Jessie's Sunshine Farm



SOP Concrete Mix 250629

STANDARD OPERATING PROCEDURES FOR

Concrete Mix

GENERAL

We will use the following table as a guideline. General speaking, for walkways and driveways, **we will use 1:2:3 ratio**. Since we have coarse sand only we will use 1 sack cement to 5 loads of coarse sand. Under a slab, like the ones we did in front of Kubo or flower tunnel, we must put a layer of gravel to prevent moist and water pooling. Inside buildings we add vapor barrier.

Concrete Grade	Mix Ratio (Cement: Sand: Gravel)	Uses
M5	1: 5: 10	Non-structural applications like paths
M7.5	1: 4: 8	Wall foundations under static loads
M10	1 : 3: 6	Foundations for single-story buildings
M15	1: 2: 4	Driveways, floors, internal flooring
M20	1:1.5:3	Reinforced concrete works, slabs
M25	1:1:2	Heavy load-bearing structures

- M5 to M7.5 Grades: Ideal for non-load-bearing structures, such as garden paths and fence post footings. These mixes are unsuitable for supporting buildings but great for small DIY projects.
- M10 to M15 Grades: These grades are commonly used in residential construction for elements that support moderate loads. They are perfect for building foundations and internal floors.
- M20 to M25 Grades: This high-strength concrete is suitable for significant structural applications, including support columns and beams bearing heavy loads.

CONCRETE SLAB

Concrete slabs are a popular choice for sidewalks due to their durability and ease of installation. A concrete slab is a flat, horizontal surface made of cast concrete. A typical sidewalk slab is usually about 4 inches thick, providing sufficient strength for pedestrian use. A thicker slab, around 6 inches, is recommended for areas with potential vehicular traffic.

Expansion joints, which are full-depth gaps filled with flexible material, accommodate the slab's expansion and contraction, preventing damage from temperature fluctuations. Using gravel or crushed stone as a foundation for concrete slabs is also essential. The stones absorb moisture that could turn into pooling water that can erode the surface from the bottom.

REFERENCE:

https://www.ultratechcement.com/for-homebuilders/home-building-explainedsingle/descriptive-articles/what-is-concrete-mix-

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