

VX Guardian PU Graphene

Graphene Polyurethane Waterproof Coating (root Puncture Resistant)



VX Guardian PU Graphene has a high solid content, low VOC, environmentally friendly polyurethane waterproof coating made from isocyanate and polyether polyol as the main raw materials, mixed with imported chemical root-blocking agents. various additives, fillers, etc. After application, the product absorbs moisture from the air and cures into a seamless, strong bonding, and elastic film.

The product does not contain organic solvents, heavy metals, or harmful components to plant roots. It can prevent plant roots from penetrating and has excellent waterproof performance, making it particularly suitable for green areas.

PRODUCT FEATURES

- The coating film has good elongation and high tensile strength, with strong resistance to shrinkage cracking of the base layer.
- Does not contain any organic solvents, meets the requirements of Class A products in national standards
- Ready to use upon opening, low density, high solid content, high coverage rate.
- Excellent root barrier performance to prevent plant roots from penetrating.
- Corrosion resistance, mold resistance, high strength, and good elasticity, with excellent overall performance

WHERE TO USE

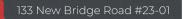
Suitable for greens roofs, terraces, municipal bridges, plaza floors, and basement planting ceilings (Note: This product should not be directly applied to drinking water pipes and domestic water supply equipment.)

RECOMMENDED USAGE

The recommended usage of the waterproof coating with a film thickness of 1.0mm is approximately 1.3kg/m² to 1.5kg/m²

(Note: This data is calculated based on standard environmental conditions and is for reference only. The actual usage should be calculated according to the specific conditions of the site.)

Disclaimer. The information and the recommendations relating to the application and end use of this product are given in good faith and are based on the information provided by the manufacturer of the product and/or the Company's current knowledge and experience in connection with the product when properly stored, handled and applied under normal conditions and no liability of final function at the job site is assumed. In practice, the differences in materials substrates and actual size conditions are such that no warranty in respect of merchantability of or fitness for particular purpose, nor any liability by the Company will be accepted for misuse, misreading or derivation from recommended guidelines in respect of this product and the user shall determine the suitability of the product for his intended use and all risks and liability in connection therewith. The information contained in the brochure may change at any time without notice.







SPECIFICATION

25kg/pail

SHELF LIFE & STORAGE

- Different types of products should be stackedseparately in storage and transportation. It should be forbidden to approach the fire source, avoid sun and rain, prevent collision, and pay attention to ventilation. The storage temperature is 5~40°C.
- Under normal storage and transportation conditions, the shelf life is at least 6 months from the date of production.

APPLICATION PROCESS

Pre-applied preparation - Substrate treatment - Detail and Joint treatment - Large area application(scratching, rolling or spraying) - Inspection - Acceptance.

APPLICATION REQUIRMENTS

- **Substrate requirements**: The substrate should be dry, clean, flat, solid, and any defects should be repaired.
- **Substrate preparation:** Before application, the substrate should be cleaned. For substrates with honeycombs, rough surfaces, cracks, or defects, cement mortar should be used for repair and consolidation.
- The internal and external corners should be made into rounded or obtuse angles. Additional coating layers (reinforced with non-woven fabric) should be added at the corners and pipe roots. The width of the additional layers on the flat and vertical surfaces should not be less than 250mm.
- The coating should be applied in multiple thin layers, preferably 2 to 3 coats. The applying directions of the upper and lower coatings shall be perpendicular to each other. The first coating shall be thin to close the pores of the base layer. The next coating can be applied only after the last coating is hard dry. If the padding reinforced materials are required, the reinforced materials shall be laid while applying coating materials.
- When proceeding to the next process, care should be taken not to damage the waterproof coating with hard objects, so as not to affect the overall waterproof effect. If there is any damage, promptly notify the waterproof application personnel to repair it before continuing the application.

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TECHNICAL DATA

NO	lter	m	Index
1	Solid content/%≥	One Component	85
2	Surface dryir	12	
3	Fully drying time/h≤		24
4	Tensile strer	ngth/MPa≥	2.00
5	Elongation a	t break /%≥	500
6	Tear strengt	:h (kN/m)≥	15
7	Low temperat	ure bending	-35°C, no crack
8	Imperme	eability	0.6 MPa , 120min, Impermeable
9	Heating expa	nsion rato/%	(National standard: 0.3MPa, 120min, impermeable) -4.0~+].0
9			-4.0~+1.0
10	Bonding strength/MPa≥		1.0
11	Absorptio	Absorption / % ≤ 5.0	
10	Aging at constant	Heat aging	No cracks and deformation
12	extension	Tensile strength retention/%	80~150
13	Heat treatment	Elongation at break /%≥	450
10	(80° C , 168h)	Low temperature bending	-30°C, no cracks
		Tensile strength retention/%	80~150
14	Alkali treatment	Elongation at break /%≥	450
	[0.1% NaOH + saturated Ca(OH)2 solution, 168h]	Low temperature bending	-30°C, no cracks
		Tensile strength retention/%	80~150
15	Acid treatment	Elongation at break /%≥	450
15	[2% H2SO4 solution, 168h]	Low temperature bending	30°, no crack.

Application Properties Q/WDT C080-2020 "Test Method for Root Penetration Resistance of Waterproof Coatings for Green Roofs" passed the root penetration performance test.

NO	Fiber		Technical indicators
1	Resistance to fungal corrosion	Anti-mouldy grade	Grade 0

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