

SECTION 5. CORE FILL GROUT & GROUTING

All **mortarless** walls and piers must be fully grouted regardless of whether or not they are reinforced, as it is the grout that permanently bonds the masonry units to each other. Although most **mortarless** elements will contain reinforcement minor structures such as drainage pits and temporary in-ground works may not need to be reinforced.

Core filling grout must be a free flowing concrete with a small sized coarse aggregate. Typically core filling grout is specified as 20MPa or 25MPa with maximum 5mm or 7mm coarse aggregate and about 230 slump. This is achieved by means of a super plasticiser additive.

Concretes with such a high slump are sometimes more appropriately specified with a spread rather than a slump and a spread of about 600mm is the equivalent.

The 28-day cylinder strength of the grout should be at least equal to the unconfined compressive strength of the face shells of the masonry units but may be increased for enhanced corrosion protection and it is recommended that a minimum 20MPa grout be used in any **mortarless** wall.

The grout must have pouring consistency that enables the cores or cavities to be completely filled and reinforcement to be completely surrounded without segregation of the constituents. The super plasticised mix readily achieves this objective and thoroughly wetting the block cores immediately prior to grouting is also essential.

Grout should not be compacted by mechanical vibration as this can result in failure of face shell. As stated above it is recommended that all block cores be thoroughly wet down immediately prior to grouting and it is also recommended that the grout be compacted by rodding only to remove any trapped air.

Upon completion of the last lift of **mortarless** blockwork, the grout should be topped up after a waiting period of 10 to 30 minutes and lightly rodded to merge the top up grout with the previous pour.