

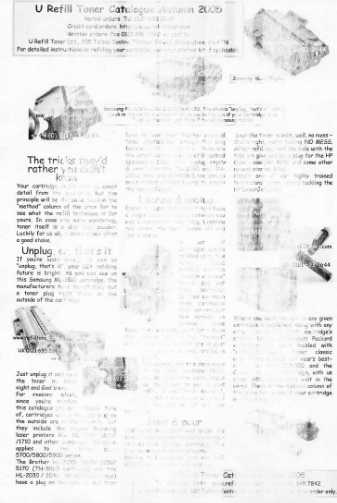


How to refill Samsung ML-1630 and SCX-4500

Manufacturer part number for bought cartridge: ML-D1630A/ELS.
Before use, familiarize with the safety data on pages 4 and 5.

Ignore "toner low" and "toner empty" messages, refill at fade out

Ignore any pop-up messages you get that mention "toner low" or "toner empty". Refill when the print actually starts to fade out due to lack of toner. Fade out develops progressively as shown in these three prints.



As you can see, the faded area gets wider and more pronounced with each print, but even on the last very faded page, the print at the edges is still the same blackness as on the first print. If you take out the cartridge and give it a shake at this point, perfect print will return for a few more prints – but then the fade out will return again. This pattern of progressively widening fade out bands which can be temporarily cured by shaking is the hallmark true fade out due to toner exhaustion.

Toner "exhausted" message?

In the world of toner cartridges in general, it'd be normal to expect a chip in the cartridge to interfere with your attempts to refill repeatedly. You could expect a message saying something like "toner exhausted" and the machine would refuse to print.

In the preparation of this product we used a Samsung SCX-4500 machine and successfully refilled both the starter cartridge and subsequently bought cartridge **3 times each, with no refusal to print.**

We figure 3 refills is worthwhile and viable, so we've released this product. It could be that if you refill beyond 3 refills, you'll run into a "toner exhausted" message and the machine could refuse to print with that cartridge until it gets a new chip.

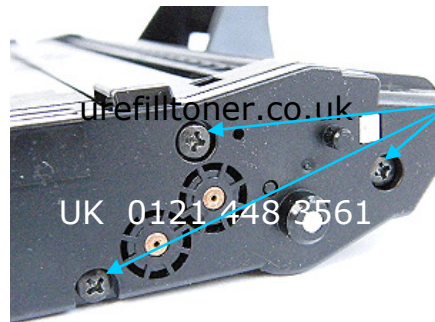
At the time of writing, we expect new chips to be available soon and they'll be made available on <http://urefilltoner.co.uk> if there's sufficient technical need and sufficient demand.



How to refill it

Take maximum care when using a screwdriver as a lever. Consider the use of eye protection and gloves to guard against injury due to accidental slippage.

1. Identify this end of cartridge, which has 2 brass contacts inside characteristic radial pattern.



2. Take out 3 screws.

3. Carefully lever off end plate, easing apart gradually, using screwdriver in different places in join.



4. Lever out plug by applying outward pressure to the lip only. **Do not slide screwdriver down side of plug.**

5. With cap still on, shake toner bottle hard for 5 seconds.
6. Screw spout onto bottle and wrap sticky tape around join of spout to ensure no leakage of toner.
7. Hold cartridge at 45 degree angle with one hand. Use other hand for bottle.
8. Keeping bottle below horizontal, marry spout with hole. Up-end bottle into hole for a slow count of 3.



9. Rotate toner bottle back down to horizontal position, disengaging from cartridge as you do so.
10. Shake bottle with finger firmly over end. Repeat pouring until no toner left in bottle.
11. Push plug back in to seal toner hole. (If you feel you might have accidentally damaged plug while taking it out, seal into position with a small amount of bathroom sealant or Copydex glue).
12. Screw end plate back into position.
13. Rock cartridge gently to even out toner in the cartridge.



Waste

The cartridge collects waste toner in a compartment which, in theory, could fill up completely and cause print problems.

Based on tracking the waste build-up over the original cycle and 3 refills, we feel the waste is unlikely to fill up before the end of 8 refills.

To future-proof this document, we're including full information about the waste and how to empty it if you want to go down that road. But bear in mind that, as the cartridge gets older, failure due to wear on components becomes more likely. Plus, emptying the waste is messy.

The symptom of waste overflow is black "skid marks" down one side of the page (usually, but not always, the left side). If you seem to have that, you can try following these steps to empty the waste.

How to empty the waste

You need a vacuum with the "hairy" attachment on. Only use the vacuum near a toner cartridge with the hairy attachment on and only use for cleaning stray toner powder, not for sucking up the bulk of any big piles of toner.

1. Get a melting tool from urefilltoner.co.uk (in the manufacturer list, choose "Sundries", then click "Sundries" again).



2. Melt hole here.
3. Shake waste straight into an outside bin.
4. Using hairy vacuum attachment, carefully clean up outside of cartridge.
5. Clean flat surface around hole with absorbent paper.
6. Seal hole with any wide tape.



Limits to refilling a cartridge

You can't refill the same laser printer cartridge for ever. Assuming the wastes issues described above either don't come into play or are dealt with, sooner or later something will go wrong with the cartridge.

We think it's very unlikely inside 3 refills for this particular cartridge, but it will happen.

Depending on what fails: OPC drum, doctor blade, dev roller, catcher blade or something else, the defect that stops the fun will be different.

But suffice to say if you've got a persistent print defect that isn't attributable to either toner fade as (as described on page 1) or waste overflow (as described above on this page), then there's not much you can do but buy a new cartridge and start again.



Safety Data Samsung ML-1630 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 ML-1630 refill toner
Part no.	SA1630BOT
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.



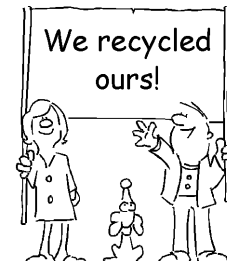
Please, tell three people what you've done

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.



Refills by you ... thanks to you

Thanks for refilling the toner cartridges in your printer. We invented "do-it-yourself" toner refills in 1992, "melt & pour" in 1996 and put "unplug & pour" into internet-speak in 2002. We've never tried to patent or otherwise restrict the use of these ideas.

If you liked our product, please recommend us to friends and colleagues. We've survived for over 20 years - fighting giant corporations that dwarf us - thanks to your custom and recommendation. No one here takes that, or you, for granted.

U Refill Toner. Now needed more than ever. Now refined more than ever.

- ✓ more than halve the cost
- ✓ halve CO₂
- ✓ defend your consumer choices and right to reuse

URefillToner
.co.uk



The antidote to laser printers

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