

THE SOLAR BOTTLE IN 12 STEPS



You've got a dark room with a sheet metal roof ? Created by the Brazilian Engineer Alfredo Moser, the solar bottle is THE solution! With a plastic bottle, a piece of sheet metal, bleach and a few tools, you will be able to enlighten your room with zero electricity!

Cost : \approx 100 Rs
Duration : 2 x 1h30
24h to dry
between each

Material

- A plastic bottle (min 1,5L)
- A piece of sheet metal (\approx 22 cm x 22 cm)
- Silicone or tar
- Mineral water
- 3 caps of bleach

Tools

- A pair of gloves
- Metal scissors
- A pliers
- A hammer + a metal point
- A ruler and a marker
- A brush
- A glue pistol

FABRICATION

Drawing

- Draw a 22 cm side square on you sheet metal , put the line in the hollow of the waves on your sheet metal like the photo
- In the center, draw a circle slightly smaller than your bottle's base



Cutting the piece

For safety, wear some gloves

- Using the metal scissors, cut your metal square





Cutting the circle

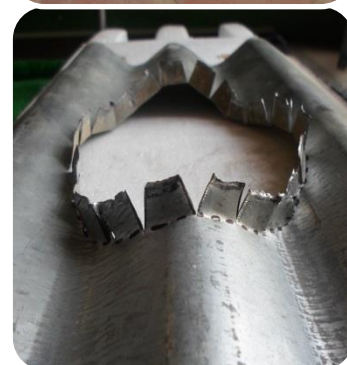
Lean on a wooden support

- Pierce your circle using the hammer and metal point. Adjust your square's position in order to keep the cutting line flat on the support to make it easier



The tightening system

- Measure your bottle's perimeter
- Draw a circle that size around your hole, draw lines between the circle and the hole
- Cut along the lines and tork the small pieces upward with the pliers



Inserting the bottle

- Wash the inside and outside of the bottle
- Insert a third of the bottle from the bottom
- Tighten the small metal pieces around the bottle to maintain it. Be careful not to deform your bottle



Putting the joint

- Make a silicone or tar joint around the bottle on the small metal pieces
- Let dry. Make sure the whole thing is waterproof before going to next step



Filling up the bottle

- Put 3 caps of bleach in the bottle
- Fill it up mineral water





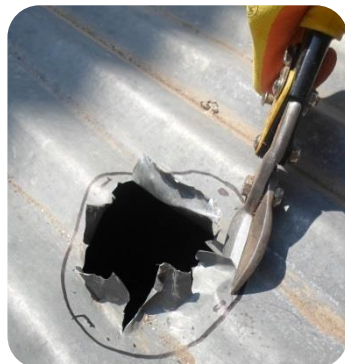
Drawing on the roof

- Draw a circle slightly bigger than your bottle on the roof. Take care to put the waves of your sheet metal and those of the roof on top of each other, like the photo



Cutting

- With the hammer and the metal point, make a small hole in your circle
- From that hole, cut bit by bit the rest of the hole with the metal scissors until you have got the circle you wanted



Cleaning the roof

- Clean the area of the roof where your sheet metal square will be in order to ease the grip of the silicone joint



Final assembling

- Insert your bottle taking great care not to touch the sides or you might damage the bottle
- Seal everything with silicone or tar as shown on the photo



Testing and maintenance

- Make sure your disposal is waterproof
- If you detect a leak after a while, do not hesitate to put some new silicone or tar to seal everything again

