

Operational Instructions

OI - 5.19 | Reinforced Concrete

Revision:

B

Section:

5.0 - Plot Groundworks Stage 1

Visual Aids

Figure 1: Concrete cover

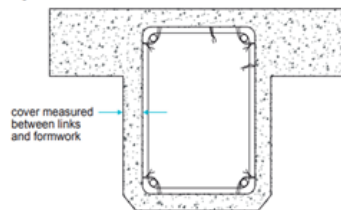
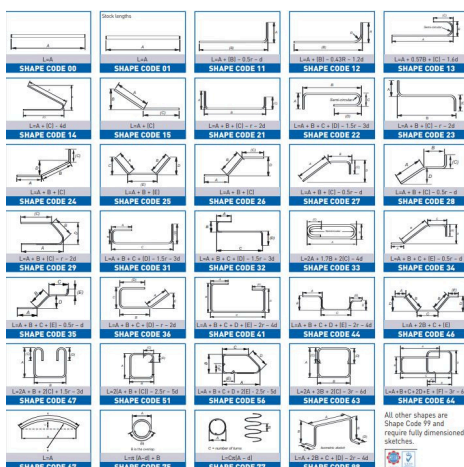


Figure 3: Spacer layout



Application	Designated concrete	Recommended consistence class
Kerb bedding and backing	GEN0	S1
Drainage works to give immediate support	GEN1	S1
Unreinforced concrete, Design Chemical Class DC-1^(a)		
Other drainage works	GEN1	S3 ^(b)
Blinding and mass concrete fill	GEN1	S3 ^(b)
Oversite below suspended slabs or timber floors	GEN1	S3 ^(b)
Strip foundations	GEN1	S3 ^(b)
Mass concrete foundations	GEN1	S3 ^(b)
Trench fill foundations	GEN1	S4
House floors, no embedded metal		
– Under screed or floating floor	GEN1	S2
– No permanent finish to be added	GEN2	S2
Garage floor slabs		
– Not designed as suspended and not reinforced	GEN3	
Cement-bound for road and pavement base courses	CB 16/20	S2 ^(c)
Reinforced concrete, minimum concrete quality	RC25/30	S3 ^(b)
House and garage ground floor slabs		
– Wearing surface: light foot and trolley traffic	RC25/30	S2
– Fully or nominally reinforced, either ground bearing, suspended or over sub-floor voids	RC28/35	S2
– Wearing surface: general industrial	RC32/40	S2
– Wearing surface: heavy industrial ^(d)	RC40/50	S2
Unreinforced concrete in aggressive chemical environment^(a)		
– DC-2	FND2	S3 ^(b)
– DC-2z	FND2Z	S3 ^(b)
– DC-3	FND3	S3 ^(b)
– DC-3z	FND3Z	S3 ^(b)
– DC-4	FND4	S3 ^(b)
– DC-4z	FND4Z	S3 ^(b)
– DC-4m	FND4M	S3 ^(b)
Paving		
– House drives and domestic parking ^(e)	PAV1	S2 ^(b)
– Heavy-duty external paving with rubber tyre vehicles ^(e)	PAV2	S3 ^(b)

^(a) DC-1 to DC-4 are Design Chemical classes that define a resistance level for concrete exposed to aggressive chemical environments, where the higher the number the more aggressive the environment. FND concretes are supplied at a minimum strength class of C25/30.

^(b) Consistence/workability supplied unless otherwise specified.

^(c) Cement bound concrete is normally compacted by vibrating roller.

^(d) For extreme applications such as foundry floors and busy public roads then special high performance concrete may be required. Seek specialist advice and consult concrete supplier.

^(e) Where de-icing salts are likely to be frequently applied then PAV2 is recommended.

Information

Task Specific Safety Checks & Notes	Operational Checks
In the first instance, please ensure you have referred to your site-specific Risk Assessments & Method Statements (RAMS)	Reinforcement cover, if not designed by Designer/Engineer: - When the concrete is in contact with the ground 75mm minimum cover is required - When cast against blinding 40mm cover is required - Spacers should either be concrete blocks (no more than 50mm x 50mm) or ready made steel or plastic - Spacers for parallel bars should be staggered to avoid planes of weakness in the concrete - Formwork should be cleaned out and checked for fallen debris - Fresh concrete is susceptible to frost damage and should be covered where required - Construction joints should be formed only where unavoidable and in consultation with the engineer, these should not be positioned next to a return in the foundation - Reinforced concrete should be fully compacted using a poker vibration unless the design states otherwise - Freshly poured concrete should be kept moist by covering and is particularly important in hot, windy or cold conditions to prevent the surface drying out to rapidly or freezing. Damp Hessian or curing agents are ideal
QA Checks & Actions	Operational Standard - References
Form QMF 37 - RC Pre Pour Inspection & Checklist	MIDA Operational Standard - 2.4 - General Working Area