(EP18/10/18)

DURAGARD VE98

MODIFIED HIGH BUILD EPOXY VINYL ESTER RESIN FOR HIGH TEMPERATURE, SOLVENT AND CHEMICAL RESISTANCE COATING OR FRP LINING SYSTEM

PRODUCT DATA SHEET

CEMKRETE®

ISO 9001 & 14000 CERTIFIED

DESCRIPTION

DURAGARD VE 98 is a solvent build-up system based on epoxy vinyl ester resin and curing agents specially selected for their ability to withstand chemical attack. The system consists of pre-weighed base & hardener components.

An optional slip resistant texture can be contrived using a wide array of anti slip grains which have been carefully sourced to ensure an even surface.

USES

DURAGARD VE 98 provides exceptional mechanical properties with higher temperature resistance and resistance to solvent and chemical. Ideally suited for use in tank coating or lining where a high degree of resistance to chemicals, oils and grease is required such as:

-Waste water treatment tank lining
-Chemical manufacturing plant
-Chemical drainage gutter and/or pipe
-Transportation tank lining

ADVANTAGES

- Durable and low maintenance
- Protection against a wide range of industrial chemicals
- Liquid applied - providing complete protection
- Specially formulated for use in hot climate area
- Built up system can be easily achieved

SPECIFICATION

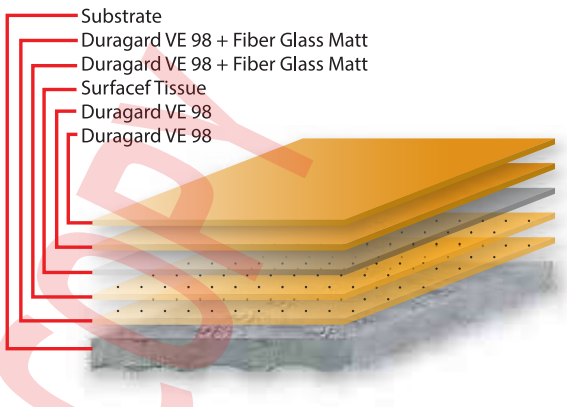
The minimum dry film thickness of the epoxy vinyl ester resin coating and lining system shall be 1000 microns with fiberglass lining (~300 - ~600 gsm), and shall have a Tensile strength of more than 13 N/mm^2 or above, a Flexural strength of 17 N/mm^2 or above, and a compressive strength of 80 N/mm^2 or above.

TECHNICAL SUPPORT

Cemkrete offers a comprehensive technical support service, on-site technical and dedicated specification to specifiers, end users and contractors.

DESIGN CRITERIA

DURAGARD VE 98 is intended to be applied as a wall coating build-up system or multi-layer system (in case thicker layer is needed), comprising of two top coats (depending on the substrate conditions a primer might be required). Each top coat is to be a minimum of 200 microns thick. To provide a slip resistant texture, the first top coat can be dressed with Anti-slip Grains.



TYPICAL DURAGARD VE 98 SYSTEM

Technical Data:	
Duragard VE98	40%
Specific gravity	1.08
Viscosity	350 cps
Gel time at 25°C.	10-60 minutes
Compressive strength	>80 N/mm^2
Flexural strength	>17 N/mm^2
Tensile strength	>13 N/mm^2
Bond strength to concrete	> Cohesive strength of - concrete
Average coefficient of linear Thermal expansion from 25°C-100°C X 10-6cm cm-1°C-1	70

NOTE: Coverage figure given is theoretical. Due to wastage factors, the variety nature of the substrate, and the site application condition, etc., the practical coverage may be reduced.

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CHEMICAL RESISTANCE

Fully cured **DURAGARD VE 98** samples have been tested in a wide range of aggressive chemicals commonly found in industrial environments. Tests were performed by constant immersion over a set period, followed by visual inspection.

ACIDS	RESISTANCE
Sulphuric acid 98%	: Excellent
Hydrogen peroxide 50%	: Excellent
Hydrochloric acid 50%	: Excellent
Acetic acid 50%	: Excellent
Lactic acid 50%	: Excellent
Citric acid 50%	: Excellent

ALKALIS	
Sodium hydroxide 50%	: Excellent
Ammonia (0.880) 10%	: Excellent

SOLVENTS	
Petro	: Excellent
Oil	: Excellent
Kerosene	: Excellent
Butanol	: Excellent

OTHERS	
Saturated sugar solution	: Excellent
Urea (saturated)	: Excellent
Bleach 5%	: Excellent

All the above properties have been determined by laboratory controlled tests and are in excess of those expected in practice.

Nevertheless, success in use will be determined by the implementation of good housekeeping practices.

INSTRUCTIONS FOR USE

SURFACE PREPARATION

The long term durability of any resin floor system is determined by the adhesive bond achieved between the flooring material and the substrate. It is therefore important that substrates are correctly prepared prior to application.

New concrete floors

New concrete must be cured for at least 28 days. Wall should be sound and free from contamination such as oil and grease, mortar and paint splashes or curing compound residues. Excessive laitance can be removed by light mechanical scrabbling, grinding or grit blasting. Light laitance can be removed by acid etching followed by thorough washing with clean water, vacuum cleaning and then allowing the surface to dry.

Old concrete floors

Where deep seated contamination has occurred, mechanical methods such as blasting, grinding or scrabbling should be used to provide a suitable clean surface.

Any necessary repairs should be carried out using Cemkrete repair mortar (see separate data sheets)

PRIMING

Priming is not normally required provided the substrate is sound, untreated and good quality nonporous concrete. If any doubts exist of the quality of the concrete, or if it is porous it should be primed and treated with Primer 500 as primer coat. The primer should be left to achieve a tack-free condition before applying the top coat. A second coat of primer may be required if the substrate is excessively porous.

Mixing the top coat

In a separate mixing vessel, use a slow speed drill and mixing paddle to mix the base, hardener and colour pot for 3 minutes. Mix these components in the quantities supplied taking care to ensure all containers are scraped clean. DO NOT add solvent thinners at any time.

Limitations

DURAGARD VE 98 should not be applied on to surfaces known to or likely to suffer from rising damp conditions or have a relative humidity greater than 75% as measured in accordance with BS8203 Appendix A, or by a Hammond concrete / mortar moisture tester type COCO.

Standard application

The first coat of **DURAGARD VE 98** should be applied using a good quality medium haired pile roller, suitable for epoxy application to achieve a continuous coating. Ensure that loose hairs on the roller are removed before use. A minimum film thickness of 750 microns should be applied then install fiber glass weight of ranging from 300-600 gsm and roll it until smooth impregnated surface. This can be increased with number of layers where specifications demand.

STANDARD COVERAGE	
Primer 500	: 8-10 m^2/kg
DURAGARD VE 98 (1st coat)	: 1.5 m^2/kg
Fiberglass 300-600gsm	: 1.0 m^2/m^2
DURAGARD VE 98 (2nd coat)	: 1.5 m^2/kg
Fiberglass 300-600gsm	: 1.0 m^2/m^2
DURAGARD VE 98 top coat	: 2.5 m^2/kg
Estimated system thickness	: 2.5~mm.