Thank you for your interest in this Guide, 
with this you can start creating your very own space marine costume!

We came up with making “power armor” after seeing 
a few photo’s online and thinking we just might be able to build a better one. 
And to show off of course. 
Although we used these techniques to make a “Space Marine” you could use it to make any 
kind of bad ass armor that suit’s you.

⚠️ WARNING ⚠️

This project is big, really big! 
It will swallow up more time and money than the game that originally started it and I think that many of you (although I hope not) might never finish it. 
Also we want to make clear that we are not related to Games-Workshop in anyway and any of the models used in this guide are for reference purpose only! 
We are not responsible for any accidents, mishaps, deaths or financial disasters that can occur during construction. Read the guide before doing anything!!!

Have fun and good luck!

If you have questions u can mail to Lord_kevin18@hotmail.com or cypermelchior@hotmail.com
Step 1
First thing you would want to do is to get yourself some reference (we got some miniatures and modeled/painted them exactly how our costumes would have to be although eventually we made a few changes to the details of the design).

Step 2
Get yourself some clothes, gloves and rubber boots with the appropriate under-color. (We used a black long-sleeved T-shirt, black trousers, a black balaclava, normal rubber boots and some workers gloves.)
Step 3 fabrications.

1) Weapons.
First off we made the weapons to get a feel for the materials we were going to use. The "Chain sword" was sawn out of a single board of wood, which you can still see in the photo. Then we cut blocks of PU-foam and carved the right shapes out of the blocks. Those blocks were put on the board. Then we used black cloth and "Paverpol" to make the stiff outer side, and finally added some details like purity seals and chains. The bolt pistol is carved out of a big block of PU-foam.

2) Breastplate.

The breastplate is one of the most difficult pieces and needs the most work. First you build a skeleton out of wood. The wood we used was plywood because it's cheap and it's easy to get. Tip: Make sure you don't put too much tension in the construction by forcing pieces into place, because if you create tension, then when you split the torso into a back and front part, the construction will deform. Tip2: first glue the parts with hot glue and then after it's solid you screw the parts together.

You start with the underside of the plate. You cut 4 pieces of 1/3 of a circle, with a radius of about 25cm. Those pieces you pin and glue together to get a bent hoop:

Next is the top: Cut out a circle and half of a circle but with a bigger outer radius. Also cut about 4 cm off each ends of the half circle. Screw them together like on the picture, don't glue them because they have to come apart later on. Now connect the underside and the circle with 4 bent pieces. Cut away about a quarter of the upper circle and glue it back but point it a bit down.

The upper and lower parts are connected so now you cut out two ovals. These ovals are the holes for your arms. Cut two square pieces and put them at the ends of the half circle and screw them to the uppermost circle. Screw the ovals to the two square pieces. Cut 2 pieces the quarter of the ovals you used for the armholes. Now those 2 pieces you connect with the square pieces and the ovals. This is needed later on so you can have a good front and back part. Now cut 4 pieces to connect the ovals to the underside, this is also to get a front and back part later on.
Now you make a box about 25 cm x 20 cm with two holes in it. These holes are for the hooks of the backpack. Cut out 2 pieces so you can fixate the box between the two pieces that connect the upper and lower part.

Now the breastplate is done and you can split it into a front and back part. Cut through the ovals between the two pieces at the bottom (RED) and cut through the ovals’ higher curve, where earlier, you installed the smaller pieces on the inside of the oval; **but don’t cut through the smaller pieces just the outer ovals (RED)!** Now screw off the upper-most circle from the half circle to complete the front and back piece of your armors torso.

Now you can stuff the skeleton full of PU-foam, gluing it to the skeleton using PU-foam out of spray cans that you can fit on a PU-gun. Make sure you use enough PU-foam that it fills up the skeleton good, leaving no gaps. Gaps can be filled up with chunks of PU-foam and spray it full of foam out of the gun. After the foam you sprayed on it to glue it all to the skeleton has dried, you grab a big knife and start cutting until you have a good shape. Now you grab some sanding paper and start sanding until you have the right shape and a nice smooth surface.

### 3) Upper legs

Building the legs is just like the breastplate, you build a skeleton and line it with PU-foam. The upper legs: Start by cutting out two “big” ovals, and two circles. The two ovals have to go around your leg at an angle of about 45 degrees, so make sure the size is ok. Don’t make the legs to tight or you won’t have much space left for the PU-foam. Now cut about a quarter out of the circles. Cut out an arc and glue it to the circles at an angle, you need this in order to bend your legs so you can walk stairs and sit down (if you have the space). Now you can cut out pieces to connect the oval and circle.

When you finish the skeleton you can line it with foam. When the foam is in place you can start cutting and sanding it into the right shape.
4) Lower legs:

The lower legs are much like the upper legs, but now you just have to build two of the same because the left and right legs are alike. The upper part of the legs are done like the lower end of the upper legs; Two circles and two arcs. The lower parts of the lower legs are two big circles. The circles are cut through the middle, before you put the circles back together by gluing them at an angle. For better fixation you add triangular pieces on both sides of the circles. Now you can connect the upper and lower parts just like you did with the upper legs. Finally, line it with foam and cut/sand it into the right shape.

5) Backpack

You start by cutting out a board, then you cut out these things that look like old-fashioned crosshairs with a stick on the end. Cut some rectangular pieces that you screw onto the sticks of the crosshairs. Now you can screw the crosshairs to the board. Screw the crosshairs on at an angle, but make sure they are at the same angle. Cut out the “hooks”. These hooks, hook into the holes of the box on the backside of the breastplate, so make sure they fit. Screw the hooks onto the board.

Now cut out straight pieces to connect both crosshairs. Three pieces should do it. Now you can fill it up with foam and shape it. For the spheres on both side of the backpack we used Styrofoam spheres that you can buy at hobby shops. These balls are then connected to the backpack with PVC tubes. Glue or screw the tubes onto the crosshairs. Cut a hole in the Styrofoam ball and shove it onto the tube.
6) “Power pants”

The “power pants” as I like to call them are made by cutting out three circles. These circles are glued and screwed (if possible) together. Now line it with foam and shape it into the right shape. Now cut out the wood between the red lines, **when you do this make sure the foam holds the rest of the wood together.** Finally you can sand the crotch into the right shape. Also, the belt on the pants can be made separate so you can have a robe that goes underneath it, just like mine. If you don’t have a robe you will probably just want to make the belt as a part of the pants themselves.
7) Arm’s

Arms are just some PU-foam plates glued together and shaped into the right shape.

![Arms](image)

8) Shoulder Plates/ Pauldrons

Just like the arms, some PU-foam plates glued together and shaped into the right shape.

![Shoulder Plates](image)

9) Boots

For the boots just buy some rubber. Now cover the foot part of the boots with a lot of PU-foam from the PU-gun. After it is hardened you cut and sand it into shape.

![Boots](image)
Step 4 Paverpol.

For our armour we used Paverpol. In our case it was the cheapest way to do it, but you might be able to do it with for example fibreglass, that’s all up to you!
For all the folks who don’t know what Paverpol is: [http://www.paverpol.com/en_aboutpaverpol.html](http://www.paverpol.com/en_aboutpaverpol.html)

Now that all of the woodwork, PU-foam cutting and sanding has been done you can cover it up with fabric and Paverpol. The best fabric to use with Paverpol is cotton. Don’t use material that is too thin, like old bed sheets that’s too fragile. If the fabric is a bit thicker it will work better and will be really strong. The best way of working with Paverpol is with your bare hands. Don’t use gloves it makes it hard to work with. When you’ve soaked you piece of cloth in the Paverpol, squeeze out most of the Paverpol. This way it will harden out faster but you will be able to go on longer with your Paverpol. Lay your “Paverpolled” parts drying in the sun. This way a part can be cured in just a couple of hours.

A trick while covering up your parts is to use multiple pieces, but don’t try to do it all in one go. Do the top/front first, let it harden out and then do the bottom/back. Also do a “dry-fit” first, so first you cut out the pieces and fit it to the part. After that you take off the pieces and apply the pieces with Paverpol to the part. Note that the pieces of cloth may deform because of the Paverpol. The hardened fabric can be sanded, but don’t overdo it! Paverpol will be transparent once cured, so red fabric stays red. This way you don’t need much paint if you need to fix things.