

TECHNICAL DATA

Product No.
41.140

LEYCOSIT-DS CONC

COATING FOR WATERPROOFING SYSTEM BY CRYSTALLIZATION

DESCRIPTION

LEYCOSIT is a unique chemical treatment for the waterproofing, protection and repair of concrete. LEYCOSIT-DS CONC is the most chemically active product within the LEYCOSIT Crystalline Waterproofing System. When mixed with water, this light grey powder is applied as a cementitious slurry coat to above ground or below ground concrete, either as a single coat or as the first of a two-coat application. It is also mixed in LEYCOSIT-Pac form for sealing strips at construction joints, or for the repairing of cracks, faulty construction joints, and honeycombs. LEYCOSIT prevents the penetration of water and other liquids from any direction by causing a catalytic reaction that produces a non-soluble crystalline formation within the pores and capillary tracts of the concrete and cement-based materials.

RECOMMENDED FOR

- Reservoirs
- Sewage and Water Treatment Plants
- Underground Vaults
- Secondary Containment Structures
- Foundations
- Tunnels and Subway Systems
- Swimming Pools
- Parking Structures
- Roof Decks

ADVANTAGES

- Resists extreme hydrostatic pressure
- Becomes an integral part of the substrate
- Can seal hairline cracks up to 0.4mm
- Allows concrete to breathe
- Highly resistant to aggressive chemicals
- Non-toxic
- Does not require a dry surface
- Cannot puncture, tear or come apart at the seams
- No costly surface priming or levelling prior to application
- Does not require sealing, lapping and finishing of seams at corners, edges or between membranes.
- Can be applied to the positive or the negative side of the concrete surface
- Does not require protection during backfilling or during placement of steel, wire mesh or other materials

- Less costly to apply than most other methods
- Not subject to deterioration
- Permanent

APPLICATION PROCEDURES

1. **SURFACE PREPARATION** Concrete surfaces to be treated must be clean and free of laitance, dirt, film, paint, coating or other foreign matter. Surfaces must also have an open capillary system to provide "tooth and suction" for the LEYCOSIT treatment. If surface is too smooth (e.g. where steel forms are used) or covered with excess form oil or other foreign matter, the concrete should be lightly sandblasted, waterblasted, or etched with muriatic (HCE) acid.
2. **STRUCTURAL REPAIR** Rout out cracks, faulty construction joints and other structural defects to a depth of 37mm and a width of 25mm. Apply a brush coat of LEYCOSIT-DS CONC as described in steps 5 & 6 and allow to dry for 10 minutes. Fill cavity by tightly compressing LEYCOSIT-Pac into the groove with pneumatic packing tool or with hammer and wood block. LEYCOSIT-Pac is prepared by mixing six parts LEYCOSIT-DS CONC powder with one part water to a dry, lumpy consistency.

Note:

1. Against a direct flow of water (leakage) or where there is excess moisture due to seepage, use LEYCOSIT SP Plug then LEYCOSIT Dry-Pac followed by a brush coat of LEYCOSIT-DS CONC (refer to LEYCOSIT Specification and Application Manual for full details).
2. For expansion joints or chronic moving cracks, flexible materials such as expansion joints sealants should be used.
3. **WETTING CONCRETE** LEYCOSIT requires a saturated substrate and a damp surface. Concrete surfaces must be thoroughly saturated with clean water prior to the application so as to aid the proper curing of the treatment and to ensure the growth of the crystalline formation deep within the pores of the concrete. Remove excess surface water before the application. If concrete surface dries out before application, it must be re-wetted.

4. MIXING FOR SLURRY COAT Mix LEYCOSIT powder with clean water to a creamy consistency in the following proportions:

For Brush Application

0.65 - 0.8 kg/m

2.5 parts powder to 2 parts water

1.0 kg/m²

3 parts powder to 1 part water

For Spray Application 0.65 - 0.8 kg/m

2.5 parts powder to 3 parts water

(ratio may vary with equipment type)

Do not mix more LEYCOSIT material than can be applied in 20 minutes. Do not add water once mix starts to harden. Protect hands with rubber gloves.

5. APPLYING LEYCOSIT Apply LEYCOSIT with a semi-stiff nylon bristle brush, push broom (for large horizontal surfaces) or specialized spray equipment. The coating must be uniformly applied and should be just under 1.25 mm. When a second coat (LEYCOSIT-DS CONC or LEYCOSIT-MODI) is required, it should be applied after the first coat has reached an initial set but while it is still "green" (less than 48 hours). Light pre-watering between coats may be required due to drying. The LEYCOSIT treatment must not be applied under rainy conditions or when ambient temperature is below 4°C. For recommended equipment, contact the Technical Department of LEYCOCHEM.

6. CURING a misty spray of clean water must be used for curing the LEYCOSIT treatment. Curing should begin as soon as the LEYCOSIT has set to the point where it will not be damaged by a fine spray of water. Under normal conditions, it is sufficient to spray LEYCOSIT-treated surfaces three times per day for two to three days. In hot or arid climates, spraying may be required more frequently. During the curing period, the coating must be protected from rainfall, frost, wind, the puddling of water and temperatures below 2°C for a period of not less than 48 hours after application. If plastic sheeting is used as protection, it must be raised off the LEYCOSIT to allow the coating to breathe. LEYCOSIT-AC may be used in lieu of water curing for certain applications (consult with the Technical Department of LEYCOCHEM).

Note:

For concrete structures that hold liquids (e.g. reservoirs, swimming pools, tanks, etc.), LEYCOSIT should be cured for three days and allowed to set for 12 days before filling the structure with liquid.

PACKAGING

LEYCOSIT-DS CONC is available in 4 kg, 10 kg, and 20 kg buckets.

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

For normal surface conditions, the coverage rate for each LEYCOSIT coat is 0.65 - 0.8 kg/m².

TECHNICAL SERVICES

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

SAFE HANDLING INFORMATION

LEYCOSIT is alkaline. As a cementitious powder or mixture, LEYCOSIT may cause significant skin and eye irritation. Directions for treating these problems are clearly detailed on all LEYCOSIT buckets 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 the Technical 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

Whilst information and/or specification contained herein is to the best of our knowledge true and accurate, and is based on many years experience, we cannot accept any liability either directly or indirectly arising from the use of our products, whether or not in accordance with any advice, specification or recommendation given by us, as we have no direct or continuous control over how or where our products are applied.

LEYDE-PRODUCTS are guaranteed against defective materials and manufacture and are sold subject to its standard terms and conditions of sale.