

ADCO POLYCRETE 131

Cementitious-based, polymer / acrylate-modified flooring system, different colours

ADCO
Construction-
and Mining
Chemicals

adcon
www.adcon-namibia.com

adcon cc
established 1994

Head Office: Nr 7 Eider Street, Lafrenz, PO Box 80490, Windhoek, Namibia Tel : +(264)61-215340 Fax : +(264)61-238429 E-mail : adcon@iafrica.com.na
Walvis Bay Branch: Unit 14, 10th Street, Factory Park, PO Box 4587, Walvis Bay, Namibia Tel : +(264)64-221343 Fax : +(264)64-221344 E-mail : wvb1@adcon.com.na

technical data sheet

DESCRIPTION

ADCO Polycrete 131 is a cementitious-based, polymer / acrylate-modified, fibre-reinforced overlay system, designed for heavy wear and impact exposure in industrial applications.

The product is supplied as a twin-pack prime coat plus twin-pack overlay system. The pre-pack kit form of ADCO Polycrete 131 is necessitated by the delicate chemistry involved requiring accurate batching.

ADCO Polycrete 131 is installed by specialized contractors that have completed training by ADCO Construction- and Mining Chemicals. ADCO Polycrete 131 is available in a range of colours.

SPECIFICATION

ADCO Polycrete 131 is specified for its following design criteria :

- resistance to wear (from cement content, quartzitic aggregate and resin)
- resistance to impact (superior flexural strength and bond to substrate)
- smooth, durable, non-dusting and non-slip, closed-pore surface structure (formulation and finishing)
- accommodation of cyclic thermal exposure (polymer chemistry)

Furthermore, the strength and quality characteristics of ADCO Polycrete 131 are achieved under accelerated conditions :

- ADCO Polycrete 131 floors are trafficable from 24 hours after installation and ready for full exposure in less than 72 hours. Hence the system is particularly suitable for repairs to floors where the factory environment does not allow complete or prolonged down time for areas requiring repair.

The formulation strategy of ADCO Polycrete 131 was guided by the program philosophy as follows :

1. Main contractor completes all wet works on site; the floor to a final – 10 mm wood-float finish, and cured surface.
2. Completion of electrical, plumbing, painting work, etc.
3. As a final item in the construction program, suitably qualified and trained specialized contractors install the ADCO Polycrete 131 at 200 – 300 m² per day.

INSTALLATION

The Substrate :

The substrate to receive ADCO Polycrete 131 needs to be structurally sound and rendering a mechanical key for bonding. New floors are therefore finished to a wood-float surface only and cured well. No driers or water addition are tolerated during placing and finishing.

The specified strength of industrial floors for ADCO Polycrete 131 as overlay system is generally 25 – 30 MPa (at 28 days after casting). As the strength development of conventional concrete is slow in direct comparison to ADCO Polycrete 131, we advise to commence with the installation of ADCO Polycrete 131 not earlier than 7 days after casting. Furthermore, the curing regime in these first days of the concrete sub floor is of utmost importance and therefore often listed separately in a site instruction agenda.

Existing cured concrete floors to receive ADCO Polycrete 131 are carefully prepared by mechanical scabbling. If in doubt about strength values, we advise to rely on core drilling and testing for in situ compressive strength. Any unsound areas are cut back square and repaired with a structural formulated material such as ADCO Plastrep 321 or ADCO Cemgrout 310A onto a bonding medium.

Any existing surface coating or treatments and contamination are removed by the scabbling / scarifying process. The surface is then cleaned free from dust and saturated thoroughly with clean water for a minimum 24 hours – after which any ponding water is removed. The surface is now ready for the installation of ADCO Polycrete 131.

Joints in the substrate :

As per design specifications, joints are cut into new floor substrates to receive ADCO Polycrete 131. We suggest employing minimum cutting widths and rather cast large sections continuously and saw-cut later, than to use the 'puzzle' method of individually shuttered panels.

ADCO POLYCRETE 131

Cementitious-based, polymer / acrylate-modified flooring system, different colours

ADCO
Construction-
and Mining
Chemicals

adcon
www.adcon-namibia.com

adcon cc
established 1994

Head Office : Nr 7 Eider Street, Lafrenz, PO Box 80490, Windhoek, Namibia Tel : +(264)61-215340 Fax : +(264)61-238429 E-mail : adcon@iafrica.com.na
Walvis Bay Branch : Unit 14, 10th Street, Factory Park, PO Box 4587, Walvis Bay, Namibia Tel : +(264)64-221343 Fax : +(264)64-221344 E-mail : wvb1@adcon.com.na

technical data sheet

Joints in the substrate : (cont'd...)

Where joints in new or cured surfaces need sealing, the following information is relevant.

- Contraction joints : After shrinkage is complete or as late as possible allowed by program, seal with ADCOseal 488, polyurethane-modified epoxy sealer, at Shore A hardness of ± 85 .
- Movement joints : Only these joints subject to cycling contraction and expansion movement are sealed with a system at Shore A of ± 25 (ADCOseal 412 or ADCOseal 422).

Mixing and Application :

The workforce involved in the installation of ADCO Polycrete 131 will have the required skills to plan the sequence carefully, as no time delays can be accommodated after commencement.

Mix by mechanical, controlled-speed, drill the bonding slurry in the supplied kit form (powder and liquid component) to a lump-free smooth and even consistency. The mixed slurry is continuously agitated. No water is added. The bonding slurry is applied by stiff bristle broom or brush onto the saturated, damp, prepared substrate.

While maintaining a wet edge, the ADCO Polycrete 131 overlay system, mixed thoroughly as per supplied kit ratio in a drum mixer, is placed without delays onto the wet slurry in a continuous process. The consistency of the ready-mixed ADCO Polycrete 131 overlay component is crumbly and dry with seemingly to little paste fraction (compared to conventional screeds and concrete). The material is spread / raked out and levelled to 10 – 12 mm nominal thickness using wood floats, straight edge and / or hand-held vibrating beams. The combined consolidation and finishing process commences immediately by power float.

ADCO Polycrete 131 is installed over existing joints in the substrate that have been accurately marked previously. Joints are carried through by diamond saw-cutting the following day and sealed using the ADCOseal 488 or ADCOseal 412 / ADCOseal 422 later. Note, with the superior characteristics in flexural strength of ADCO Polycrete 131, the construction of extensive seamless floor areas is possible. We suggest the specifier contacting ADCO Construction- and Mining Chemicals at the planning and design stage of a floor, should seamless flooring be a requirement.

Where ADCO Polycrete 131 is installed as a repair medium and levels do not allow continuous application of 10 – 12 mm thickness, an amended bulked derivative of ADCOPolycrete 131 can be installed at up to 35 mm.

Coloured ADCO Polycrete 131 installations are completed by coloured joint sealing materials.

PHYSICAL PROPERTIES

Strength :

Typical values for ADCO Polycrete 131 are as follows :

24 hours	± 32 MPa
3 days	± 42 MPa
7 days	± 54 MPa
28 days	± 62 MPa

The flexural strength typically carries values as follows :

24 hours	± 4.9 MPa
3 days	± 6.2 MPa
7 days	± 7.6 MPa
28 days	> 8.5 MPa

For even higher wear and impact exposure conditions, ADCO Polycrete 131 MF is available where metallic fibres are incorporated into the mix to achieve these characteristics.

SAFETY

ADCO Polycrete 131 is not considered toxic or dangerous; however standard industrial precautions apply such as protective clothing, gloves and eye goggles. Cementitious-based products are alkaline and hence may cause irritation to the skin and eyes. Remember : Keep out of reach of children, handle responsibly and consider the environment.

PACKAGING

ADCO Polycrete 131 is supplied in ready-packed kit form. For large projects, the material is delivered in bulk and proportioning into gauged measuring containers done on site.

UPDATE

May 2017.

This supercedes all previous documentation.