

Refill your Samsung SCX-4100 series cartridge

Before use, familiarise yourself with the safety data on page 4 & 5.

Take maximum care when using a screwdriver as a lever. Use precautions such as gloves and eye-protection to guard against injury due to accidental slippage.

Starter cartridge is different

When you buy a new machine, it arrives with a so-called "starter cartridge" that has a lot less toner than the original cartridge you buy later. It also has a smaller toner compartment, so you can only refill it with 30g of toner – about half of the amount that will fit into the bought Samsung cartridge.

How to spot the "fade-out point"

There's no toner low signal from the machine. We were left to deduce that the cartridge was empty as the image started to fade out vertically down the page, which normally happened from the right side of the page. Taking the cartridge out and shaking it at the first fade out allows about another 60 pages to be printed before the fade out appears again.

Vertical fade-out that can be cured by shaking the cartridge, but then returns shortly afterwards, is the tell-tale symptom of there being no toner left. If you want to be clinically precise, the weights of the cartridges with no toner in are:

Starter cartridge empty weight 621g Original cartridge empty weight 676g

Starter cartridge refill



1. Make sure cartridge is at fade-out point (see page 1, paragraph 3)
2. Take out 5 screws.
3. At back, near handle, insert flat blade screwdriver between two halves of cartridge.
4. Twist blade to free lugs, lifting top half of cartridge at same time. Lid of cartridge will come off, exposing toner compartment.



Lugs to be freed are in these holes. Repeat this action to left of cartridge handle if necessary.

5. Screw spout onto bottle and wrap sticky tape around join of spout to ensure no leakage of toner.
6. Note worm gears at each end of a horizontal bar.



We're aiming for a toner level that just covers those worm gears so we can't see any of their teeth. Here's the right fill level: you'll see the toner level is just short of a foam gasket.



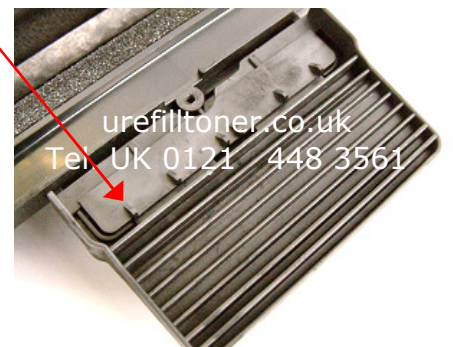
You might find that the stirrer blade confuses you. It's a strip with windows bonded to the same shaft that connects the two worm gears. Pay no real attention to it. Focus on the worm gears being just covered and the level being short of the foam gasket as explained above. With the stirrer blade in play, the correct level looks something like this.



7. CARE! A full bottle holds 3 times the toner you want to pour in. Go little by little, stopping to even out the toner by shaking the cartridge from side to side.
8. Hold finger firmly over end of spout, shake bottle for 10 seconds.

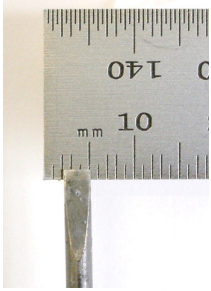


9. Slowly spread a layer of toner along length of compartment.
10. Stop pouring and shake cartridge from side to side to even out toner.
11. Check the level as described in 6. Stop if there. Carefully put more in if not.
12. Place handle piece in correct position for re-assembly. Note triangular teeth face upwards.



13. Snap cover back on and screw down with 5 screws.
14. Put refilled cartridge back machine and wait a few moments while it initialises.

Normal cartridge refill



You need a small flat blade screwdriver to lever the plug out. We found it easiest with one, which was 3mm wide at the tip, where the metal was 0.5mm thick. Bigger, fatter screwdrivers can't get behind the lip of the plug.

1. At top of cartridge, insert 3mm screwdriver behind flange of plug.



2. Push screwdriver into cartridge down side of plug and start to lever out.
3. When plug has moved out a little, try to pull with fingers to avoid damage.
4. Some damage to plug is unavoidable. This plug didn't leak during first refill, but leaks can be sealed with bathroom sealant or soft-drying glue.
5. Screw spout onto bottle and wrap sticky tape around join of spout to ensure no leakage of toner.
6. Use one hand to hold cartridge ready at 45-degree angle.
7. Hold finger firmly over end of spout, shake bottle for 10 seconds.



8. Approach spout to hole and up-end into hole. Jam in firmly and wait 60 seconds.
9. Bring bottle back down to horizontal and move away from hole.
10. Hold finger firmly over end of spout, shake bottle again. If you feel there is still some toner left in, approach to hole, up-end, jam in and wait as before.
11. Replace plug with damaged areas towards top of cartridge – alternatively, if supplied, use replacement new orange plug.
12. Shake end of cartridge over a sheet of white paper. If it leaks, seal with bathroom sealant, soft-drying glue or a rubber-based glue like copydex.



Safety Data Samsung SCX-4100 type toner powder

Not to be used by children. Avoid inhalation of product. Avoid eye and skin contact. Do not ingest.

1 Identification of the substance and the company

Product name	Samsung SCX-4100 refill toner
Part no.	SA4100BOT
Supplier	U Refill Toner Ltd. Contact details as per page header

2 Composition

Ingredient name	CAS No.	% weight
Styrene acrylate copolymer blend	25036-16-2	45-60
Iron oxide	1317-61-9	25-35
Pigment	NA	0.1-0.2
Polypropylene	9003-07-0	1-4
Carbon black	1333-86-4	1-2

3 Hazards identification

Toner dust is a combustible powder the formation of an explosive dust-air mixture is possible. Toner dust may cause discomfort for the eyes and respiratory tract.

4 First aid measures

General	Get medical attention if any discomfort continues.
Inhalation	Move the exposed person to fresh air at once.
Skin	Remove affected person from source of contamination. Wash skin immediately with soap and water.
Eyes	Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eyelids. Continue to rinse for at least 15 minutes.
Ingestion	Dilute stomach contents with water. If large quantity swallowed seek medical advice.

5 Fire fighting measures

Extinguishing media	Water spray, foam, water
Special fire fighting procedures	Avoid breathing fire vapours
Unusual fire & explosion hazards	Non-flammable, but when suspended in air is combustible as with most organic powders. Generates massive smoke during fire. Avoid all ignition sources.

6 Accidental release measures

Personal precautions during spill	Avoid breathing dust
Spill clean up methods	Avoid generation and spreading of dust. Shovel into dry containers. Cover and move the containers. Flush the area with water.

7 Handling and storage

Usage precautions	Use mechanical ventilation in case of handling which causes formation of dust.
Storage precautions	Keep in cool, dry, ventilated storage and closed containers. Keep in original container. Max. storage temperature 38°C.

8 Exposure controls and personal protection

Treat toner as a nuisance dust. Avoid eye and skin contact. Do not ingest. No special technical measures. Industrial hygiene: after skin contact wash with cold water and soap.

9 Physical and chemical properties

Appearance and odour	Black free flowing powder, faint odour
Solubility in water	Negligible.

10 Stability and reactivity

Thermal decomposition	Above 300°C
Hazardous reaction	none
Hazardous decomposition products	None at intended use
Combustion products	Carbon dioxide

11 Toxicological information

Threshold limits	No data
Routes of entry	
Eyes	Possible may cause slight discomfort
Inhalation	Possible may cause slight discomfort
Skin	None known, no adverse effects expected
Ingestion	Possible, considered harmless
Health hazards	None known
Carcinogenicity/mutagenicity	None found
Medical conditions aggravated by exposure	None known

12 Ecological information

Environmental hazards	Not regarded as dangerous for the environment. Not biodegradable.
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13 Disposal considerations

Disposal methods	Pack in dust proof containers to prevent dust exposure. Dispose of in accordance with Local Authority Requirements by landfill or incineration. Do not throw in open fires to prevent risk of dust explosion.
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14 Transport information

General	Not regulated
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15 Regulatory information

The product is not classed as a dangerous preparation according to European directives 67/548/EEC and 88/379. Therefore, indications of special risks or safety advice on the packaging are not prescribed.

16 Other information

Use	Dry powder ink for use in laser printers
Room ventilation	See operators manual or safety data sheet for printer

Notice. All safety information is given to help facilitate the safe use of this product and is based on information obtained from the manufacturer. This information is believed to be correct, but does not purport to be all-inclusive and shall only be used as a guide. U Refill Toner Ltd makes no warranty, express or implied, as to the accuracy or completeness of this information. It is the user's responsibility to determine the suitability of this information for the adoption of necessary safety precautions and / or compliance with local laws and regulations.

All information offered is believed to be true and is offered for consideration in good faith. However, U Refill Toner Ltd gives no warranties, neither explicit nor implicit as to the completeness or accuracy of any information offered nor the ultimate safety of refilling toner cartridges in any manner described or suggested nor the ultimate safety or hazardousness of products supplied by U Refill Toner Ltd. The onus is on the purchaser to evaluate all possible risk, including the possible incompleteness or inaccuracy of currently available information, and by proceeding to use the refill product or products, the purchaser thereby assumes all risk of peril or injury howsoever arising.

If you the purchaser decide not to go ahead with refilling for whatever reason, simply return the product or products to U Refill Toner Ltd and we will cheerfully refund your money. Your statutory rights are unaffected.



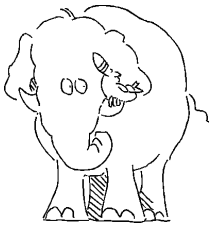
Please, tell three people what you've done

OK, we admit it. This is our begging act. Have you saved money by using our DIY kit? Did you feel a touch of pride as your cartridge *did* print again? Maybe you found some environmental satisfaction? Or perhaps you feel it should be refilled "because it's there". We sincerely hope we've helped float your boat in some way. And if so, then please help our voice in the wilderness and tell at least three people about what you did with your empty cartridge.

We all know a lot of people: at work, in the family and in clubs and groups. Why not make a point of telling just three of those people about what you did with your empty cartridge? Even if they don't have printers themselves, they probably know people that do.



Why not copy these instructions and FAX them to three work contacts? Why not make some photocopies and give them to people that you know use computers? Why not broadcast an email to your email pals? In our experience, people will probably thank you for getting organised to spread useful information and it enhances your (doubtless already legendary) image as someone who knows their stuff. A battered home world might just benefit from your efforts as well.



Don't forget

You can easily refill **desktop copier cartridges** by Canon, Sharp and Xerox. Plus enjoy more refilling success with mono and colour laser printers by Hewlett Packard, Brother, Canon, Epson, Lexmark, Konica Minolta, Samsung, Xerox and others.

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Samsung SCX-4100 Series Instructions © February 2005.

Revision 2nd February 2005.

Revision 7th December 2005.