

MULTIVIBE & HAND POWERED BUILDING MATERIALS PRODUCTS

RAW MATERIALS

For Micro Concrete Roofing (MCR) Roman II, Super Roman, Semi Sheet roofing, Hollow Formwork Units (waffles), Floor Tiles, Wall Tiles, Paviers, Balustrades and Copings:

- ◆ Cement – Ordinary Portland Cement is suitable. Slow setting pozzolanic cements (sometimes known as ‘Masonry Cement’) should be avoided.
- ◆ Sand – Sand should not contain more than 10% clay or silt as this may cause strength and porosity problems.
- ◆ Gravel – Stones should range in size from 2mm-4mm for 6mm thick tiles and 2mm-5mm for 8mm or 10mm thick tiles. Better results will be obtained from crushed or angular particles.

For Fibre Concrete Roofing (FCR) Roman II, Super Roman and Semi Sheet roofing and Storage Unit arches:

- ◆ Fibre – many different fibres can be used, the most common being sisal, jute, henequen, flax, hemp, manila or coconut coir. Artificial fibres such as polypropylene and glass can also be used.

For Water Tanks, Storage Units and Blocks:

- ◆ Cement – Ordinary Portland Cement is suitable. Slow setting pozzolanic cements (sometimes known as ‘Masonry Cement’) should be avoided.
- ◆ Sand – Ordinary ‘builders’ sand will be suitable for the production of good quality concrete blocks.
- ◆ Gravel – Stones should be smaller than 10mm in size. Better results will be obtained from crushed or angular particles.

For Building Blocks:

- ◆ Cement – Ordinary Portland Cement is suitable. Slow setting pozzolanic cements (sometimes known as ‘Masonry Cement’) should be avoided.
- ◆ Sand – Ordinary ‘builders’ sand will be suitable for the production of good quality concrete blocks.
- ◆ Gravel – Stones should be smaller than 10mm in size. Better results will be obtained from crushed or angular particles.
- ◆ Sandcrete – (ie – sand & cement only) can be used but cement content will need to be higher.

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TYPICAL MIXES FOR MICRO-CONCRETE (MC) AND FIBRE CONCRETE (FC) PRODUCTS

Element produced

Suggested Mixes

		CEMENT	SAND	GRAVEL	FIBRE
All roofing tiles and thin-walled products.	MC #1	25%	25%	50%	-
	MC#2	25%	35%	40%	-
	FC	25%	75%	-	Approximately 0.5% of total
Slabs, Floor tiles, Wall tiles, Beams and other load-bearing items.	-	15-20%	30-50%	30-50%	-
Hollow concrete blocks	Option 1	10%	60%	30%	-
	Option 2	10%	40%	50%	-
Interlocking blocks, water tank blocks and hollow formwork units (waffles).	-	20%	40%	40%	-

MC #1 = Micro-Concrete (Fine Sand)
MC #2 = Micro-Concrete (Coarse Sand)
FC = Fibre Concrete

Option 1 = Coarse Gravel
Option 2 = Fine Gravel

The above mixes should be used for initial guidance at the commencement of a project. Materials tend to be different in different localities and precast product manufacturers usually modify the proportions of the raw materials used to achieve optimum performance.