

CORROGLASS

Corroglass 202

Product reference: 1/01

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Product title: Corroglass 202

Valid from: 14th August 1997

Last reviewed: October 2017

Type

A high build glass flake coating based on pre-accelerated bisphenol `A` polyester resin with a large high flake loading, cured by addition of organic peroxide.

Suggested use

As a build coat for Corroglass 200 series specifications, 202 can be used in many applications where good corrosion, abrasion and chemical resistance are required. This general purpose material is ideal for protection of metal and masonry substrates in arduous conditions. 202 has high chemical and acid resistance and is suitable for tank lining, pump casing, valve repair and protection. When fully cured it is readily machined, it can also be used to give added resistance to GRP fabrications or cast to form components.

Limitations

Not suitable for demineralised water. Resistance to polar solvents is poor and alkaline resistance at temperatures above 60°C is limited.

Health & safety

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

Surface preparation

The surface to be coated should be free from grease etc. Metal should be grit blasted to ISO Standard 8501-1 Sa 2½, SSPC-SP 10, with a surface profile of at least 75 microns, 100-125 microns being the ideal key. All blast residues should be removed by sweeping clean and vacuuming where necessary. Coating of the substrate should then take place as soon as possible. Although 202 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 232 as a primer under this material. For full Surface Preparation details see relevant Surface Preparation Specification sheets.

Application equipment

Brush, Trowel or Float.

Application

This viscous material is preferably applied over the top of a recommended primer (either Corroglass 232 or PPA). 202 can be applied at thicknesses up to 3 mm in a single film and where necessary can be built up by the use of multiple coats to any required thickness. However consideration should be given to any mechanical properties required and reinforcement where necessary. Because of exotherm and shrinkage this product should not be applied in single applications at thicknesses in excess of 6 mm.

After applying and levelling this material, the surface should be lightly brushed or trowelled with Styrene, catalysed with P2 at 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 intercoat adhesion. Care must also be taken not to over work the product, which will rapidly increase in viscosity.

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When applying, each subsequent coat of material should be of a different colour to the previous one to ensure full and even coverage. Only the recommended dye for the product should be used and dye must be used sparingly so that only sufficient is used to give good differentiation from the previous application. Dyes can affect chemical and corrosion resistance in some environments and the advice of Corrocoat UK should be sought where the material will work close to either its chemical resistance or temperature limit. In some environments dyes are not colour stable and a change in colour may take place in service, which is not detrimental to coating performance.

Mixing ratio

Corroglass 202 can be catalysed 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 that 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 colour. After mixing in the original container it is advisable to remove the contents onto a flat clean surface or shallow receptacle and remix.

Pot life

40 to 50 minutes at 20°C. Pot life will be shorter at higher temperatures and longer at lower temperatures. Where temperatures are below 10°C the use of catalyst P4 will reduce pot life and cure time. Where higher temperatures are encountered, refrigerate material before use or seek the advice of Corrocoat UK for availability of material with longer pot life.

Thinners

This material can be thinned by the addition of not more than 5 parts of Styrene Monomer to 100 parts base before catalysation. Additionally 202 may be mixed with 232 without detriment to performance whilst obtaining a less viscous material. **NO OTHER DILUTENT OR THINNER SHOULD BE USED. THE USE OF ACETONE OR SIMILAR THINNERS IN CORROGLASS WILL SEVERELY AFFECT PRODUCT PERFORMANCE.**

Packaging

10 and 20 Litre composites.

Storage life

12 months stored at temperatures below 20°C and away from radiating heat sources or direct sunlight (see Shelf Life Information Sheet).

Colour availability

Unpigmented (Translucent Brown) or Pigmented (White). Dyes can be used to effect colour change.

Recommended DFT

1 to 3 mm in two coats or as advised, may be built up to any desired thickness for repair via multiple coats.

Theoretical spreading rate

1.25 kg/m² at 1 mm thickness.

Volume solids

This material contains volatile liquid convertible to solids. Volume solids obtained will vary dependent upon polymerisation conditions. Nominally greater than 99% of the contents are convertible to solid.

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Practical spreading rate

Regular surfaces e.g. new steel - 1.8 Kg/m² at 1 mm thickness minimum.

Irregular surfaces e.g. badly pitted steel - 2.8 Kg/m² at 1 mm.

Note: this information is given in good faith but may increase dependent upon environmental 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.

Density

Apparent 1.05 G/cm³. Actual 1.13 G/cm³ for Base.

Flash point

31°C

Catalyst type

Methyl Ethyl Ketone Peroxide Corrocoat Type P2 (for Ambient temperatures of 10°C or above) or Catalyst P4 (for ambient temperatures below 10°C).

Mixing ratio

100:1 to 100:2 base to catalyst.

Hardness

40 barcol (approximate)

Tensile strength

23.4 N/mm² (3400 psi)

Cohesive strength

11.8 N/mm² (1720 psi)

Elongation

0.3%

Moisture vapour transmission rate

Approximately 1.095 X 10⁻² g/hr/m² (0.0007 Perm inches)

Thermal conductivity

0.389 W/m²k

Dielectric strength

16 To 25 x 10³ v/mm. Arc resistance 40 seconds minimum.

Temperature limits

90°C immersed.

160°C non-immersed.

No known lower limit.

Overcoating

May take place as soon as previous coat has gelled sufficiently to resist movement of next application and whilst still tacky. Maximum overcoating without treatment 5 days. Shorter at ambient temperatures above 30°C.

Cleaning fluid

Acetone or Methyl Ethyl Ketone before gel. Trichloroethane after gel.

Machining

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 centre. Clean water may be used as a coating lubricant or dust suppressant.

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Cure time

At 20°C product will be hard within 3 hours and 90% cure will be attained within 12 hours. Full cure for chemical resistance will be between 7-10 days. Full cure times will be shorter at higher temperatures and longer at lower temperatures. Although not fully cured, after gel has occurred, this product may be immersed in many environments without detriment to the coating, the cure process continuing even when immersed.

All values are approximate. Physical data is based on the product being in good condition before polymerisation, correctly catalysed and full cure being attained. Information regarding application of the product is available in the Corrocoat manual. Should further information be required, please consult Corrocoat Technical Services.

Reviewed 10/2001
Reviewed 10/2010
Reviewed 02/2014 (No change)
Reviewed 10/2017 (No change)