How to Make Gunge

Step 1- Gather the materials
The main ingredient in gunge is a food thickener. There are a number of options open to you.

If you are in the UK Natrosol HR250 (often mis-spelt Natrasol) from The Basic Chemical Company (see address below) is a good material. This is the supplier the BBC have used (not sure if they still do, but I wouldn't be surprised)- You will need to buy a minimum of 1 kg of the natrosol, but this makes a good gunge.

The Basic Chemical Company (UK) Ltd
Hillbottom Road
Sands Industrial Estate
High Wycombe
Buckinghamshire
HP12 4HJ
01494 450701
http://www.basicchemicals.co.uk/

Ebay/ other websites
There are other suppliers that well sell you smaller quantities, either found on the web or through Ebay. Personally I don't believe these generally offer particularly good value, unless you only want to make one bucket full. It is likely (although I stand to be corrected) that these suppliers are selling on re-packaged Natrosol .

Xanthan Gum- this is sometimes available from the supermarkets (certainly Sainsburys) or health food shops as it is used as a gluten replacement.

Guar gum- another alternative that can sometimes be found in health food shops.
If you are in the US, you can use Methylcellulose (Methocel) from The Chemistry store-

www.thechemistrystore.com or Ethylcellulose from Douglas and Sturgess- www.artstuf.com
Elsewhere you may need to find a local source for one of the thickeners.

There are many other recipes for making goo, both on Instructables and other places on the web as well as commercial products, so why use this one?

You enjoy making things and you will probably learn something new whilst making this
The cost will be significantly cheaper than buying a commercial product
You have full control of the properties of the goo- from runny to thick, clear to opaque and colourless to vivid colours
You can happily make large quantities of goo- even filling a paddling pool becomes practical (think how many tubs of toy shop slime you'd need to this, or how much PVA glue)
The materials are easy to store- you can easily keep some on hand for rainy day play, or next Halloween
The gunk is a bit sticky- it therefore has a much better feel, and visual appeal than some commercial products (like Gellibaff), that simply run off.
The materials are biodegradable, and hence easy to dispose of
Most importantly- it's more fun than buying it!

Possible Thickeners

The substances used to make gunge generally have long shelf lives (normally several years) and so can be bought in larger quantities and stored if desired. Moisture is their biggest enemy, so they will need to be packaged in a well sealed container.

You will also need:
powder or poster paint
Suitable container to mix in- bucket for the quantity described
Scales
Wooden spoon, whisk, paint stirrer or similar

Step 2 - Preparation
Measure out the following quantities of materials. I use plastic cups or a jug to do this, but a piece of folded paper will work as well. Quantities do not have to be precise, but it may help you make a batch the same in the future if you can be fairly accurate. The water can go into the mixing container straight away.

Powder paint 160 grams (2%)
Thickener 96 grams (1.2%)
HOT water 8 litres

Weigh out Ingredients & Measure Water

Step 3- Mixing

There will be variation in the properties of the gunge, most importantly the viscosity (thickness), dependent on the materials used. It is therefore worth experimenting with small quantities first before you make a large batch, until you have a goo you are happy with. The quantities given in these instructions will work well with natrosol, and will therefore serve as a good starting point. You will want to mix up in an area where a spilt mess can be easily cleaned up, so probably not your living room!

Start by mixing in the colouring into the water- 2% will give a good level of colour and opacity for most uses, but dependent on what you want to use your gunge for you may need to vary between approx 1% and 5%. Liquid poster paint (tempera) can also be used, but I wouldn't recommend food colouring as it stains easily.

Mix in the Colourant

Water must be hot for the mixing to work correctly. If natrosol is dispersed into cold water, the thickener tends to drop out and form a jelly that won't then mix correctly. I tend to use hot water straight out of the hot tap.

Add the powder into the water slowly whilst stirring thoroughly and keep stirring until you notice the water starting to thicken up, and there are no lumps. This will usually take a couple of minutes.

Add the thickener and mix thoroughly

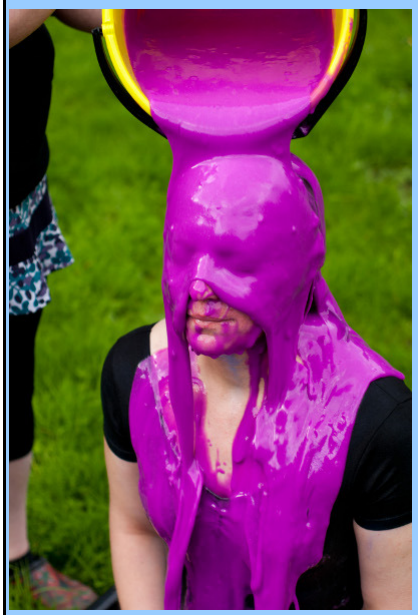
Step 4- Use and Disposal

Leave the gunge to stand before using it. It will need time to cool, and as the viscosity slows convection, this will take a lot longer than ordinary water. For natrosol the mix will take about an hour to thicken up to full viscosity- I often leave it to stand all night. Other thickeners may need a different length of time

Use it on a slip and slide, fill water pistols with it,enjoy tipping it over your friends, fill a bath with it, re-create your favourite messy game show, use it in your next blockbuster alien home movie, pretend to be a Ghostbuster, fill a cauldron with it for an unusual lucky dip, challenge your friends to a messy wrestling event or find other uses for it the world is not a gooey enough place....

It is possible for the gunge to stain, so keep away from soft furnishings and make sure any clothes that get covered are washed thoroughly and preferably before the gunge dries.

The gunge can be disposed of down a normal drain, but it is well worth diluting it with water first so that it flows easily and doesn't block your drains. If left to stand for a few days after use it well generally break down to a watery consistency, which will aid disposal.



Pour it over your friends!

Safety
Whilst I have been careful to only recommend materials that are not known to have any significant health risks associated with them, they cannot be classed as completely hazard free.

The largest single issue is the slipperiness of the gunge- it can be very easy to slip over on. It is therefore essential to consider this when planning any activities involving gunge, including clean up and washing off as the most significant effects will be found on a smooth surface such as a bath!

Most of the materials are supplied as relatively fine powders, and as such create nuisance dust. It is therefore worth wearing a dust mask when handling large quantities. Likewise if this dust gets into eyes it can cause irritation so goggles may be appropriate.

Most of the materials are sold as safe for skin contact and to date I have not had any problems with this. I would however be slightly wary of allowing prolonged skin contact with the colourants as it may stain!

All of these main materials are not hazardous when eaten, however many are used as laxative additives, so it would probably be unwise to consume large quantities !

In addition to the specific information above, general safe chemical handling practice will further reduce the risk of any issues, in particular;
Store materials in sealed, well marked, containers in an area out of reach of children and pets
Wash hands before and after handling these materials
Dispose of excess/ used materials/ empty packaging responsibly
Wear dust mask when handling powders
Clean up any spills quickly- Avoid using water to stop the area becoming slippery
Do not use utensils/ containers/ cleaning cloths that will be later used for food
Supervise children if they are making the gunge