

SECTION 5. CORE FILL GROUT & GROUTING

All **mortarless** masonry 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 and it is the grout that mostly carries the applied vertical load. 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 M20 or M25 with a recommended 5mm coarse aggregate (maximum 7mm) and 230 slump.

The 28-day cube strength of the grout shall be at least 5MPa greater than the unconfined compressive strength of the face shells of the masonry unit.

The grout must have pouring consistency that enables the cores or cavities to be completely filled and the reinforcement to be completely surrounded without segregation of the constituents. Thoroughly wetting the block cores immediately prior to grouting is **essential** to achieve this outcome.

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 minimal rodding only to remove any trapped air.

Upon completion of the last lift of **mortaless** blockwork, the grout should be topped up after a waiting period of 10 to 30 minutes with light rodding to ensure the top up grout fully merges with the grout previously placed.