TECHNICAL DATA

Product No.
41.142

LEYCOSIT-FCM

FLEXIBLE CEMENTITIOUS MEMBRANE

DESCRIPTION

LEYCOSIT-FCM is specifically designed for repairing cracks subject to movement, sealing construction joints, restoring deteriorated concrete, and waterproofing concrete structures. LEYCOSIT-FCM has exceptional adhesive and elongation characteristics and is often used in conjunction with the LEYCOSIT Crystalline Concrete Waterproofing and Protection System. LEYCOSIT-FCM is a two component product consisting of a specialized liquid polymer dispersion and a cementitious powder. These ingredients are mixed just prior to application.

Note: LEYCOSIT-FCM Products have been specially formulated to meet varying temperature conditions. LEYCOSIT-FCM is used under normal environmental conditions, where the lowest annual ambient temperature is not below -15°C. Consult with the Technical Department of LEYCOCHEM for the most appropriate LEYCOSIT-FCM product for your project.

RECOMMENDED FOR

- Moving Cracks
- Construction Joints
- Deteriorated Concrete Surfaces
- Concrete Block Walls
- Balconies, Terraces, and Planters
- Water-holding Structures
- Sewage and Water Treatment Tanks
- Marine Structures
- Thermal Contraction and Expansion

ADVANTAGES

- Flexible
- Superior elongation properties
- Excellent adhesive qualities
- Impermeable to water and chlorides
- Breathable, seamless
- Durable, retains properties in climatic extremes
- Non-toxic, solvent-free, odorless
- UV resistant
- Effective when subjected to thermal contraction and expansion.

PROPERTIES

Adhesion:
0.4 to 2.5 MPa depending on mix ratio and temperature

Elongation:
3 mm
Resistance to Tearing (non-reinforced membrane): 0.30 MPa to 2.0 MPa depending on mix ratio and temperature
Elongation at Tear:
70°/D to 100% (non-reinforced)
30% (reinforced)

Water Pressure Resistance:
Positive side: 30.5 m head pressure (0.3 MPa) Negative side: 7 m head pressure (0.07 MPa)

Chemical Resistance:
2 to 13 pH (periodic contact)
3 to 11 pH (constant contact)

APPLICATION PROCEDURES

SURFACE PREPARATION

Concrete surfaces must be free of all bond inhibiting materials such as loose concrete, dirt, dust, oil, grease, release agents, curing and cleaning compounds. Clean the surface thoroughly by sandblasting, waterblasting or etching with muriatic (HCL) acid. Prior to the LEYCOSIT-FCM application, the concrete substrate can be dry or damp but not dripping wet. Where a damp or porous (eg. masonry blocks) substrate exists, a LEYCOSIT-FCM Primer slurry coat is recommended. Please consult with the Technical Department of LEYCOCHEM regarding your specific requirements.

MIXING

Mix by weight: one part LEYCOSIT-FCM liquid with 2.5parts LEYCOSIT-FCM powder. Mix thoroughly for 3 to 4 minutes to obtain a homogeneous and lump-free compound. Do not mix more material than can be used in 30 minutes.

PRIMER SLURRY

In situations where damp or porous substrates exist or where increased bond is required, a LEYCOSIT-FCM Primer "slurry coat" is recommended prior to the LEYCOSIT-FCM membrane application.

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The LEYCOSIT-FCM Primer slurry is mixed one part LEYCOSIT-FCM Powder by weight to create a slurry consistency. Do not mix more material than can be used in 30 minutes.

Note: The LEYCOSIT-FCM Primer is packaged (in a carton) as a unit consisting of a liquid component (4 1 bottle) and a powder component (4 kg pail). When applied at a thickness of 1 mm, one LEYCOSIT-FCM Primer will cover approximately 4.8 m² .

REPAIR OF CRACKS AND FAULTY CONSTRCUTION JOINTS No Water Flow

1. Clean and prepare the concrete surface as specified above.
2. Brush-apply one coat of LEYCOSIT-DS CONC, approximately two inches wide, to the crack joint line at the rate of Ikg/m2 and allow to set for two hours.
3. Trowel-apply first coat of LEYCOSIT-FCM to a width of 10 - 15 cm and a thickness of 1.5 mm. Allow first coat to dry for six hours, then apply second coat at the same rate to a total membrane thickness of 3mm. The second coat of LEYCOSIT-FCM should be applied at right angles to the first coat.

Against A Flow Of Water

1. Clean and prepare the concrete surface as specified above.
2. Rout out crack or construction joint in a "U" shaped slot one inch 25mm wide and 37mm deep.
3. Utilize LEYCOSIT-SP Plug in the slot to control and stop water flow. In the event that there is any active water flow under high hydrostatic pressure, rout out the slot area affected to a depth of 50mm and insert a "bleeder hose" using LEYCOSIT-SP Plug to secure it into place.
4. Fill slot to within 12 mm of surface withLEYCOSIT-Pac. LEYCOSIT-Pac is mixed by adding one part clean water to six parts LEYCOSIT-DS Conc by volume. Apply the LEYCOSIT-Pac by glove, by compressing it tightly and then compact it with pneumatic tool or a hammer and block.
5. Fill remainder of slot to surface with LEYCOSIT-SP Plug.
6. Apply the LEYCOSIT-FCM Primer slurry with a brush or roller to a width of 10-15 cm along crack repair line. Work slurry into surface. Allow to dry for one hour.
7. Trowel-apply the first coat of LEYCOSIT-FCM to the surface to a thickness of 1.5mm. Allow first coat to dry for six hours, then apply second coat at the same rate to a total membrane thickness of 3mm. The second coat should be applied at right angles to the first coat.

Note:

1. The ambient temperature for applying LEYCOSIT-FCM should be between 10° C and 35° C.
2. To increase the tensile strength of LEYCOSIT-FCM over cracks and joints, use a reinforcing poly-propylene mesh (3mm square pattern). Do not use a fiberglass mesh. Embed mesh into the initial LEYCOSIT-FCM coat and fully cover with second application of the LEYCOSIT-FCM membrane.
3. If significant crack movement is anticipated, a "bond-breaker" is recommended. Simply place 25mm wide masking tape or hypalon tape over top of the crack or joint

COATING APPLICATION

1. Clean and prepare the concrete substrate as specified above.
2. Apply an initial coat of the LEYCOSIT-FCM mixture by trowel or spray to a thickness of approximately 1.5mm. Allow coating to dry for six hours.
3. Apply second coat at right angles to the first coat to ensure even coverage. Second coat should bring total membrane thickness to 3mm.

Note:

1. Under normal conditions, the LEYCOSIT-FCM coating is applied to the positive side of the concrete surface subjected to hydrostatic pressure. However, when LEYCOSIT-FCM can only be applied to the negative side (against the pressure), a single coat of LEYCOSIT-DS Conc should be applied to the concrete surface prior to the LEYCOSIT-FCM coating. LEYCOSIT-DS Conc should be applied as per manufacturer's specifications and cured for at least 14 days to allow for substantial crystallization growth. Following curing, the Concentrate coating should be acid to clean the surface 3% - 5% solution of muriatic acid to clean the surface and open the pore structure of the hardened LEYCOSIT coating. Flush surface thoroughly with clean water and allow to dry before applying LEYCOSIT-FCM membrane.
2. If concrete substrate is damp or porous, the LEYCOSIT-FCM Primer slurry should be applied prior to the application of LEYCOSIT-FCM

CURING

LEYCOSIT-FCM does not require any special curing procedures. LEYCOSIT-FCM dries within 5 to 6 hours of application at 20°C. Protect the membrane surface from rain or water until dry. Allow a minimum of 14 days of air-curing prior to immersing the surface in water..

PACKAGING

The LEYCOSIT-FCM is packaged (in a carton) as a unit (kit), which includes the liquid component (41 bottle) and the powder component (10 kg pail). For larger projects, customized packaging is available.

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STORAGE

LEYCOSIT products must be stored dry at a minimum temperature of 7° C. Shelf life is one year when stored under proper conditions.

COVERAGE

When mixed, one unit will cover an estimated 2.9 m at a thickness of 3 mm.

TECHNICAL SERVICES

For more instructions, alternative application methods, or information concerning the compatibility of LEYCOSIT FCM with other products or technologies, contact the Technical Department of LEYCOCHEM.

SAFE HANDLING INFORMATION

In liquid, powder, or mixed form, LEYCOSIT-FCM may cause significant skin and eye irritation. Directions for treating these problems are clearly detailed on all LEYCOSIT pails and packaging. The manufacturer also maintains comprehensive and up to date Material Safety Data Sheets on all its products. Each sheet contains health and safety information for the protection of your employees and customers. Contact theTechnical Department of LEYCOCHEM, or refer to our internet website www.leyde.com to obtain copies of Material Safety Data Sheets prior to product storage or use.

REMARK

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