



TSIRCON CO LTD

MANUFACTURERS & TRADERS
OF BUILDING MATERIALS

Ημ. έκδοσης 3/2007

TSIRCO-EXPAGROUT

Function: Tsirco-ExpagROUT is designed as a plasticising expansive aid for use in cement grouts and concrete to prevent shrinkage and bleeding.

Areas of use: The additive may be used in cementitious mixtures including concrete for underpinning, grouting of machinery, stanchion bases, anchorage, rails, joining precast units and repairs and for Self Compacting concrete, where shrinkage must be avoided. It should not be used for pre-stressed tendons as hydrogen evolved in the expansion process which may lead to embrittlement of steel, which is under constant tension. It may be used with all grades of Portland Cement, however it should not be used with high alumina cement.

Description: The additive is supplied in 1 kilogram packs containing 4 x 250gr sachets of the powder. Each sachet is sufficient to treat 50 kilos of cement in neat cement grout.

Advantages:

Non-Shrink: The combined plasticising and expansive action lead to a non-shrink system.

Increased Strength: The plasticiser allows lower water cement ratios to be used for a given workability yielding to improved ultimate compressive strength in the hardened stage.

Reduced Bleed: The formation of microscopic bubbles in the mix lowers the tendency of bleeding in the grout.

Improved frost resistance: The grout has the tendency to decrease the level of damage caused by freeze/thaw cycling.

Controlled Expansion: The level of expansion is carefully controlled to prevent damage from excessive expansion prior to setting.

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How to use: The additive is usually used at a rate of 1 x 250gr sachet per 50kg cement for neat cement or 1:1 cement: sand grouts. If used with concrete, mortar or grout mixes with an aggregate content exceeding 50%, 2 x 250gr sachets should be used to achieve the necessary degree of expansion per 50kg of cement. The admixture should be added to the mix in a mechanical mixer and mixing should continue for a minimum of 3 minutes after addition. The addition should be made slowly at the time of adding the aggregates and prior to adding the cement in the mix. Only add sufficient water to the mix to achieve the fluidity required.

Prior to grouting, all surfaces should be clean, free from contamination from dirt, oil or grease and where possible should be scabbled to provide a roughened substrate. Surfaces should also be saturated with water and any surplus water removed prior to placing the grout. The grout mix should be poured or pumped in the position from one side to avoid trapping air in the void space.

After placement of the grout, the mix must be protected from frost or rapid drying in accordance with good practice curing for cementitious materials.

Typical Compressive Strength Development

<u>MIX</u>	<u>3 DAYS</u>	<u>7 DAYS</u>	<u>28 DAYS</u>
NEAT CEMENT +			
GROUT ADDITIVE	15N/mm ²	27N/mm ²	42N/mm ²
1:1 CEMENT: SAND +			
GROUT ADDITIVE	18N/mm ²	28N/mm ²	46N/mm ²

Health and Safety:

Do not breath dust.

In case of insufficient ventilation, wear breathing apparatus.

Store out of direct sunlight.