

ANTICORROSIVE COATING SYSTEM HIGH CHEMICAL AND MECHANICAL RESISTANCE

DESCRIPTION

Shieldcote 330 system is a series of composite coatings with appropriate resin for each type of chemical attack. It is a composite based on vinyl ester resins, novolac epoxy and chlorinated polyester, formulated with inert mineral fillers and anticorrosive pigments, applied in two layers with reinforced glass fiber fabric. It can be applied to concrete or steel. It is cured by chemical reaction in order to form a coating with high chemical resistance and abrasion. The surface finish can be smooth, rough or non-slip. Shieldcote 330 is available with antistatic property, called Shieldcote 330 AE.

APPLICATIONS

The Shieldcote 330 system is recommended for applications in alkaline and acidic conditions at elevated temperatures. They can be applied in the protection of concrete and steel structures and equipment, new or aged by use.

- Coatings for towers, tanks, process and storage vessels;
- Coatings for filters, deaerators and separating tanks;
- Dikes for containment of various chemicals, channels, pump bases;
- Floors and areas subject to constant washing and severe chemical attacks;
- Used for leveling and repairing corrosion protection in concrete;
- Applied in a single layer as a base coat for other systems.

BENEFITS

- Chemical resistance to various aggressive chemicals;
- High compressive strength;
- High abrasion resistance;
- Working temperatures up to 120°C;
- Thermal expansion compatible with concrete and steel;
- Used in structural repairs in composite material;
- Base layer for several coating systems;
- Application classified as cold working (heating is unnecessary).

PACKAGING

EMBALAGEM	
Epoprimer	18 Kg Bucket 100 and 200 Kg Drum
Base Layer and Finishing Shieldcote 330 Liquid Shieldcote 330 Aggregate	25 Kg Bucket 22,5 Kg Bag
Lamination Resin Resincoat	18 Kg Bucket 100 and 200 Kg Drum
Catalyzer MEKP LPT	1,00 Kg PEAD Gallon
Straightening 01	3,6 L Gallon 18 Kg Bucket
LP solvent - Cleaning solvent	5 L and 18 L Steel Can

PHYSICAL PROPERTIES AT 25°C

For Product SHIELDCOTE 330 D.
Chemical Base: Bisphenol A vinyl ester resin.
Aggregate: chemically inert mineral fillers.

Color - Shieldcote 330	Green, Gray
Color - Shieldcote 330 AE	Black
Thickness	1.50 – 5.00 mm
Specific gravity	2.05 g/cm ³
Pot life	25 – 35 minutes
Typical Viscosity Brookfield, Axis 6, Speed 50	11,000 – 13,000 cP
Interval between layers Minimum Maximum	4 hours 48 hours
Total Cure	7 days
Tensile Strength	17.2 MPa (2,500 psi)
Compressive Strength	87.5 MPa (12,700 psi)
Abrasion resistance Taber CS 17F Disk - 1,000 revolutions 1,000-gram load	Coefficient 26
Barcol Hardness	40 - 60
Chemical Resistance	Consult Wolf tank Latinoamérica

See technical spreadsheet for products formulated with other resins in the Shieldcote 330 system.

INSTRUCTIONS FOR USE

SURFACE PREPARATION

Concrete:

- Concrete surfaces must be treated by abrasive blasting to receive the Shieldcote 330 protective coating.
- Immediately after blasting, the residual abrasive must be removed completely by aspiration or by a jet of compressed air, dry and without oil. The remaining particles and dust must be removed with a stiff bristle brush.
- Print the surface with the indicated Epoprimer. The concrete must be fully cured, minimum of 28 days, for the application of the specified Epoprimer.
- The relative surface moisture content of the concrete should be less than 5%.

Steel:

- SCarbon steel substrates and other alloys must be prepared by abrasive blasting to almost white metal, standard Sa 2 ½ of ISO 8501-1, equivalent to SIS 05 5900-67.
- At the end of the blasting, the residual abrasive deposited on the surface must be eliminated by aspiration or by a jet of compressed air, dry and without oil. The remaining particles and dust must be removed with a nylon brush.
- Cover the blasted steel surface with Epoprimer 14 ZNP.

ENVIRONMENT CONDITIONS DURING APPLICATION

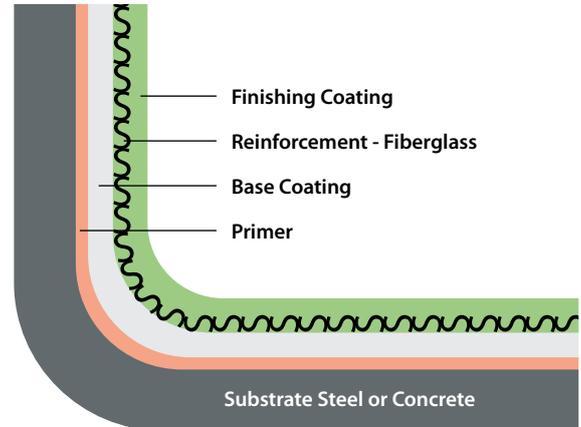
The coating must not be applied under the following conditions:

- If the surface temperature is not at least 3°C above the Dew point.
- If the metallic substrate has a temperature above 40°C.
- When the ambient temperature is below 15°C or above 4°C.
- In rainy, foggy or misty weather, when relative humidity is greater than 85%, or when this is expected value to be achieved within the working day.

APPLICATION - FOR SHIELDCOTE 330 D

MIXING RATIO

COMPONENT	WEIGHT RATIO	VOLUME RATIO
Liquid Shieldcote - Component A	1.25 kg	1.00 liter
MEKP LPT Catalyzer - Component B	0.02 kg	15 ml
Shieldcote Aggregate - Component C	2.25 Kg	1.90 liter



APPLICATION

Shieldcote 330 is applied with a rectangular steel trowel, trowel and spatula in two layers with a laminated fiberglass fabric between them.

1. Homogenize the component A resin before use, by means of mechanical or pneumatic stirring using a helical rod coupled to a drill.
2. Add component B to component A, respecting the product mixture, stir mechanically at low speed.
3. Add slowly the component C, in mixture A + B, keeping constant agitation.
4. Mix perfectly with a low speed mechanical helical mixer to avoid incorporation of air and obtain a homogeneous mass (components A + B + C).
5. Apply the polymeric mortar Shieldcote 330 through rectangular steel trowels and spatulas on the surface prepared and covered by Epoprimer respecting the thickness specified for the base layer of the coating.
6. Do not dilute component A resin.
7. Do not heat components A and B.
8. Laminate a 330 g/m² fiberglass fabric impregnated with Resincoat D.
9. Repeat the operation of items 1 to 5 to apply the Shieldcote 330 D Finishing Layer.
10. Optional Topcoat: A layer of Glass Flake 421 D can be applied as a Topcoat in very abrasive environments and in the presence of extremely aggressive chemicals.

CONSUMPTION

Consumption may change depending on the type and condition of the substrate to be protected, application sequence of the products, type of resin used, temperature at the application site, type of roller or brush used and the skill and experience of the applicator.

CONSUMPTION	
Primer Epoprimer D	0.350 Kg/m ² for Concrete 0.250 Kg/m ² for Steel 0.330 Kg/m ² for Fiberglass
Base Coating Shieldcote 330 D Liquid - Comp. A Shieldcote 330 D Aggregate - Comp. B	1.25 Kg/m ² - for 1.5 mm thickness 2.25 Kg/m ² - for 1.5 mm thickness
Reinforcement Layer Fiberglass fabric 330 g/m ²	0.400 Kg/m ² - for one fiberglass layer
Lamination Resin Resincoat D (For lamination of glass fabric)	1.1 Kg/m ² resin per layer of the glass Fabric 330 g/m ²
Coating Finish Shieldcote 330 D Liquid - Comp. A Shieldcote 330 D Aggregate - Comp. C	1.25 Kg/m ² - for 1.5 mm thickness 2.25 Kg/m ² - for 1.5 mm thickness
Catalyzer - Comp. B Catalyzer MEKP LPT	15 ml per kg of resin used

CLEANLINESS

Immediately after application, Shieldcote can be removed from tools and equipment using Solvent LP or Solvent EP. The product after hardening will only be removed mechanically.

STORAGE

Keeping the Shieldcote 330 in a dry place and in the original sealed packaging, protected from the sun and other heat sources, Shelf Life at 25°C is 3 months.

SAFETY

HEALTH AND SAFETY AT WORK

Avoid all contact with skin or eye. The environment during the application should be well ventilated to reduce inhalation of vapors. Workers should wear adequate breathing apparatus in confined spaces. Open flames, welding operations and any other spark inducing activity are not permitted near the work area. Smoking should not be allowed.

Some people are sensitive to contact with resins, catalysts and solvents. To avoid discomfort all workers should wear gloves and goggles at all time when there is a possibility of spillage or any other contact with these products. The use of protective creams is encouraged as added protection. Over sensitive personnel showing any sign of discomfort should be removed from the work area.

Resin spillage / drippings on the skin can be removed with soap and water. In case of contact with the eye, wash thoroughly for 15 minutes with clean water and get medical help. Medical assistance is required in case of accidental ingestion. Do not induce vomiting.

ADDITIONAL INFORMATION

Wolf tank produces and sells a large variety of products designed to protect steel or concrete substrates against corrosion. Our product line includes coatings and linings, special paints, and products used in surface treatment.

We also carry a complete line of auxiliary products like grouts, anchoring systems, carbon fibers and a complete system solution to the problem of the structural rehabilitation of steel or concrete structures.

Please call us for further information about our products, tutorial videos and technical brochures.



PRIME OFFICE PARK

Bloco A1 • Conjunto 203
Rua Adib Auada, 35 • Granja Vianna
Cotia • SP • Brasil • CEP 06710-700
Telephone: +55 (11) 4617-3393
+55 (11) 4617-5464
Email: latinoamerica@wolftank.com

www.wolftank-la.com.br

The products mentioned in this Technical Report are registered trademarks of Wolf tank Latinoamérica Desenvolvimento de Projetos de Engenharia para Revestimentos de Tanques e Estruturas com Materiais Compósitos Ltda.

The custom designed and made to order products manufactured by Wolf tank are guaranteed against manufacturing defects. Wolf tank will provide all technical support and information to assure the correct use of their products. However, since we do not have control over the crew and the conditions under which our products are applied, we cannot assume any liability for their misuse or misapplication.