

Product reference: 3/80

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Product title: ISO Polymer Concrete

Valid from: 5th June 2006

Last reviewed: May 2019

Type

A low shrink, isophthalic resin bonded polymer concrete, supplied as three components for mixing on site.

Suggested use

Corrocoat ISO Polymer Concrete may be used to lay screeds, cast slabs of up to 100mm in thickness, or manufacture many items normally manufactured from standard concrete. It has advantages over standard concrete in that it is chemically resistant and has higher mechanical strengths. Unlike standard concrete, ISO Polymer Concrete will bond to correctly prepared concrete or steel surfaces and may be used to repair existing concrete structures.

Limitations

Should not be used at temperatures higher than 176°F (80°C). Should be over coated with Polyglass VE where chemical service is arduous.

Health & safety

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

Surface preparation

Concrete: Grit blast to remove surface laitance. For best results prepare surface as per Corrocoat Surface Preparation SP5 and prime accordingly.

Metal: Grit blast to SSPC-SP10 (ISO 8501-1 Sa 2½) or equivalent. Prime surface using Polyglass PPA Primer.

Corrocoat ISO Polymer Concrete may be applied directly on to the substrate although the adhesion will be reduced. Priming, where possible, is advisable.

Mixing ratio

15% Base: 85% Aggregate by weight.
(Base equals 98% Resin and 2% Organic Peroxide).

Mixing procedure

Thoroughly mix the catalyst with the resin, then add the aggregate ensuring that the product is thoroughly wetted and mixed throughout. A heavy-duty paddle may be used to mix the product or alternatively the product may be mixed in certain types of mixing machine provided that the unit is thoroughly cleaned after each mix.

Application

ISO Polymer Concrete should not be applied to unprepared surfaces, see surface preparation above. The concrete may be poured or trowelled in the normal manner up to 20mm thickness where shrinkage is restrained, or up to 100mm thickness where shrinkage is unrestrained. Air bubbles can be removed as with conventional concrete by vibrating and the surface can be floated using a styrene wetted trowel.

The ISO Polymer Concrete has a high slump, and hold-up on vertical surfaces will be very limited. It is therefore necessary in most instances to shutter vertical surfaces.

Reinforcing bars and mesh may be used to increase mechanical strength and crack resistance. Where these materials are used they should be grit blasted first to remove and oxide films and ensure good adhesion.

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Pot life

Approximately 30-40 minutes at 68°F (20°C). Will vary dependent upon temperature and volume mix.

Thinners

The performance of Corrocoat ISO Polymer Concrete will be adversely affected by the addition of solvent thinners. The addition of styrene will increase shrinkage rate and should not normally be used.

Packaging

1 Gallon and 5 Gallon kits, or bulk supply for larger orders.

Storage life

12 Months at temperatures at or below 75°F (24°C) and away from direct heat sources and sunlight. Frequent temperature cycling will shorten the shelf life.

Flash point

93°F (34°C)

Overcoating

May take place as soon as the previous layer has gelled and while still tacky. Maximum over coating time 72 hours.

Hardener type / ratio

Corrocoat Catalyst P2.

1-2% by weight of base component only i.e. not total weight. Catalyst level should be reduced at thicker DFT's and when warm ambient temperatures ascertained.

Curing time

At 68°F (20°C) tack-free in 4 hours. Full cure 7 days.

Cleaning solvent

Prior to gelation - Acetone or Methyl Ethyl Ketone.

Reviewed 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.