

How to make an inflatable sphere aka "carbon bubble"?

The inflatable carbon bubble is a great tool to transform a protest into a highly playful, fun and interactive event and at the same time raise awareness about the carbon bubble issue.*1 The making of the inflatable can be an inspiring group activity. It can be also used for symbolic or direct action: for example the popping of the inflatable carbon bubble can be very powerful to tell and visualise the future market crash of the fossil fuel industry. This manual is based on our 10 minute video tutorial: <http://vimeo.com/user11411696/inflatablecarbonbubble>

Please email us on info@toolsforaction.net if you have questions. And please send us pictures of your inflatable action!

Yours,
350.org and Artúr van Balen / Tools for Action
www.toolsforaction.net



MATERIALS:

- 3 hours and 2 persons
- strong black bin bags, as big as possible.
- heavy duty double-sided tape with removable protective foil (important: please check if this tape glues well with your type of bin bags.)
- Black gaffer tape & transparent tape
- marker pen - scissors and/or utility knife
- measurer - 5L plastic bottle - cardboard (same size as bin bag)
- fan or air mattress pump



1.

STEP 1: CONSTRUCT THE SAMPLE SHAPE

- Cut out the cardboard in the above shape. The cardboard will be your sample shape. (You can find the shape at the end of this document.)
- Add extra material at one side of the shape. This will be the seam. The width of the seam is dependent on the size of your double-sided tape. This can be between 2 and 5cm in width.

Less width in the tape is easier to work with.



2.

STEP 2: CUT OUT THE SEGMENTS

- Tape the cardboard shape on the bin bag.
- Note that the wide shape of the cardboard should touch the bottom seam of the bin bag. The seam of the bin bag will be the middle of the sphere.
- Mark the outline and cut out the shape. -Do this 8 times.

*1 The "carbon bubble" is first coined by the Carbon Tracker Initiative in their "Unburnable Carbon" Report (2011). A definition of the idea is, that "fossil fuel companies are overvalued because if and when the world ever gets serious about dealing with the climate crisis, the fossil fuel companies won't be able to burn their carbon reserves, from which they derive their value." Kessler, Huffington Post 29.10.2013



STEP 3: TAPE THE SEEMS OF THE BIN BAG

-Tape the seems of the bin bag onto one side to prevent the air from coming out later.

Tip: always gently rub the tape onto the material, so there are no air bubbles between the tape and the material.



STEP 4: ADD DOUBLE SIDED TAPE ON THE SEGMENTS

-Add double-sided tape onto the segments.
-The double-sided tape should be placed on the extra seam you have made before.
-Every segment contains only one side of double sided tape.



STEP 5: CONNECT THE SEGMENTS TOGETHER

-Connect all the segments together. Always start from the middle towards the end in two directions.
-Attach all 8 segments with each other. Attaching the last segment will close the shape.
-After sticking the segments together, always rub the taped seam of the two segments to seal them together.



STEP 6: CUT OUT THE CIRCLES

-Cut out 2 circles to cover both ends of the sphere. An easy way of doing this is using a round cooking pot or pan. Place the pot on a bin bag, mark the shape and cut it out.

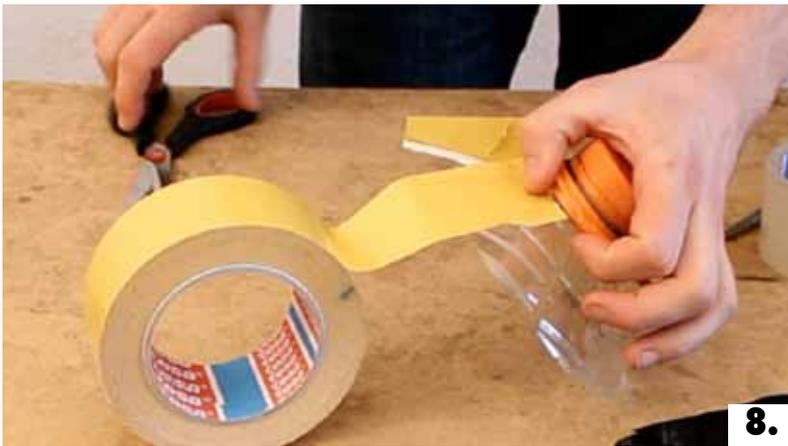


STEP 7: CONSTRUCTION OF THE VALVE

- Cut off the top of the 5 L drinking bottle. (Around 5 cm below the top.)
- Cut into the plastic in a flower shape.

Tip: If you place the bottle cap on the table, it should lay flat.

7.



STEP 8: ADD DOUBLE-SIDED TAPE ON THE BOTTLE CAP

- Add double-sided tape on the sides of the plastic bottle cap. Cover all of the plastic.

Please note, that when you overlap with different pieces of tape, you should always take off the protective foil and tape on the sticky bits.

8.



STEP 9: CUT OUT A HOLE IN ONE OF THE CIRCLES

- Reinforce the middle of the circle-shaped foil with black gaffer tape.
- Place the bottle cap in the middle and mark the outline.

9.

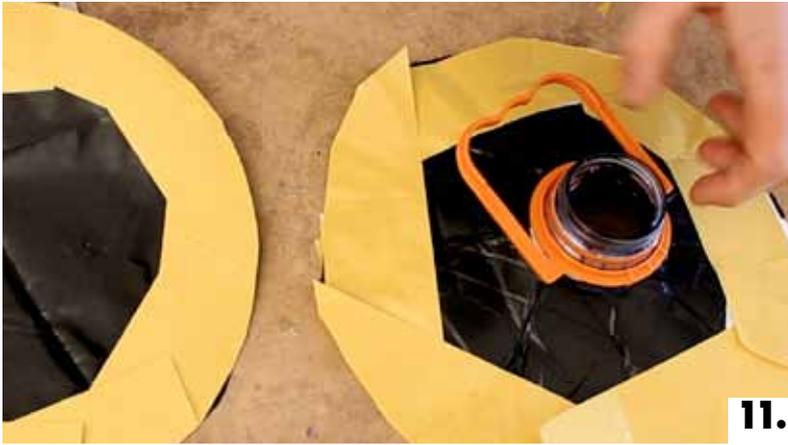


STEP 10: INTEGRATE THE BOTTLE INTO THE FOIL

- Make the bottle very small and squeeze it through the hole. (The foil will not rip, as you have previously reinforced it with gaffer tape.)
- Glue the different sides of the plastic flaps onto the foil.
- Reinforce the flaps with gaffer tape to prevent the air from coming out.

Tip: The easiest way to do this is bending one part of the flaps on a chair and then sticking it to the foil.

10.



11.

STEP 11: ADD DOUBLE SIDED TAPE ON THE CIRCLES

- Add double sided tape on the circles. The tape on the valve should be pointing outwards.



12.

STEP 12: INTEFRATE VALVE INTO THE INFLATABLE

- Place the valve into the hole.
- Take off one after each other the protection foil of the valve and glue to the inner foil of the inflatable.
- Enforce the sides with gaffer tape.
- Do the same with the other circle.



13.

STEP 13: STICK LETTERS ON THE SEGMENTS

- This is an additional step. We like inflatable shapes that speak for themselves, although sometimes its important to write messages on them. Here we cut out letters from paper and stick them on with wide transparent tape.

Tip: The letters will look best, if you do this step when the foil is still flat. So before STEP 5 when you put all the segments together.



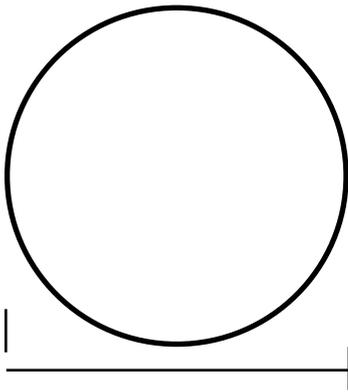
14.

STEP 14: INFLATE!

- Inflate the carbon bubble with an air mattress pumps or hand pump or leaf blower from the hardware store or other small fans. For mobile purposes, we use bilge blowers (fans they use on boats, that run on 12 V). For power we connect the blower to a 12 v car battery. We connect the air exhaust to a plastic bottle that we cut open. The plastic bottle fits into the hole of the bottle cap.
- Happy Inflation!

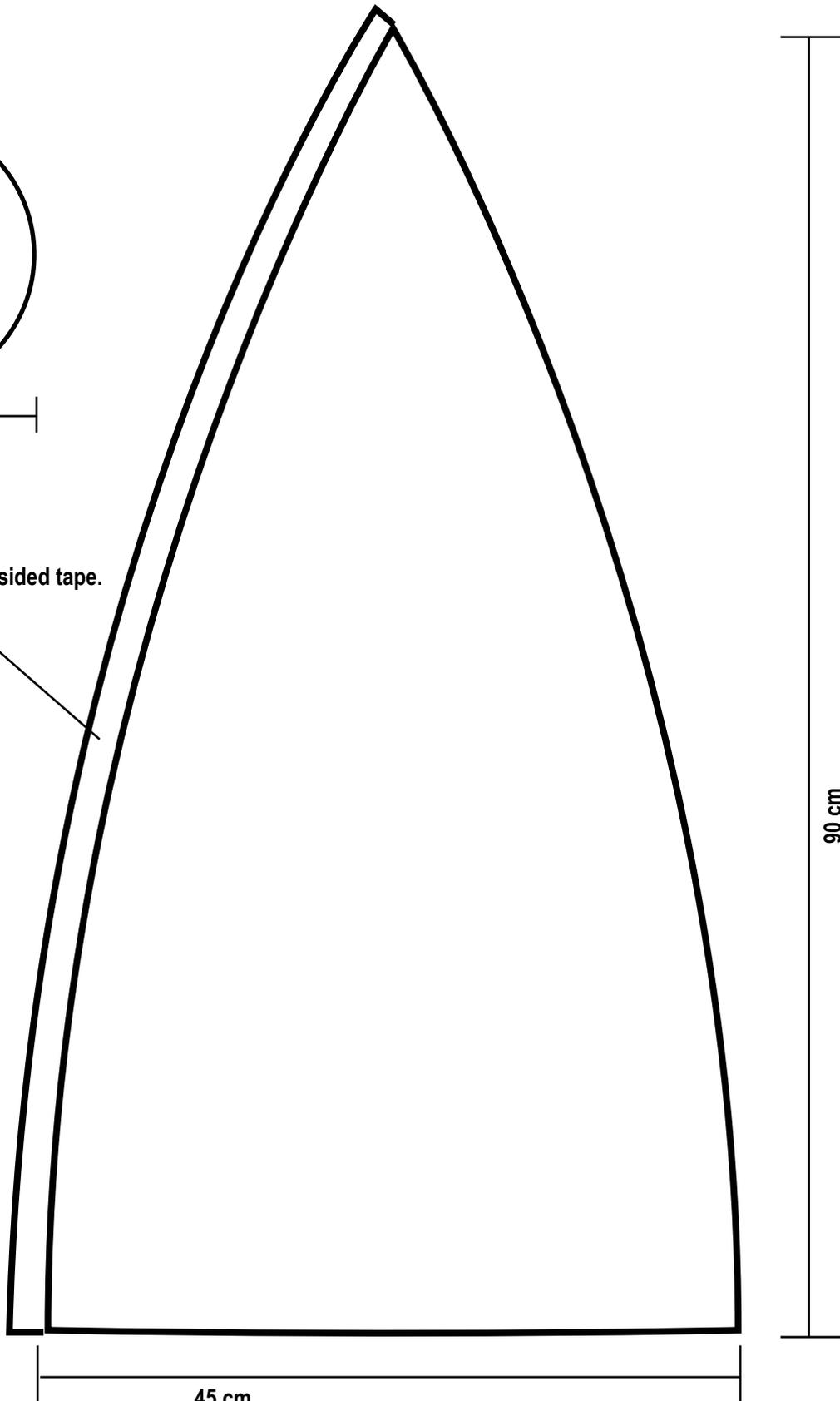
The basic shapes of the sphere aka carbon bubble:

You can project this shape on the wall with a projector or enlarge the drawing with a photocopy machine. The size can be variable, according to the size of bin bags you have. The bigger it is, the more impressive it will be.
Be aware that the height of the inflatable is not the height of the sphere, as this will be curved.



Diameter can be variabel.

2-5 cm
extra seam for the double sided tape.



90 cm
height = dependent on the max.
size of your bin bag.

45 cm
width = 2 x height