

CLF Rapid Repair Fixcrete

INTRODUCTION

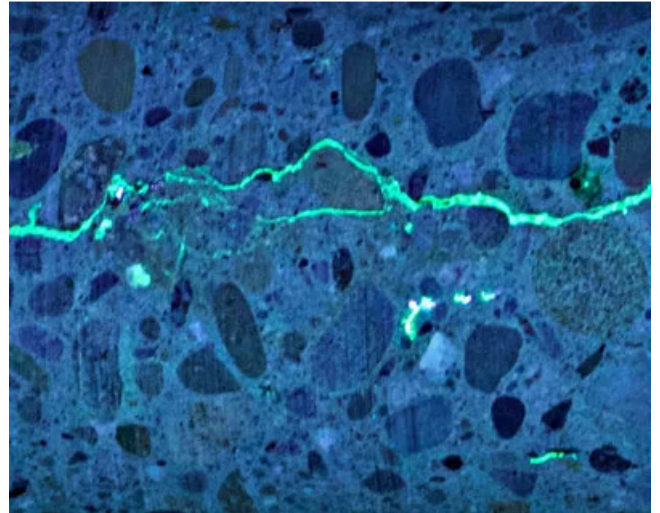
The industrial flooring market is notorious for its after installation defects. These range from surface cracking to surface delamination, uneven surfaces, damaged joints, curled panels, structural cracking, drying shrinkage cracking, dusting of the surface and peeling/blistering of coatings, just to mention a few.

CLF offers a comprehensive range of rapid repair products, equipment and specialist contracting services to effectively deal with these problems. This begins with an investigation into the cause of the defect. Once determined, we are able to draw down on years of contracting experience combined with excellent rapid repair product and equipment to effect the necessary repairs. All repair work is carried out using dust free equipment and all work is fully insured.

The biggest mistake made by contractors and consultants is the inability to accurately determine the cause of the defect. This leads to a doubtful repair specification using incorrect materials.

Our revolutionary product – CLF Rapid Repair Fixcrete – is proving extremely successful in undertaking repairs to concrete floors, which are completed within 10 minutes and can set in freezers up to -32°C .

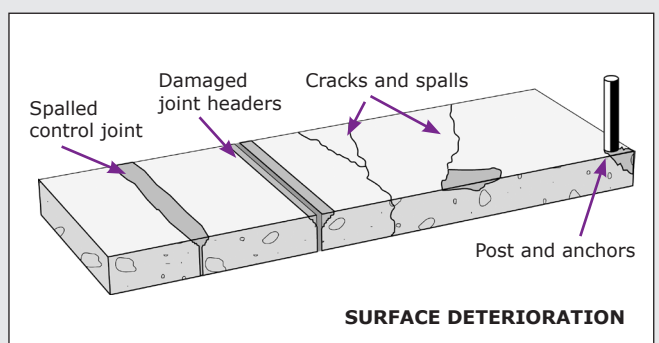
A 2 part structural polyurethane, it penetrates deep into the concrete matrix and offers long lasting repairs that accommodate very harsh environments. The product can be used to treat cracks, spalls, surface gouges, etc. It's basically a product that can repair severely distressed concrete within 10 minutes and sets rock hard.



Rapid Repair Fixcrete deep penetration.



CLF Rapid Repair Fixcrete provides quick repair solutions for the following common flooring problems:



CLF RAPID REPAIR FIXCRETE

Standard product data sheet

Micro dowelling concrete repair system

PRODUCT NAME

CLF Rapid Repair Fixcrete

PRODUCT DESCRIPTION

CLF Rapid Repair Fixcrete is a high-penetration two-part hybrid urethane that combines with sand to form a tough instant polymer concrete. This nearly water thin formula is designed to Microdowel deep into the host concrete creating extremely high bond strengths, reinforcement of the repair area as well as permanent repairs.

CLF Rapid Repair Fixcrete produces polymer concrete repairs that absorb the shock and transfers the load of heavy traffic without cracking or debonding. It is highly chemically resistant and can be applied in a wide range of temperatures. It is excellent for industrial floor repairs subject to forklift traffic and harsh conditions.

GENERAL USE

- Freezer floor repairs.
- Repairing hairline cracks or larger.
- Repairing spalled control joints.
- Restoring integrity to distressed concrete.
- Connecting broken slabs.
- Repairing spalls and pop-outs in concrete.
- Securing bolts, equipment, or railings into concrete.
- Vertical repairs when combined with specified sand.
- Rebonding delaminated floors
- Ramping elevated slabs
- Repairing concrete surface imperfections prior to coating.

KEY MARKS

Warehouse floors

Freezer floors

YIELD

CLF Rapid Repair Fixcrete is combined with manufactured silica sand or equivalent at the point of application. The gradation of the sand and the amount of sand used will determine yield.

LIMITATIONS

CLF Rapid Repair Fixcrete is a rigid material designed for use on interior or exterior concrete surfaces. It is not intended for repairing areas of movement such as exterior cracks and joints subject to structural or ground movement. It must be applied to concrete free of surface moisture.

TECHNICAL DATA

Typical Properties	Value (average)
Hardness @ 22°C	72D
Compressive Strength (with sand)	30 MPa
Elongation	6%
Tensile Strength	30 MPa
Bond Strength, ASTM 882-99	13.2 MPa
Viscosity (at application)	<9 cps
V.O.C.(mixed)	5.5 g/l
Solids	98%
Cured Colour	Grey
Gel time @ 22°C	6-7 mm
Cure time @ 22°C	10 minutes
Ambient temperature range for application	-30°C to 49°C

INSTALLATION

Surface preparation:

Surface Cracks (all depths and widths): Cracks should be free of dirt, oils, dust, latents and old crack repair materials. ALL SURFACES MUST BE CLEAN AND DRY. New concrete must be fully cured. A dry diamond blade attached to an electric hand grinder is recommended for preparing cracks and creating a clean surface for bonding. A wire brush or twisted wire wheel on a grinder may be used in some cases.

Surface Spalls and Deflections: Remove all loose materials back to sound concrete with a chisel or light chipper.

DO NOT SQUARE CUT THE REPAIR AREA. If a square appearance is necessary, lightly score surface and remove material. Use a wire brush or twisted wire wheel to clean the repair area. All surfaces must be free of dirt, oils, dust, latents and old repair materials.

For feather edge repairs in high traffic areas, score the repair edge with a dry diamond blade 3mm deep around the perimeter of the repair. New concrete must be fully cured.

Application temperature:

Recommended application temperature is between -30°C and 40°C. It is best to keep material at room temperature prior to application. If manufactured sand is to be used with product, it also should be kept at room temperature. Avoid frost laden surfaces as this may adversely affect bonding and curing.

CLF Rapid Repair Fixcrete will fully cure in 10 minutes at 22°C. The temperature of the material and the temperature of the concrete surfaces will affect cure time. Warmer temperatures will decrease cure time and colder temperatures will increase cure time. In extremely cold environments, heat the concrete to remove frost before application. Successful repairs have been installed at temperatures as low as -32°C.

MIXING

Cartridges: CLF Rapid Repair Fixcrete is a two component material and must be thoroughly mixed at a ratio of 1 part "A" to 1 part "B" by volume. Mixing and metering of CLF Rapid Repair Fixcrete is achieved with self-mixing cartridges and is ejected from prepackaged cartridges through a supplied static mixing nozzle with a dual component caulking gun.

Bulk: Due to the rapid setting nature of the product, pot-mixing of the components is not recommended for crack and joint repairs less than 20mm in width. Combine one Part A with one Part B. Mix with a drill mixer or hand mixing stick for 30 seconds or until well blended. Add manufactured sand and mix for an additional 10 seconds. Pour the entire batch into the repair area immediately.

CLF Rapid Repair Fixcrete may be dispensed through a one-to-one ratio pump specifically designed to handle extremely low viscosity materials while maintaining exact ratios. The system must not allow the two components to combine until they reach the point of delivery.

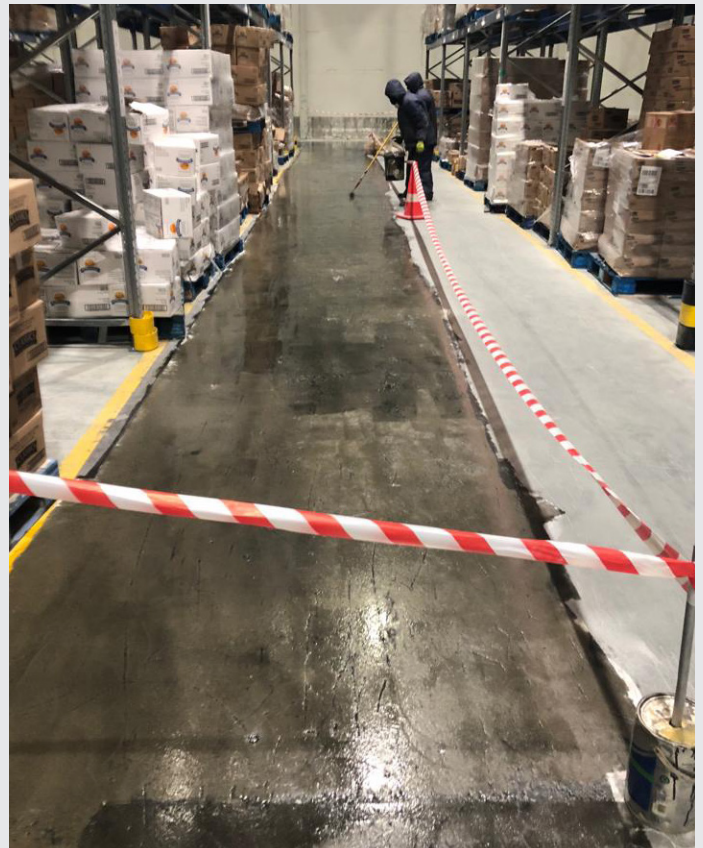
APPLICATION

Surface Cracks (all depths and widths): Assemble cartridge according to directions. Remember to use the flow restrictor included with each cartridge set. Holding the application gun upward, place cartridge set into gun. Gently squeeze trigger to bleed-off air and start material flowing into mixers. Point mixer into waste container and squeeze trigger to start mixing process. **DO NOT POINT MIXER UPWARD AFTER MATERIAL IS FLOWING.** This may cause material to flow back into the tubes and cause clogging.

Pre-wet repair area with mixed CLF Rapid Repair Fixcrete without sand. Fill with 30-40 grit manufactured sand and additional material to grade. Be sure to saturate all of the sand completely. Additional sand may be added to the repair as necessary.

Saturated sand may be moved into place with a margin trowel or scraper. Work with one small section at a time. Do not stop flowing material for a period of more than 2 minutes. If material sets inside mixer, remove cartridge from gun and replace mixer. Fill all repair areas to grade. When material cures (turns gray) in about 10 minutes, remove excess material with a sharp scraper for a smooth and flat finish. Finished repairs may be "cleaned up" by sanding or buffing within a few hours of application.

Spalls: Pre-wet repair area with mixed CLF Rapid Repair Fixcrete without sand. Fill with no more than 25 mm of 30-40 grit manufactured silica sand and additional material. Add additional layers to grade if needed. Be sure to saturate all of the sand completely. Additional sand may be added to the repair as necessary. Saturated sand may be moved into place with a small squeegee or scraper. Work with one small section at a time. If material sets inside mixer, remove cartridge from gun and replace mixer. A trowel or scraper may be used to move saturated sand into place and to create a level surface. If required, surface friction may be maintained by adding additional manufactured to the surface as the material cures. Allow to cure (approximately 10 minutes). Finished repairs may be "cleaned up" by sanding or buffing within a few hours of application.



CLF RAPID REPAIR FIXCRETE CRACK REPAIR

Problem Shrinkage cracks appeared before control joints could be cut

Solution CLF Rapid Repair Fixcrete topped with Silica Sand



1. Shrinkage cracks parallel to the control joints ranging from hairline to 6mm wide.



2. The cracks are lightly scored and cleaned out with a diamond blade attached to an electric grinder. Dust and debris is removed with a vacuum.



3. Ultra penetrating CLF Rapid Repair Fixcrete is applied directly the crack followed by a 6mm layer of Silica Sand.



4. Repairs are made full depth. Silica sand is added to stop "sinkers" and build a polymer concrete matrix.



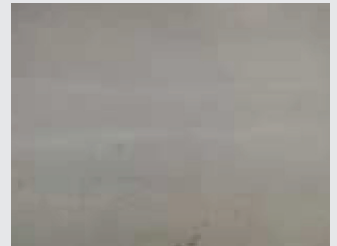
5. Additional material and sand is added to fill the crack up to the top.



6. Excess material is trowelled or scraped off before curing.

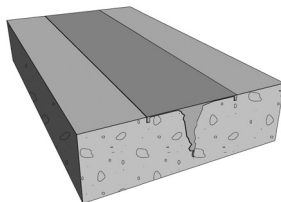


7. After 10 minutes at 22°C, the repair is ready for traffic or finishing if desired. Here a concrete finishing stone is used to blend the repair with the surrounding concrete.

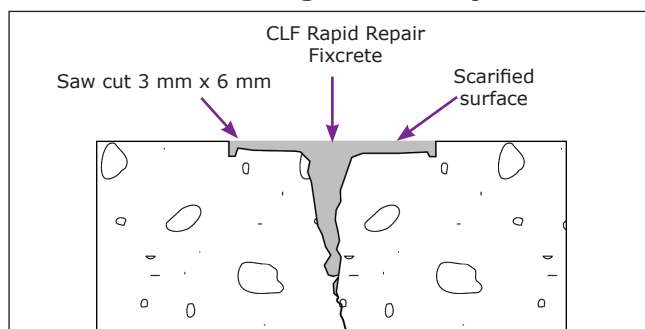


8. After the repair cures for an hour, the crack is repaired structurally, and is nearly invisible.

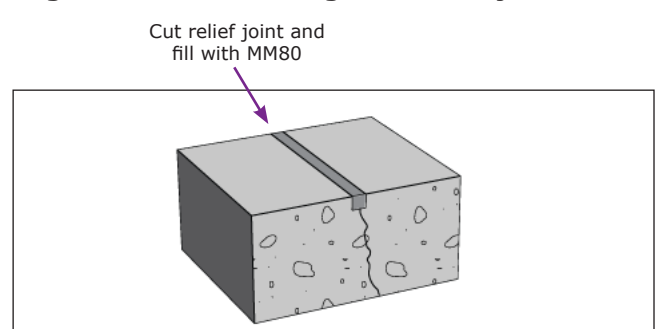
JOINT REPAIR USING CLF RAPID REPAIR FIXCRETE

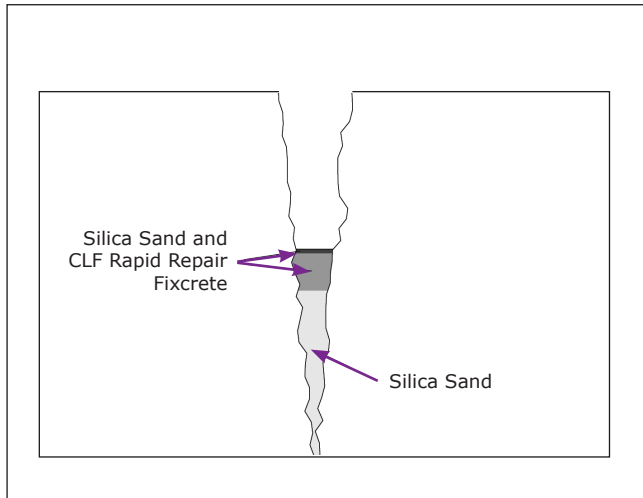


Non-movement damaged saw-cut joints.

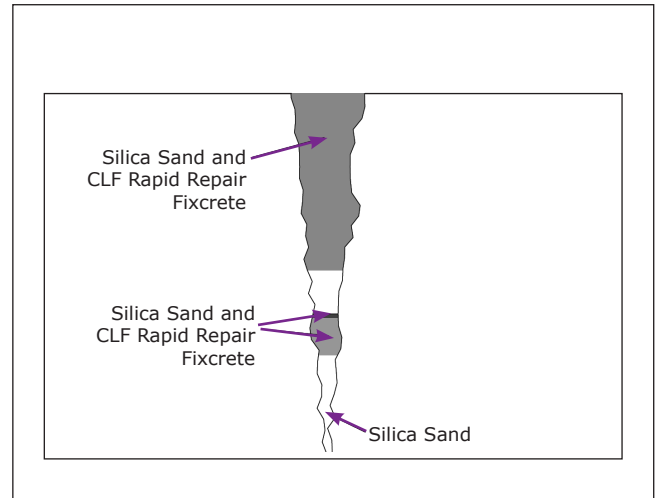


Slight movement damaged saw-cut joints



CRACK REPAIR USING CLF RAPID REPAIR FIXCRETE**Repairing cracks that are open to the sub-base****Step 1**

Fill bottom of crack with 25 mm of material and allow to set. This will form a bottom to the repair as well as dissipate any moisture in the crack.

**Step 2**

Continue repair up to grade with silica sand.



Repair of Surface Delamination.



Saturate the Crack with CLF Rapid Repair Fixcrete.

Freezer Floor Repairs

Are the concrete floors in your freezer/cold storage facilities causing problems for your business

If your freezer concrete floors are in bad condition, affecting your operational efficiency, presenting a health and safety risk and, above all, costing you money, then CLF Concrete Laser Flooring has a solution for you!!

A high penetration structural two part polyurethane that forms a tough instant polymer concrete. CLF Rapid Repair Fixcrete has been developed by CLF to stop dusting, repair freezer floors and restore warehouse floors. It can be applied at temperatures of -32°C with no need for lengthy shutdowns to undertake the repair work.

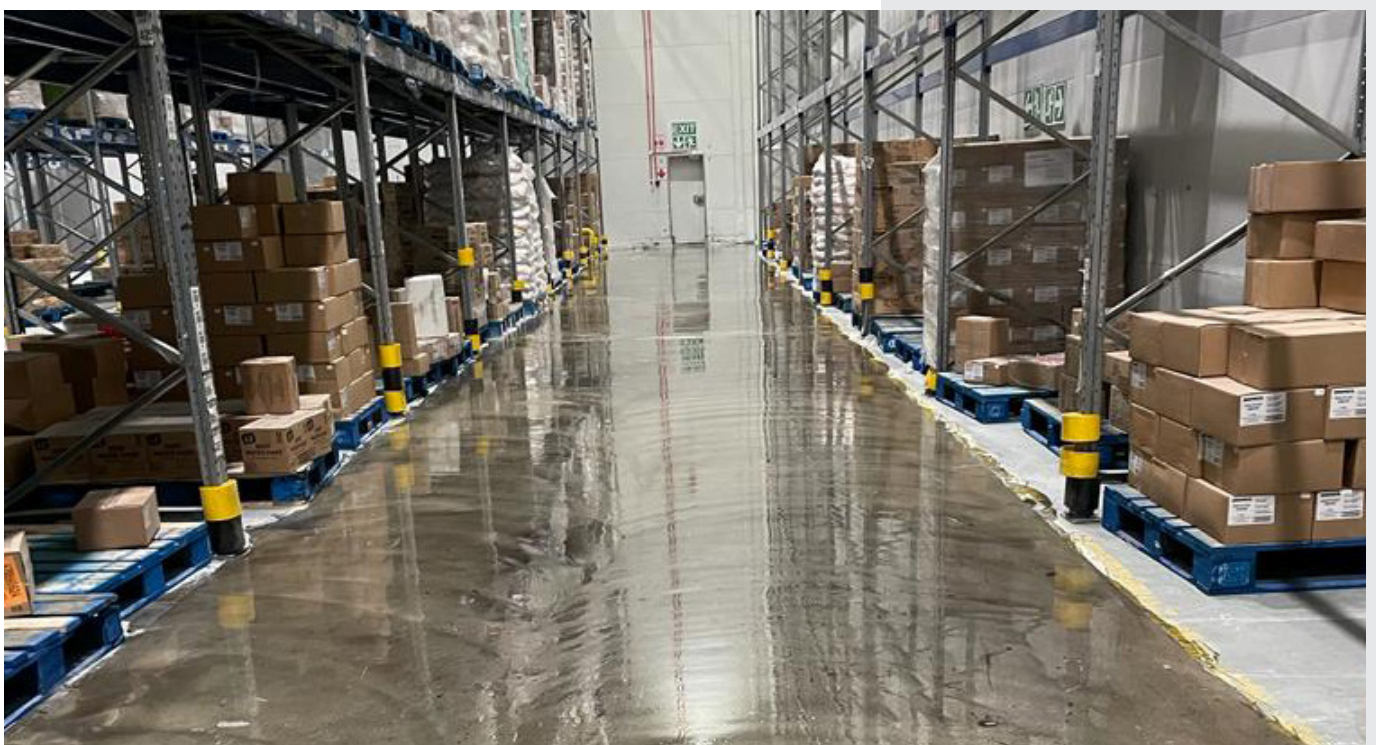
The harsh reality is that the concrete floor is the most important element of any working industrial freezer or cold storage facility as it is the platform on which all operational functions take place.

Industrial concrete floors at sub-zero temperatures present a different set of challenges to floors operating at normal temperatures. But the biggest challenge is getting them repaired without having to shut down the operation which can be an extremely costly exercise.

Defects range from surface delamination, surface dust-ing, damaged joints and surface cracking to name a few. And these defects translate into headaches such as:

- Workplace accidents and health and safety risks.
- Damage to forklifts and materials handling equipment.
- Stock loss due to load tippage.
- Operational downtime.
- Increased maintenance costs.

CLF Concrete Laser Flooring have the expertise and products to effectively deal with all of these problems.



Concrete dusting can lead to a complete breakdown of the concrete surface and airborne silica dust a health hazard. Grinding machines are used to remove the dusting surface creating a solid surface.



A single trowel application of CLF Rapid Repair Fixcrete is all it takes to provide a new surface with a good quality floor. Product cures in several hours and the odour is minimal.



Full working operation can resume 10 hours after the application of CLF Rapid Repair Fixcrete freezer coating.



REPAIR CRACKS IN YOUR CONCRETE IN 10 MINUTES

**Save your concrete
with a crack and
spall repair system
that fully cures in
10 minutes**

**FREE*
Demonstration
on your floor!**

Now you can repair cracks and spalls to a smooth finish in a fraction of the time it takes with ordinary products. CLF Rapid Repair Fixcrete is a revolutionary new two-part hybrid urethane for repairing concrete. It's low viscosity allows for deep penetration and it won't pop out like epoxy because it never gets brittle.

GREAT FOR ALL CONCRETE REPAIRS

CLF Rapid Repair Fixcrete is extremely tough and will withstand the harshest punishment. Great for freezers... may be applied at temperatures as low as -32° C with excellent results. High chemical resistance, perfect for containment areas. Re-coat in 10 minutes and accept primers and industrial coatings in just 10 minutes after application. Now prep-work and coatings can be applied in the same day!



Damaged joint in need of repair

**CLF RAPID REPAIR FIXCRETE
CRACK REPAIR****Crack in a newly laid carpark floor****Product application****Crack prepared and ready for treatment****Crack after repair****REPAIR CRACKS IN YOUR
CONCRETE IN 10 MINUTES**

BETTER SOLUTIONS FOR CONCRETE FLOORS

GAUTENG**Tel** +27 11 704 5557**Fax** +27 11 462 1456**Cell** 083 378 5579**Email** info@concreteflooring.co.za**CAPE****Cell** 082 605 9416**Email** angus@concreteflooring.co.za**KZN****Tel** +27 31 705 2388**Fax** +27 31 705 1614**Cell** 082 908 9771**Email** lance@concreteflooring.co.zawww.concreteflooring.co.za