Premix home range

The Hanson **Premix** home range of quality ready-mixed concrete products is specifically designed for domestic and other self-lay applications, from drives and pathways to floors and foundations.

The products are specially formulated for home lay, making them easy to place, easy to compact, highly durable and crack resistant.

Premix home range

Premix is one of the UK's most popular and enduring ready-mixed concrete brands with a reputation built on over 50 years of quality and service.

We can supply our home range products from a network of over 240 plants.

There are three products in the range:

Premix **home**pave

The building and surfacing of paths and drives can be harder work than anticipated when concrete has to be mixed on site. Premix **home**pave has been designed to overcome the problems and to provide the precise formulation and consistency for the job, with durability for external paving.

Premix **home**floor

On-site mixing for a garage or out-building floor can be a demanding task for even a modest area.

The work involved can be dramatically reduced by direct placement with ready-mixed concrete.

With Premix **home**floor you can enjoy the same benefits that are available to the professional builder and contractor and, at the same time, be assured of high quality products.

If concrete for your floor slab is to be pumped, power-finished or reinforced, Premix **home**floor **plus** has been specifically designed to provide the right solution.

Premix **home**found

Premix **home**found contains the carefully balanced preparation of cement, sand and aggregate to produce the required strength to suit the normal range of footings. The mix will vary for more substantial walls.

When ordering, the main dimensions of the trench or slab to be laid should be provided, and our staff will be happy to advise on the volume required. Please also tell us about access and ground conditions.

The mix is formulated for ease of placement and working and is delivered in prime condition.

The **Premix** home range of ready-mixed concrete products is supplemented by a wide range of aggregates for use in base works and decorative applications. These include graded granular material and sand and gravel for sub-base preparation and stone chippings in a comprehensive range of size and colours for use on paths and driveways and for garden features.

Contact your local sales office for details (see page 8).

Premix – *the* choice in concrete

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Laying Premix **home**pave – helpful hints

Excavating the site

Mark out the area of the pad with string lines attached to pegs driven into the ground outside the work area. Remove them to excavate the site, but replace them later to help position the formwork which will hold the concrete in place.

Remove the top soil and vegetation down to a level which allows for the combined thickness of concrete and sub-base (see table opposite). Make the area of excavation about 150mm (6") bigger than the size of pad to be concreted. Level the bottom of the excavation by dragging a board across it. Make sure the soil is firmly compacted and cut back any tree roots which intrude into the work area.

Formwork

Until the concrete sets hard it must be contained all around by what is called formwork or shuttering.

For a straightforward rectangular pad, use 25mm (1") thick softwood planks on edge. The planks must be as wide as the finished thickness of the concrete, held in place with stout wooden pegs nailed to the batten on the outside. The pegs need to be suitably spaced to provide solid support as wet concrete can exert high sideways pressure. Second hand or sawn timber is quite adequate. If it is slightly thinner than 25mm, use more pegs.

The top edge of the planks must be level and correspond exactly to the surface of the pad.

Check the rectangle for accuracy by measuring the diagonals, which must be the same.

If you want to bend wooden formwork, make a series of parallel saw cuts across the width of the plank in the area of the curve. For gentle bends make cuts on the outside, on the inside for tight bends.

Granular sub-base

Sub-base is the commonly used term for compacted hardcore underneath the concrete. This can be crushed aggregate, usually 40mm to less than 5mm fines. If secondary or recycled aggregates are used, for example crushed concrete or bricks, it should be free of contamination. Hanson can supply a range of sub-base products.

Place the hardcore within the formwork and rake it fairly level before compacting it. Break up any large lumps and fill in low spots with fine hardcore or sharp sand, until the sub-base comes up to the underside of the formwork. Use a rigid board supported on either side by the formwork to check the level of the sub-base all the way across.

Placing the concrete

Dampen the sub-base and formwork with a fine spray and let surface water evaporate before tipping the concrete in place.

Start filling from one end of the site - if on a slope, from the bottom upwards - and push the concrete firmly into the corners. Rake it level until the concrete stands about 18mm (3/4") above the level of the framework.

Tamp down the concrete with the edge of a plank long enough to span across the formwork. This is done by starting at one end of the site and compacting the concrete with steady blows of the plank, moving it along slowly as you do. In some circumstances this may require two people. Remove excess concrete using the plank in a sawing motion. Fill in any low spots, then compact and level once more. See page 7 for details on surface finishes.

As soon as the concrete is sufficiently hard not to mark, cover the pad with sheets of polythene to retain the moisture, weighing it down with bricks around the edge. This will prevent the concrete drying out too quickly and cracking. Leave the polythene in place for at least three days. Try to avoid laying concrete in very cold weather.

You can walk on the concrete after three days, but leave if for at least seven days before removing the formwork. If you require access before this, please discuss options with your **Premix** sales representative.

Laying Premix **home**floor – helpful hints

A solid ground floor usually comprises a concrete slab laid on hardcore (often called sub-base). The topsoil is first removed and the hardcore then laid to consolidate the ground and level up the site. The rough surface of the hardcore is filled with a thin layer of sand (sometimes called blinding) which is then rolled flat.

In most instances the thickness of the floor is 100mm to 150mm (4" to 6"). A layer of polythene sometimes called a damp-proof membrane (DPM) is usually laid under the concrete slab. It must be continuous and connected to the damp proof course.

Depending on the floor covering, the top surface of the concrete will need covering with a thin layer (screed) of sand mixed with cement to provide a perfectly level surface. As an alternative, we can supply a low workability concrete using 10mm aggregate.

Replacing a timber floor

Remove all the old timbers and take off the doors to the room. Fill in any holes in the walls left by the timbers. Demolish any dwarf walls which may have been used to support floor joists.

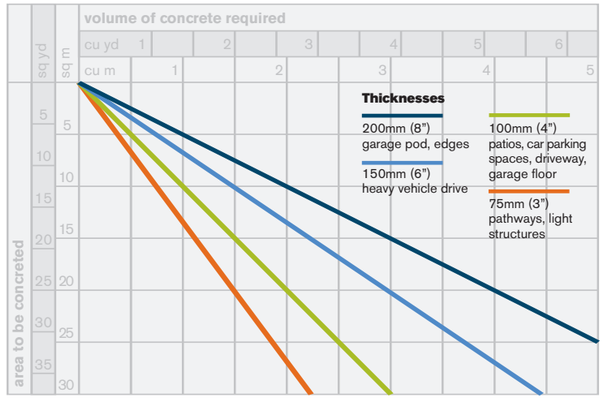
Put a chalk line around the walls to mark the finished floor level, allowing for the thickness of screed and floor coverings if necessary.

Granular sub-base

Sub-base is the commonly used term for compacted hardcore underneath the concrete. This can be crushed aggregate, usually 40mm to less than 5mm fines. If secondary or recycled aggregates are used, for example crushed concrete or bricks, it should be free of contamination. Hanson can supply a range of sub-base products.

Lay the hardcore to within 25mm (1") of the required depth. If the total depth is greater than 200mm (8"), work in layers, compacting each one thoroughly. Blind the surface with a layer of sand rolled flat. This prevents the polythene DPM from being punctured.

	sub base	concrete
Pathways pedestrian traffic only	–	**75mm** (3")
Light structures garden shed, coal bunker etc	**75mm** (3")	**75mm** (3")
Patios large areas for pedestrian traffic	**100mm** (4")	**100mm** (4")
Parking spaces family car	**100mm** (4")	**100mm** (4")
Drives family car	**100mm** (4")	**100mm** (4")
Drives delivery trucks	**100mm** (4")	**150mm** (6")
Garages floor	**100mm** (4")	**150mm** (6")
Garages edges	**100mm** (4")	**200mm** (8")



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Laying Premix **home**found – helpful hints

Damp-proofing
Spread a sheet of polythene not less than 0.010" thick (usually called 1000 gauge) over the sand, turning the edges up the wall all round to form a tray. If joints are necessary, overlap them well and secure with waterproof tape.
If you require watertight concrete or jointing materials, contact your local **Premix** sales office.

Laying the concrete
Tamp the concrete with a piece of timber to compact it and finish level with the chalkline. As you proceed, check the overall surface with a spirit level and straight edge and fill in any hollows. Make sure you finish at the doorway!
If a screed is to be applied, wait until the concrete has set firmly enough to support a plank to walk on, then brush the surface with a stiff broom to prepare it for receiving the screed. Leave it to cure for about three days under a sheet of polythene to prevent shrinkage cracks, which occur when concrete dries too quickly.

The thicknesses recommended on page 5 assume the concrete will be laid on firm subsoil. If the subsoil is clay or peat, or the site is new and not well compacted, increase the thickness by about 50 per cent.

The foundation for success
Provided ground conditions are good, foundations for low-rise buildings and garden walls are often strips of concrete in a straight sided trench. They are commonly known as strip footings. Professional advice should be obtained before deciding that strip footings are suitable for your project. In any case, stringent building regulations govern the size of footings for most walls and the advice of your local building control department should be obtained. They can also advise if precautions are needed against aggressive ground conditions.

Preparing the ground
As a general rule, footings should be in good, firm ground which is well drained. It is unwise to form foundations on ground recently filled or re-graded. Avoid any tree roots and drains.

Dig the trench deeper than the footing itself, so that the first one or two courses of brick are below ground level. If the soil is not sufficiently firm when you reach the required depth (check by pressing your heel into it, which should not make a deep impression), dig deeper until good, firm ground is reached. If the trench starts to fill with water as you dig, seek professional advice.

Keep the sides of the trench vertical and check the bottom is level using a long, straight piece of wood and a spirit level.

Knock a wooden peg into the bottom of the trench near one end, until the top of the peg represents the depth of the footing. Place more pegs along the trench at regular intervals, making sure the tops are level. Cut back any tree roots which intrude into the work area.

Sloping sites
When the ground slopes, make the footing level by introducing one or more steps. Make the steps equal to multiples of brick thickness, allowing for the mortar as well. Make the steps by placing securely anchored shuttering across the trench.

Filling the trench
Pour the concrete into the trench, then tamp it down with a piece of timber until it is exactly level with the top of the pegs. Leave the pegs in place, cover with polythene and allow the concrete to cure/harden before building the wall. In cold weather, provide frost protection.

We can also supply a cost-effective flowing material for trench fill, which discharges from one position, is energy and time saving, self-levelling and needs no tamping.

Please ask your local sales office for details.

Concrete tips for the home user

Before you start work, if your project is a new structure or extension, remember to check legal requirements with your local council or building department.

Draw a layout of what you intend to do. Although it might seem odd to design simple pads and pathways, there are important factors to consider. If nothing else, the thickness of the concrete must be suitable for the weight on it. Also, a slight slope may be required to drain off surface water. If a pad is for a habitable building, a layer of polythene not less than 0.010" thick (usually called 1000 gauge) must be placed under the concrete to prevent moisture rising from the ground.

Preparing for delivery
Concrete is heavy - one cubic metre weighs 2.5 tonnes. It takes approximately 20 barrow loads to move this amount of material.
With this in mind, it is best to have the concrete delivered directly into, or as close as possible to, the laying area. Mixer trucks are fitted with chutes which have a maximum reach of 2.5 metres but remember, they are heavy vehicles and require hard standing or a suitably compacted approach - in most cases this will need to be the edge of a public highway. Where access to the site is limited and does not provide this facility, arrangements should be made for adequate manual transfer of larger volumes of material.

Use boarding and polythene to protect driveways and paving from staining.

Check access, gate widths, manoeuvring areas etc. before ordering and discuss any problems with your **Premix** representative. Alternatively, the hire of a dumper should be considered.

The concrete is workable up to a maximum of two hours from the time of mixing. Every effort should be made to place the concrete within this period.

Remember that adding water will affect the quality and durability of the concrete.

How much do I need?
To calculate the volume you require, multiply the area to be covered by the depth of concrete. For example, a slab measuring 7.2m long by 3.8m wide and 100mm deep will require 2.736 cubic metres of concrete (27.36 sq m x 0.1). Round up to the nearest 0.5 cubic metre to allow for variations in depth and order 3 cubic metres.

Surface finish
The surface finishes resulting from the method described on the previous pages are perfectly adequate for a skid resistant, workmanlike surface for a pad, drive or pathway, but other finishes can be achieved using simple hand tools once the concrete has been compacted and levelled.

Float finish
Let the concrete dry out a little. Bridge the formwork if necessary so that you can reach the whole area. Smooth the tamped concrete by sweeping a wooden float across the surface. For an even finer finish use a steel float.

Brush finish
Flatten the concrete initially with a wood float, then make parallel sweeps across the pad with a broom held at a low angle. This will provide a non-slip surface, particularly useful for external paving.

Exposed aggregate finish
Scatter dampened pebbles onto the freshly laid concrete and tamp them firmly with a length of timber until they are flush with the surface. Place a plank across the width of the concrete, resting it on the edge of the formwork and apply your full weight. This should be done before hardening starts and will ensure an even finish. Leave the concrete to harden for a while until all surface water has evaporated, then use a fine spray or a brush to wash away the cement from around the pebbles until they protrude.

This method produces a very attractive finish, but may take some practice to achieve a perfect result.

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Health and safety

Always observe standard health and safety practice. Contact with wet cement mixes can cause skin diseases such as irritant contact dermatitis, allergic contact dermatitis or cement burns. Suitable protective clothing should be worn when working with concrete (long sleeved clothing, gloves, full length trousers and impervious boots). It is also important to avoid harmful contact through saturated clothing caused by kneeling or sitting on wet concrete. Back injuries are a particular hazard when lifting. Stand well clear of the mixer truck when it is manoeuvring and discharging its load.

Keep children and animals well away from these operations.

Weather

Concrete laying should not take place when heavy rain or frost are expected. Remember that fresh concrete loses its workability and starts to stiffen more rapidly in high temperatures. Polythene sheeting should be used to protect exposed areas of concrete during the curing/hardening process or during protracted periods of high temperature, strong drying winds or heavy rain.

Additional protection to retain heat generated by concrete may be required in extremely cold conditions.

Cleaning tools and machinery

At the end of the working day wash all traces of concrete from you tools and wheelbarrow. Shovel unused concrete into sacks ready for disposal at a refuse dump. Wash any area where concrete has stood. Never hose concrete into a drain.

Placing your order

Ordering the **Premix** home range of ready mixed concrete products couldn't be easier. Simply phone your local office for advice and information (see below). We'll take care of the rest. Payments can be made cash on delivery or by credit card over the telephone.

Hanson **Premix** concrete has customer quality assurance through QSRMC, an organisation solely concerned with the quality of ready-mixed concrete produced under its regulations.

Contact your local **Premix** sales office

Scotland
Tel: **01786 450200**

Northern England
Tel: **0845 120 6293**

North Wales/north west England
Tel: **0845 602 1010**

East and west midlands and east anglia
Tel: **0845 845 6688**

Greater London
Tel: **0845 120 5750**

South east/home counties
Tel: **0845 758 5646/5634**

South Wales
Tel: **0800 393 057**

Cornwall/Devon/Dorset
Tel: **0845 120 6312**

Oxon/Wilts/Glos/Bristol/ Somerset/west Berks/ west Hants
Tel: **0845 120 6313**

Need more information about Hanson and our products? E-mail us at uksales@hanson.biz or visit our website at **www.hanson.biz/uk**