

Product reference: 3/12

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Product title: Graphite 'S'

Valid from: 10th January 2000

Last reviewed: July 2020

Type

An electrically conductive two pack cold cured acrylated ester system loaded with flaked graphite.

Suggested use

Used in immersed environments for protection in base solutions or solutions aggressive to glass such as Hydrofluoric Acid. The product is a good microwave absorber and has good self-lubrication properties both wet and dry. Useful as a first coat on concrete to enable spark testing and as a conductor layer for preventing static build up. It can be used as a surface veil to other Corrocoat products.

Limitations

Limited abrasion and erosion resistance.

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 a minimum ISO 8501-1 SA 2½ near 3 or equivalent. (Refer to Corrocoat Data Sheet SP1).

Concrete: should be pre-primed. For full Surface Preparation details see relevant Surface Preparation Specification Sheets.

Application equipment

45:1 ratio airless pump fitted with 10mm nylon lined hoses. Spray gun should be fitted with a clean by reversing tip in the

range 40 to 60 thou. As a guide, a typical tip size would be 47 thou with a 60° fan pattern. The size of tip and fan pattern will vary dependent upon the nature of the work. May also be applied by brush.

Mixing ratio

98:2 parts base to hardener. For mixing instructions use the Polyglass Application Data Sheet. This product behaves in a similar manner, but the addition of inhibitor should only be made after first checking the suitability with Corrocoat.

Pot life

Approximately 1 hour 10 minutes at 20°C. Pot life will decrease at higher temperatures and increase at lower temperatures. Seek the advice of Corrocoat UK for availability of inhibitor.

Application

When used on its own Graphite S should be applied in at least two layers to a minimum DFT of 1000 microns. Each coat should be applied to a WFT between 600 and 1000 microns by multi pass wet on wet spray technique. When used as a surface veil for Corroglass materials it should also be applied in two coats to a DFT of 500 microns with the Corroglass/Graphite combination being not less than 1000 microns in total. **Do not add dye to this product.**

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Thinners

DO NOT THIN. The addition of Styrene may substantially affect the chemical resistance of this product, particularly where post curing is not carried out.

Packaging

10 and 20 litre composites.

Storage life

6 months stored at temperatures below 20°C and away from heat sources and direct sunlight. Frequent temperature cycling will shorten storage life. See other information for extension of shelf life.

Colour availability

Black only.

Recommended DFT

1.0 to 3.0mm in multiple coats. 500 microns when applied under or over other Corrocoat products.

Theoretical spreading rate

1 m²/litre @ 1mm

Volume solids

This material contains volatile liquid convertible to solids. Volume solids obtained will vary dependent upon polymerisation conditions. Nominally 99.3% of the contents are convertible to solid.

Practical spreading rate

0.71 m²/litre @ 1mm

NOTE: This information is given in good faith but usage may vary 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.

Specific gravity

1.24 gms/cc.

Flash point

28°C.

Catalyst type

Methyl Ethyl Ketone Peroxide Corrocoat Type P2.

Mixing ratio

98:2 base to catalyst.

Hardness

32 Barcol (approximate)

Elongation

0.9%.

Thermal conductivity

3.98 W/m²K

Temperature limits

110°C immersed.

185°C non-immersed.

No lower limit.

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Overcoating

May take place as soon as previous coat has gelled sufficiently to resist movement of next application and whilst still tacky. Maximum over-coating without treatment: 72 hours: Shorter at ambient temperatures above 30°C. Once the maximum overcoating time has been reached, 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 flash blasted to provide a physical key.

Cleaning fluid

Acetone or Methyl Ethyl Ketone before gel.

Cure time

At 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 heat treatment. Consult Corrocoat UK for specific information.

Although not fully cured, after gel has occurred, this product may be immersed in some environments without detriment to the coating.

Reviewed 10/2001 (No changes)

Reviewed 02/2014 (No changes)

Reviewed 05/2016 (No changes)

Revised 05/2019

Revised 07/2020

All values are approximate. Physical data is based on the product being in good condition before polymerisation, correctly catalysed and full cure being attained. Unless otherwise stated, physical data is based on a test temperature of 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.