR SHOULD BE USED. Accelerator should be used except for higher consistent temperatures 25C+.
9. During the cure period the surface should be protected from rain.

Cure Speed Modification

At low temperatures D4860 coating accelerator (2K) can be added to PU4844/60 to maintain cure speed. The table below gives approximate addition level guidance.

NOTE: D4860 coating accelerator (2K) additions should be added to the part A and pre-mixed to evenly distribute the catalyst prior to addition of the part B hardener.

Air Temperature (°C)	D4860 Accelerator Addition Level
20	0% Accelerator
17.5	4.4g per 6.5Kg kit
15	9.8g per 6.5Kg kit
12.5	16.6g per 6.5Kg kit
10	29.3g per 6.5Kg kit

Treepits

The soil should be free draining but well compacted and dry. The sub base should be covered with 50-100mm of base aggregate (size from 5-20mm) which should be well compacted and flat.

The aggregate and binder mixture should then be poured out and leveled with a trowel. The aggregate should be compacted enough to ensure a sound surface but not too much as this will reduce the drainage. Sufficient room should be left to allow for the trunk growth.

Guideline Installation Thicknesses

Use 16-18mm for driveways/paths. Using Leesonmix-1 aggregate blend 31.5kg will cover approximately 1m^2 at 18mm thick.

Use 20-26mm for car parks. Using a Leesonmix-1 aggregate blend 45kg will cover approximately 1m^2 at 26mm thick.

Finishing

To create a non slip surface the top can be scattered with microfine glass particles available from Leeson Polyurethanes Ltd. Application rates will vary depending on the aggregate used but is in the order of 50 – 100 grams per meter of resin bound surface.

TYPICAL SPECIFICATION

	PU4844/60 Part A Resin	PU4844 Part B Hardener
Colour:	Various	Clear liquid
Solids:	100%	100%
Specific gravity (gcm^{-3})	1.01	1.16
Viscosity at 23°C	2500 ± 500 mPa.s	2800 ± 500 mPa.s
Mix Ratio (by weight):	1.04	1.00
Pot life	60 ± 3 minutes at 19°C	

STORAGE

Stored in original unopened containers, PU4844/60 Part A has a shelf life of 12 months.
Stored in original unopened containers, PU4844 Part B has a shelf life of 6 months.

HEALTH AND SAFETY

PU4844/60 Part A (Resin) is not classified as a dangerous substance; however the wearing of goggles is to be recommended.

PU4844 Part B (Hardener) contains a non-volatile isocyanate. Avoid prolonged contact with skin. In cases of contact with eyes, flush out with excess water and seek medical attention. Wear goggles.

Additional Precautions

1. Use industrial safety gloves.
2. Use suitable eye protection.
3. Before use, ensure that you read the relevant Health and Safety Data Sheets for this product.

The company will supply, upon request, individual advice in writing in connection with the use and application of its products in all appropriate cases. Customers are urged to make use of this service. This leaflet is provided for general guidance only. All recommendations and suggestions are made in good faith but without guarantee and are subject to the company's terms and conditions.