

ANTICORROSIVE SYSTEM REINFORCED WITH FIBERGLASS

DESCRIPTION

Glass Shield 325 is an anti-corrosion protection system formulated with thermoset resin reinforced with glass fibers. For better performance, the substrate to be protected, concrete or steel, is impregnated with a layer of primer resin, followed by the application of a base layer that consists of a mixture of inert fillers and resin, with the function of leveling and correcting irregularities of the substrate before applying the resin with the glass fibers.

Fiberglass fabrics and blankets reinforce the lining and prevent the beginning and growth of cracks. Resins are specified according to the aggressive environment and exposure temperature, accounting for the chemical inertia of the coating system. Finishing is done with a surface veil or Glass Flake 421.

APPLICATIONS

Glass Shield 325 has excellent physical and chemical properties in acid and alkaline environment and excellent resistance to hydrolysis. Recommended for storage and process tanks. They can be applied in the protection of concrete and steel structures and equipment, new or aged by use.

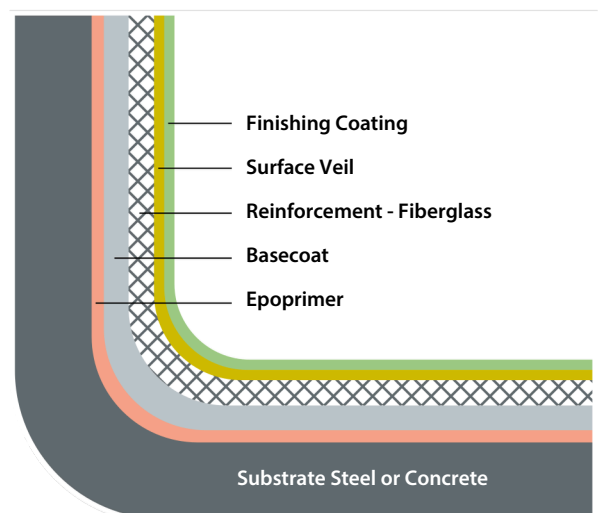
- y Storage and process tanks for corrosive chemicals;
- y Cellulose bleaching towers, cellulose washing system tanks; y Tanks and channels of chemical plants;
- y Containment dikes and aggressive chemical discharge area; y Tanks of oil, naphtha, kerosene and produced water (offshore oil extraction);
- y Tanks for gasoline, alcohol, diesel, biodiesel, aviation fuel and fuel oil;
- y Coatings for filters, deaerators and separating tanks;
- y Galvanizing tanks;
- y Water and wastewater treatment plants.

BENEFITS

- y Corrosion resistance for various aggressive chemicals;
- y Excellent in aggressive aqueous environments and at high temperatures;
- y Withstand temperatures up to 120 ° C in total immersion;
- y The resin of the coating system is defined for each type of chemical aggressiveness and operating temperature;
- y The coating structure is dimensioned according to the geometry and state of the equipment;
- y Presents little resin retraction during application and curing;
- y The finishing layer, depending on the environment, can be composed of a C glass veil or synthetic veil, or through the Glass Flake 421 coating;
- y Available with anti-abrasive or conductive finish;
- y Application classified as cold working.

PACKAGING

EMBALAGEM	
Concrete Primer Epoprimer	18 Kg Bucket 100 and 200 Kg Drum
Steel Primer Epoprimer	3.6 L Gallon 18 L Bucket
Base Layer Shieldcote Liquid Shieldcote Aggregate	25 Kg Bucket 22.5 Kg Bag
Lamination Resin Resincoat	18 Kg Bucket 100 and 200 Kg Drum
Glass Fiber Fiberglass Fabric Fiberglass shopped strand mat.	60 Kg Roll 60 Kg Roll
Surface Veil Glass Veil 'C' Synthetic Veil	7.5 Kg Roll or 250 m ² 7.0 Kg Roll or 250 m ²
Catalyst and Solvent Cleaning Catalyzer MEKP LP solvent - Cleaning solvent	1.00 Kg PEAD Gallon 5 L and 18 L Steel Can



PHYSICAL PROPERTIES AT 25⁰ C

GlassShield325 DSystem.

Chemical Base: Bisphenol A Vinyl Ester Resin.

Finishing Color	Gray, white, green and colorless
Thickness	3.50 – 6.00 mm
Gel Time Epoprimer and Resincoat	20 – 30 minutes
Application Interval between glass fiber layers Maximum	48 hours
Total Cure	7 days
Barcol Hardness	30
Tensile Strength	14.5 MPa (2,100 psi)
Flexural Strength	77.2 MPa (11,200 psi)
Chemical Resistance	Consult

Consult Oro for specific Technical Worksheet of products formulated with other resins in the Glass Shield 325 system.

INSTRUCTIONS FOR USE

SURFACE PREPARATION

Concrete:

y Concrete surfaces must be treated with abrasive blasting to receive the Glass Shield 325 protective coating.

y If the concrete is not clean, dry and without oil. The remaining particles and dust must be removed with a stiff bristle brush.

y Apply a layer of Epoprimer A or another primer indicated by Oro on the concrete surface. The new concrete must be fully cured, minimum of 28 days, for the application of the primer resin.

y The relative surface moisture content of the concrete should be less than 5%.

Steel:

y Carbon steel substrates and other alloys must be prepared by abrasive blasting up to almost white metal, Sa 2 ½ standard of ISO 8501-1, equivalent to SIS 05 5900-67 or NACE 2.

y After blasting, the residual abrasive deposited on the surface must be eliminated by aspiration or by a jet of compressed air, dry and without oil. Remaining particles and dust must be removed with a nylon brush.

y Cover the blasted steel surface with Epoprimer 14 ZNP or another Oro primer indicated for specific application.

ENVIRONMENT CONDITIONS DURING APPLICATION

The coating must not be applied under the following conditions:

y If the surface temperature is not at least 3°C above the Dew point.

y If the metallic substrate has a temperature above 40°C.

y When the ambient temperature is below 15°C or above 4°C.

y 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

GLASSSHIELD 325 SYSTEM PRODUCTS

y Consult the Worksheet with the characteristics of the Coating Systems for each specific application. The structure and resin of the coating system are defined and specified according to the aggressiveness of the chemical environment and the operating temperature of the equipment.

y Consult the Oro Technical Department for guidance.

CONSUMPTION

y Consumption may change depending on the type and condition of the substrate to be protected, the type of resin used, the sequence of application of the system layers, as well as the temperature at the application site, the type of roller used and the applicator's skill and experience.

CLEANLINESS

Immediately after use, 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 products of the Glass Shield 325 Coating System in the original sealed packaging, in a dry place and away from the sun and other heat sources, the Shelf Life at 25°C is 3 months.

CONSUMO

Primer Epoprimer D	0.350 Kg/m ² for Concrete 0.250 Kg/m ² for Steel 0.300 Kg/m ² for Fiberglass
Base Coating 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
Reinforcement Layer Fiberglass fabric 600 g/m ² Fiberglass shopped strand mat. 450 g/m ²	0.660 Kg/m ² - for one fiberglass layer 0,500 Kg/m ² - for one mat. layer
Lamination Resin Resincoat D	1.1 Kg/m ² resin per layer of mat. 600 g/m ² 1.1 Kg/m ² resin per layer of mat. 450 g/m ² 0.300 Kg/m ² resin per layer of Glass Veil 'C' 0.400 Kg/m ² resin per layer of Synthetic Veil 0.350 Kg/m ² for finishing coating (topcoat)
Finishing Coating Glass Veil 'C' or Synthetic Veil Glass Flake 421 D	1.1 m ² / m ² per layer of Veil 0.380 Kg / m ² per finishing layer
Catalyzer (general use) Catalyzer MEKP LPT	15 ml per Kg of used resin (15ml/Kg)

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

Oro 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.



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The products are marketed by Oro Design & Technical Project de Engenharia para Revestimentos de Tanques e Estruturas com Materiais Compósitos Ltda.

The custom designed and made to order products manufactured by Oro are all

produced in accordance with the information provided on the technical data sheets. 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.