



# Samsung CLP-320 / CLP-325 / CLX-3185 Toner refill instructions

These Copyleft instructions, made available free of charge at [www.urefilltoner.co.uk](http://www.urefilltoner.co.uk) are based on those included with our Samsung CLP-320 Starter Kits, also available in the UK and Europe at [www.urefilltoner.co.uk](http://www.urefilltoner.co.uk). A Starter Kit is our "zero to hero" kick-start. It's got all the materials and know-how you need to refill your empty cartridge. And get it right. **First time.**

These instructions show you *how we did it*, not how we *imagine* it could be done. In the case of the Samsung CLP-320, before releasing our Starter Kit in May 2011, we'd successfully done this refill 17 times. Most of the pages printed during these tests were sent out to customers in the form of instruction booklets.

As you'll see, this document avoids refill problems through detailed guidance on **critical issues which would only be known to people who have actually worked with the machine.** Most importantly for this printer, *when* to refill.

We've left in all substantial information needed for a successful refill, assuming you were using our products. Obviously, we can't guarantee the efficacy of a refill if you're not actually using our stuff.

Only more specific information about the tools and equipment included in our Starter Kit has been removed because it isn't relevant if you haven't actually got the Starter Kit in your hands. No substantial information about the refill technique that worked in our test lab - 17 times - has been removed.



The majority of our instruction booklets are only available included in their respective Starter Kit. Those that, like this one, are available for free, are only released after we've been selling the commercial product for a reasonable amount of time. That's because, although this document is free, we're a business and we can't do everything free all the time.

Apart from that, in this Copyleft, you have to put up with extensive water-marking over the photography. We apologise for that, but we're forced to do it because of intellectual property theft by our "competitors". Well, actually, we're at peace with the fact they copy our inventions and most of our ideas: the watermarking only stops the very worst cases of wholesale commercial rape.

If you **are** a competitor and you're reading this: don't sell a refill to your customers if you can't be bothered to try it yourself first. You'll end up with a lot more satisfied customers. Customers who'll remember you the next time the dreaded "toner low" message appears. If you haven't got the test lab and man-power resources available at U Refill Toner, then feel free to get in touch about using our instructions under license through our web-based contact form. That's not free, by the way. But then neither is developing any product that works properly.





## When to refill

Ignore the computer screen pop-up messages that say "Prepare new \_\_\_ toner cartridge" and "Replace with new \_\_\_ toner cartridge".

Refill **EITHER** at "End of life, Replace with new \_\_\_ toner cartridge" message (the machine also refuses to print at this point):



## OR

Refill at **toner fade out** **WHICHEVER** occurs first.

**Warning:** only refill the target cartridge. I.e. the cartridge indicated in "End of life" message above or the cartridge that has **fade out**. **DO NOT refill them all "while you're at it"!** We mean it!

## Knowing which cartridge is fading out

You'll see from your prints that something's fading, but depending on what you're printing, it's not always obvious which colour is the culprit. The mainly blue image right shows the kind of counter-intuitive effect you can get

Cyan cartridge starting to fade. What should be royal blue is actually pink



It's crucial to know which of the four cartridges to refill. Download this 4 colour A4 swatch from:

<http://www.urefilltoner.co.uk/downloads/toner-refill-fade-out-swatch.pdf>



Print the swatch a few times and identify the fading cartridge as follows in this table:

Colours affected on swatch	Cartridge fading
Black only	Black
Blue only	Cyan
Blue and orange	Magenta
Yellow and orange	Yellow

Having identified the fading cartridge, refill it according to the "How to refill it" section below. **But remember, if you've had the "End of life" message above, you can refill the colour mentioned straight away without worrying about fade out.**





## How to refill it

1. Turn on melting tool and leave to heat for at least 5 minutes
2. Melt hole as shown below. Note: toner compartment roof of black cartridge is raised whereas colour cartridges are flat.



3. Shake unopened bottle vigorously for 5 seconds.
4. Open toner bottle and screw on spout.
5. To avoid leakage of micro fine toner, wrap any kind of tape around join between spout and bottle: selotape, brown parcel tape, gaffa tape etc.
6. Hold cartridge near vertical with one hand. Use other hand for bottle.
7. Keeping bottle below horizontal, marry spout with hole. Up-end bottle into hole for a slow count of 5, leaning cartridge back to about a 45 degree angle.

**Note: due to smaller toner compartment, extra time and care need to be taken when refilling cyan, magenta and yellow cartridges**

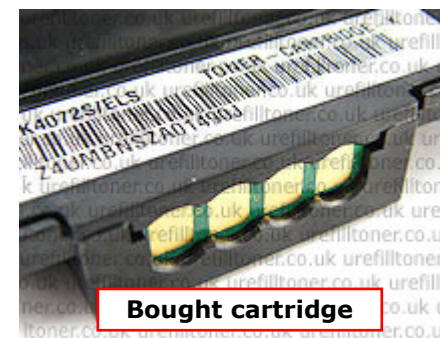


8. Bring cartridge near vertical again, rotating bottle back down to horizontal position and disengaging from cartridge as you do so.
9. Shake bottle with finger firmly over end. Repeat pouring until no toner left in bottle.
10. Clean surfaces around hole with swab. Allow alcohol to evaporate.
11. Unpeel Gaffa tape patch from backing and apply to hole as shown

To avoid leaks, aim for a firm contact to all flat surfaces near entrance of hole.

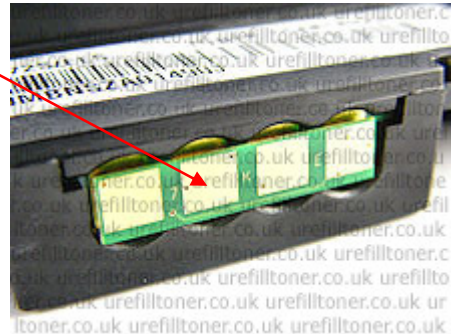


12. Locate position for replacement chip. Note: Starter cartridges differ from any subsequent bought cartridges in that they do not have a chip installed.





13. Peel off self-adhesive backing from compatible chip and stick into position. Whether fitting chip on a starter or a bought cartridge, end result looks like this or like this with alternative chip type



## Other consumables used by the printer

Besides the four toner cartridges, the printer also uses an imaging unit and a waste toner container.

These components have their own life-cycle which isn't affected by whether or not you refill the toner cartridges. Refer to your manual for full details.

## Limits to refilling a cartridge

Our experience in the test lab shows that 3 to 5 refills can be expected from the CLP-320/325 Series cartridge.

The defect that stops the fun will be different depending on what fails: doctor blade, dev roller, retaining blade or something else. Suffice to say, if you've got a persistent print defect that isn't attributable to toner fade out as (as described on page 1) then there's not much you can do but buy a new cartridge and start again.

If that doesn't fix the problem, you need to think seriously about whether it's actually the imaging unit that needs replacing. We suggest changing a toner cartridge first because that's the cheaper option. Don't forget to use the swatch at

<http://www.urefilltoner.co.uk/downloads/toner-refill-fade-out-swatch.pdf>

to help figure out which colour might be causing the problem.

## Don't update your firmware

The way the printer responds to chips can be modified by updating its firmware. **Do not allow the printer to update firmware across the internet.** Disable any default options to do this. Firmware updates can refuse to recognise our compatible chips. And if so, it's normally "game over" on refilling for an indeterminate length of time.

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