

# BUILDING STRONGER

WITH PPC

HOW TO BUILD  
A CONCRETE  
BENCH



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# A STEP-BY-STEP GUIDE TO BUILD A CONCRETE BENCH

## TOOLS

Shovel  
Wheelbarrow  
Tape measure  
Spirit level  
Builder's bucket  
Mortar trowel  
Steel nails  
Hammer  
Stiff – bristled brush  
Steel square  
Mitre box  
Float, wood or plastic  
Drill  
Saw  
Paintbrush

## MATERIALS

PPC SURECAST  
Clean concrete sand  
Clean stone  
Portable water  
Shutter board (22 mm thick)  
3x3m quadrants  
Demoulding agent  
Wood screws (±60)  
35 mm flat head wire nails (±50)  
1 m reinforcing mesh  
80 grit sandpaper

## SAFETY

Safety shoes (steel toe)  
Overalls  
Gloves  
Dust masks  
Goggles

## STEP 1

BUILDING THE  
WOODEN MOULDS

## STEP 2

MIXING CONCRETE

## STEP 3

POUR, LEVEL  
AND SMOOTH

## STEP 4

DEMOULDING THE  
FORMWORK

## STEP 5

ASSEMBLING THE  
BENCH



If you need technical or sales support,  
contact 0800 CEMENT (236 368)  
or visit [ppc.africa](http://ppc.africa)

# STEP ONE BUILDING THE WOODEN MOULDS

Build the boxes that will form the moulds using 22mm Shutter board.

## Seat (5 pieces)

Base: 1220 x 400 mm (X1)

Long sides: 1220 x 90 mm (X2)

Short sides: 440 x 90 mm (X2)

## Legs (8 pieces)

Wide sides: 200 x 400 mm (X4)

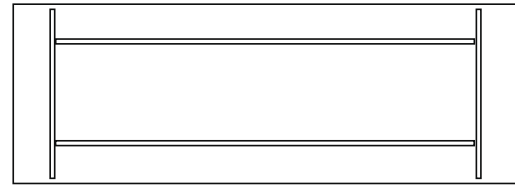
Narrow sides: 300 x 400 mm (X4)

1

Start with the seat, joining the sides and the base by first drilling holes and then screwing them together.

Next do the legs, making two identical boxes by using two wide pieces and two narrow pieces for each.

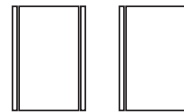
The boxes for the legs don't have a base, you should place them on a flat board to fill them.



SEAT TOP VIEW



SEAT SIDE VIEW



LEG SIDE VIEW



LEG TOP VIEW

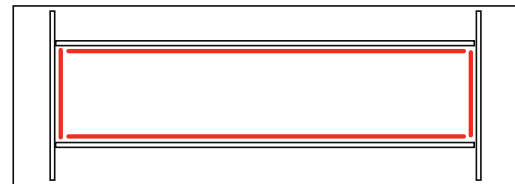
3

The lengths of quadrant must be sawn to size so that they can be used to 'line' all the inside corners of the three boxes.

Cut the ends of the quadrant for the seat at a 45° angle, using the mitre box.

Fit these pieces into the corners of the boxes (curved side outwards) and nail them in place.

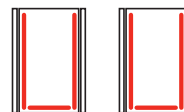
This completes the moulds.



SEAT TOP VIEW



SEAT SIDE VIEW



LEG SIDE VIEW



LEG TOP VIEW

4

Now cut the reinforcing mesh to size, you need a layer for the seat and a piece for each of the legs.



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## STEP TWO MIXING THE CONCRETE

1

Mixing surfaces should be clean from unwanted material (grass, leaves roots (etc.)), if possible, mix on a large flat board with sides.

The surface should be water tight and not absorb a significant amount of water.

2

Use the PPC Builders App Calculator from [ppc.africa](http://ppc.africa) to obtain the volume concrete required.

Mix the concrete using the guidelines found at the back of the PPC SURECAST cement bag. Mix the cement, using 1 part cement, 2½ part river sand and 3 part stone. Cement, sand and stone sequence (this 1: 2 ½: 3 ratio ensures strength).

Remove any lumps, stones or foreign material/objects from the sand.

Pour sand first, making an opening in the middle into which the cement is poured.

Properly mix the sand and cement before adding water. Add the correct amount of water until mix is easy to handle.

Add crushed aggregates and mix continuously whilst adding enough water to give the concrete a desired workability.

The mixture should be fairly sloppy because you will be pouring the concrete into the moulds.

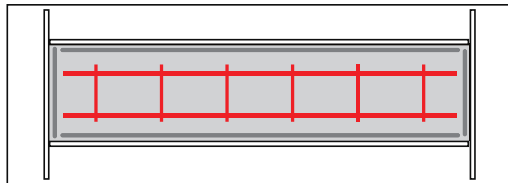


# STEP THREE POUR, LEVEL AND SMOOTH

1

Concrete must be placed within 1 hour of mixing. Apply mould release agent on mould faces in order to easily demould.

For the seat: fill the box to half way with concrete, put down the layer of reinforcing mesh, then fill the remainder of the box with concrete.



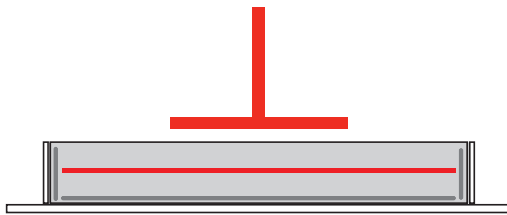
SEAT TOP VIEW



SEAT SIDE VIEW

2

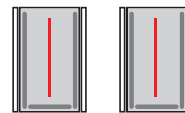
Compact concrete with tamper to remove entrapped air.



SEAT SIDE VIEW

3

For the legs, make sure the boxes are standing on a level piece of board then place the reinforcing mesh inside them and fill them with concrete.



LEG SIDE VIEW



LEG TOP VIEW

4

To create a flat surface (for a slab or driveway) use a straight edge tool.

First use a chopping motion to flatten the surface, then a sawing motion to strike off the excess concrete.



5

Keep the concrete damp by covering it with plastic sheeting, damp hessian, damp sand, or by spraying it with water regularly.

For optimum strength, this curing process should be continued for at least 21 days.



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## STEP FOUR DEMOULDING THE FORMWORK

1

Unscrew the boxes to reveal your handiwork.

Any sharp bits and rough places can be gently sanded smooth with sandpaper. Brush off the resulting powder with a dry paintbrush.

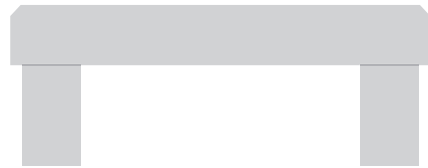
Keep the moulds because they can be reused.



## STEP FIVE ASSEMBLING THE BENCH

1

Place the legs in position and lower the seat onto them, and your bench is ready to use.



**IMPORTANT NOTE: WHILE ALL INFORMATION IN THE GUIDE IS SUPPLIED IN GOOD FAITH, NO LIABILITY CAN BE ACCEPTED BY PPC AS ACTUAL USE IS BEYOND ITS CONTROL.**

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