

CemKey Datasheet

October 2017

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CemKey contains a resin with exceptional adhesive qualities. It has been proven over the past couple of decades to be a reliable general-purpose adhesive for the building and decorative industry. It replaces the water addition component of cement based products and enhances the performance of these products.

Purpose

To dispense with hacking when plastering, tiling or painting onto smooth or friable surfaces. It can be used as an adhesive, a bonding liquid for friable surfaces, as a primer for PVA and acrylic paints, as a cement additive to improve adhesion, mixed with cement as a crack filler and mixed with proprietary crack fillers to limit “ghosting” of filled spots when over coating with paint. It can be used in plaster mixes to improve the strength and integrity of the plaster and is invaluable for improving the adhesion of cement based decorative coatings to difficult surfaces.

Technical Data

Type	Non-hazardous polymer based resin
Colour	Thick milky white liquid
Bonding time	± 1 Hour
Initial set	± 4 Hours depending on weather
Curing	Needs to air cure for at least 12 hours
pH	± 7
Ambient temperature	Avoid extreme temperatures and store above 5°C
Boiling point	100°C
Density	± 1kg/litre
Properties	Open drums will skin. The base polymer mixes well with cement
Safety	See MSDS

Advantages

- Eliminates hacking
- Interior and exterior use
- Ready for use - no diluting with water
- Lime fast
- Compatible with cement, lime and sand and mixes easy with these
- Non-flammable
- Translucent
- Adheres to concrete, brick, tiles cement plaster and stone

Limitations

- Does not bond to plastic, rubber or gypsum plaster
- Cannot be used in freezing weather (below 5°C)
- Priming or bonding coats are not recommended without the addition of cement for permanently damp conditions
- Not for use in water containing structures
- Not to be used in conjunction with thin film coatings to coat clay bricks

Cemcrete provides a comprehensive technical service based on over 3 decades of experience in the field of surface applications and cement technology. Cemcrete believes, to the best of its knowledge, that the information contained herein is true and accurate at the date of issuance and is subject to change without prior notice. For further clarification of these instructions, contact Cemcrete.

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Suitable Surfaces

Dry stack brickwork, breeze blocks, stock and face bricks, concrete, hard, clean bag wash, scratch plaster, previously painted surfaces, tiles etc. Beware of bricks containing clay as they expand and contract and are prone to pop outs. Surfaces are to be hard (no crumbling or structural cracking and have good compressive strength). They should also be clean and free of contaminants grease and oil which may impair bond.

Surface preparation

New floor and wall surfaces must be allowed to cure for the minimum periods detailed below to ensure that the overcoat/tile installation is not compromised by drying shrinkage movement in the substrate.

New concrete – 6 weeks

New screed – 4 weeks

New brickwork – 4 weeks

New render – 2 to 3 weeks depending on weather

The substrate must have a moisture content of 5% or less before applying any overlay/tiles to the substrate. All surface beds should have a damp-proof membrane (floors). Where this is not the case a suitable vapour barrier should be used should to eliminate potential problems associated with excessive moisture in the substrate (e.g. slow- or non-curing of micro-toppings, adhesives etc.).

Any screed or rendering must be firmly attached to the underlying concrete or brickwork, and the substrate must be structurally sound (no crumbling, cracking, etc.) and of a quality and consistency suitable for any form of micro-coating/topping or tiling. All damaged, defective, deteriorated or hollow sounding areas must be removed and made good before proceeding.

1. General

The substrate must be clean and free from all traces of surface laitance and contamination such as dust, dirt, waxes, oils, bitumen, old adhesives, paint, grease, weak cement screeds and renders, shutter release and curing agents, sealing compounds, etc. Organic or fungal growth must be removed and the spores killed using an effective fungicide.

2. Off-shutter concrete, smooth & dense surfaces, power floated & steel floated surfaces

Clean thoroughly or mechanically abrade to remove all traces of shutter release and curing agents, laitance, polishes, etc. (Removing $\pm 0.5\text{mm}$ to 1mm off the surface is usually sufficient).

3. Existing paint or existing gypsum plaster

Paint must be in good condition and firmly bonded to the substrate, i.e. not loose, flaking or peeling. All traces of grease, grime, soap residues and other contaminants must be removed. Where possible mechanically abrade (grinding) to remove most of the paint. The surface profile should resemble that of a p60 grit sandpaper. Do not worry about what one cannot get off and is tightly bonded. Mechanically abrade to remove all traces of gypsum plaster.

4. Bitumen adhesive / waterproofing

Mechanically abrade to remove completely.

Mixing

Ready for use - no diluting required.

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Applications

CemKey may be used in any intermediate cement based products/coat where improved adhesion, increased flexural strength, resistance to certain chemicals and as an additive where a reduced water demand is required.

CemKey is also a very effective and economical water based bonding liquid for most painting systems. For absorbent surfaces and friable plaster or plaster depicting hairline cracking brush or roller apply **CemKey** onto dry, well cured surfaces. Depending on prevailing weather conditions it should be touch dry after 2 hours.

Coverage

Depends on the application, product type and surface porosity. As a primer, depending on the nature, surface profile and method of application the coverage is estimated as $\pm 9\text{m}^2/\text{litre}$ per coat.

Weather

Avoid use of **CemKey** during freezing weather.

Storage

Store in a dry shed protected from freezing for 12 months from date of invoice. Stir well from the bottom if storage is prolonged.

Packaging

Supplied in 1 litre, 5 litre and 20 litre plastic containers.

Safety

Avoid skin and eye contact. Do not ingest. Wear safety glasses, gloves and protective clothing when necessary. Keep away from children and pets. Keep sealed and isolate from other chemicals. In the event of contact with skin or eyes, rinse thoroughly with clean water. In the event of skin irritation or discomfort seek medical attention. See the relevant MSDS.

Manufacturer's Warranty

Cemcrete warrants that the products manufactured by it shall be free from material defects and will be consistent with its normal high quality. Should any of the products be proven defective, the liability to Cemcrete shall be limited to replacement of the product ex-factory. Cemcrete makes no warranty as to merchantability or fitness for a particular purpose and this warranty is in lieu of all other warranties expressed or implied. The user shall determine the suitability of the product for his intended use and assume all risks and liability in connection therewith.

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