

Product reference: 1/10

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Product title: Corroglass 602

Valid from: 4th October 2007

Last reviewed: 31 May 2019

Type

A two component, high build Glassflake Vinyl Ester lining and repair material.

Suggested use

This product is outstanding in its performance and can be used in many areas of application to build thick layers, it can also be moulded and machined. Corroglass 602 has the same field of application as Corroglass 202 but with a much better resistance to many chemicals and solvents, as well as increased temperature resistance. 600 series materials have greater resistance to hydrolysis, they are suitable for demineralized or distilled water applications.

Limitations

Not suitable for some highly polar solvents.

Chemical resistance

Refer to the chemical resistance list. Affected by some highly polar solvents and some solutions having a high pH above 122°F (50°C).

Health & safety

Before handling or using this product, the material safety data sheet should be read, and all precautions observed.

Surface preparation

Metals: Grit blast to SSPC-SP10 (ISO standard 8501-1 Sa 2½ near 3). For full details refer to Corrocoat Surface Preparation SP1.

Concrete: refer to Corrocoat SP5.

Coating of the substrate should then take place as soon as possible. Although 602 can be applied directly to the substrate, its wet-out properties are poor and in order to

reduce application time of the first coat, it is advisable to use Corroglass 632 as a primer under this material.

Application equipment

Brush, trowel or float.

Application

Corroglass 602 should be applied to a properly prepared substrate and preferably over the top of 632, as the main build coat in the predominant 600 series specification: - (1 coat 632, 2 coats 602, 1 coat 652 to a total DFT of 1500 microns). 602 can be applied at varying thicknesses being capable of applied between 8-118 mils (200-3000 microns) without sag in a single film. Final thickness will vary to suit service environment.

There is no maximum to the thickness of Corroglass 602 and voids/landings etc can be built up several centimetres thick. However, single coat applications should not normally exceed 8mm.

After applying this material to the substrate and ensuring the film is of even thickness, the surface should be lightly brushed or trowelled with Styrene Monomer, catalysed with P2 at the 2% level, to close any voids and assist with orientation of the flake structure.

However, care must be taken to avoid the excessive use of Styrene which may degrade the surface layer or cause problems with inter-coat adhesion. Where it is necessary to use dye, only the recommended dye for the product should be used and dye must be used sparingly so that only the necessary amount is used to give good distinction from the previous application.

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Dyes can affect chemical and corrosion resistance in some environments and the advice of Corrocoat USA should be sought where the material will work close to either its chemical resistance or temperature limit. In some environments, dyes are not color stable and a change in color may take place in service which is rarely detrimental to coating performance.

Mixing ratio

Corroglass 602 can be catalyzed within the ratios of 100:1 PARTS BASE TO CATALYST BY WEIGHT to 100:2 PARTS BASE TO CATALYST BY WEIGHT. The ratio should always be within these limits, 2% addition of catalyst being the norm with a reduction being made for high ambient temperatures.

Mixing

Weigh out only the proportion of material which can be used within the pot life and place into a suitable mixing container. Measure the correct proportion of catalyst for the amount of base and carefully add this to the base, using a suitable clean implement. Mix thoroughly then add dye where necessary and mix to an even color. After stirring it is advisable to remove the contents from the mixing container on to a clean flat surface or shallow receptacle and remix.

Pot life

40 to 50 minutes at 68°F (20°C). Pot life will be shorter at higher temperatures and longer at lower temperatures. Where high temperatures are encountered, refrigerate material before use or seek the advice of Corrocoat USA for availability of inhibitor or material with longer pot life.

Thinners

Corroglass 602 is adversely affected by the addition of **solvents** and their use is prohibited. Where a less viscous material is required, the addition of 632 will lower the viscosity without significant effect on performance. **No other diluents or thinner should be used.** The use of acetone

or similar thinners in Corroglass **will severely affect** product performance.

Packaging

1 Gallon and 5 Gallon Kits

Storage life

Base and catalyst (Hardener) 6 months, stored at temperatures below 68°F (20°C), away from heat sources and out of direct sunlight. Frequent temperature cycling will shorten storage life. See 'other information' in the Corrocoat 'Tech Manual' for extension of shelf life.

Color availability

Unpigmented (Translucent Brown) or Pigmented White. Dyes can be used to effect color change where chemical resistance is not of paramount importance.

Recommended DFT

1.0 to 3.0mm in two coats. Or as advised, may be built up to any desired thickness for repair.

Theoretical spreading rate

32 sf per gallon at 40 mils dft

Volume solids

99.8% solvent free.

Practical spreading rate

Regular surfaces e.g. new steel – 25 sf per gallon at 40 mils dft, minimum.

Irregular surfaces e.g. badly pitted steel – 15 sf per gallon at 40 mils dft.

Note: This information is given in good faith but may increase dependent upon environment conditions, the geometry and nature of work undertaken and the skill and care of application. Corrocoat accept no responsibility for any deviation from these values.

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Specific gravity

Apparent 0.03 lbs/cubic inch (1.03 gms/cc). Actual 0.05 lbs/cubic inch (1.19 gms/cc).

Flash point

100°F (38°C)

Catalyst type

Methyl Ethyl Ketone Peroxide: Corrocoat Type P2.

Mixing ratio

100:1 to 100:2 base to catalyst.

Hardness

Circa 45 Barcol.

Tensile strength

3994 psi (27.5 N/mm²)

Cohesive strength

3860 psi (26.6 N/mm²)

Elongation

0.7%

Thermal Coefficient of Linear Expansion

$19.5 \times 10^{-6}/^{\circ}\text{C}$

Moisture vapor transmission rate

0.939×10^{-2} gms/hr/m²
(0.0006 perm inches)

Thermal conductivity

0.398 W/m²K

Dielectric strength

Approximately 26 kV at 1mm film. Arc resistance 60 seconds minimum.

Temperature limits

Dependent upon environment:

230°F(110°C)

immersed.

392°F(200°C)

non-immersed.

Overcoating

May take place as soon as previous coat has gelled sufficiently to resist movement of next application and while still tacky. Maximum overcoating without treatment 2 days. Shorter at ambient temperatures above 86°F (30°C) and in strong sunlight. Once the maximum overcoating time has been reached, the adhesion values attained by any subsequent coat will reduce dramatically. It is important to observe maximum overcoating times and note these will vary with climatic conditions.

Any further application of coating at this juncture should be treated as a repair, with the surface flashed over to provide a physical key. Styrene cannot be used to reactivate the surface and may in some cases impair adhesion.

Cleaning fluid

Acetone or Methyl Ethyl Ketone before gel.

Machining

For best surface finish use pure carbide or carbide tips with small radius and neutral rake. Material has similar machining characteristics to those of grey cast iron. Tool must be kept sharp. Run out will occur due to tool wear over relatively short distances, especially when facing from OD to center. Clean water may be used as lubricant or dust damper.

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Cure time

At 68°F (20°C), 90% cure will be attained within 8 hours. Full cure for chemical resistance will be 6 days. Cure time may be shortened and a beneficial increase in final cure may be attained by post heat treatment. Consult Corrocoat USA for specific information.

Although not cured, after gelling this material may be immersed in some environments without detriment to the coating.

Reviewed 10/2007
Reviewed 02/2014 (No changes)
Reviewed 05/2016 (No changes)
Revised 06/2017
Revised 05/2019

All values are approximate. Physical data is based on the product being in good condition before polymerization, correctly catalyzed and full cure being attained. Unless otherwise stated, physical data is based on a test temperature of 68°F (20°C), test results may vary with temperature. Information regarding application of the product is available in the Corrocoat manual. Should further information be required, please consult Corrocoat Technical Services.