



## OKI C710 / C711 Series refill instructions

Suitable for: C710n / C710dn / C710dtn / C710cdtn / C711n / C711dn / C711cdtn

Before use, familiarise yourself with the safety information on pages 6 and 7.

Take maximum precaution when using a screwdriver as a lever: consider safety and protection of eyes and hands from sudden slippage or unexpected freeing of the tool.

Consider doing the refill on top of sheets of old newspaper in case of accidental spills.

### Refill "Starter cartridges" with their separate refill method

The new machine arrives with a set of so-called "starter cartridges". They're physically different from the bought cartridges in a number of significant ways. Take note of how to recognise starter cartridges and refill them **exactly** according to the "Starter cartridge refill technique" section. We mean it! Follow our starter cartridge refill technique and possibly avoid ever having to buy an original C710 / C711 toner cartridge.



### Do it at the "Install [Colour] toner" message

Whichever type of cartridge you're refilling, do it only when you get a message on the printer's LCD panel of the form:

Install Black toner (of course, could be cyan, magenta or yellow that gets named)

The machine helpfully refuses to print at this point to help you recognise the moment. Don't refill in response to any other message, event or behaviour.

### Important: only refill the target cartridge

Only refill the cartridge specifically mentioned in the message (K = black, C = cyan, M = magenta, Y = yellow). Don't "top up" all the cartridges "while you're at it". The laundry list of things that can go wrong with this approach is as long and dreary as the websites that promote it. Websites, by the way, run by companies that almost certainly haven't done the refill themselves, but are quite happy to sell it to you. Make up your mind right now to just refill each individual cartridge as and when necessary.



## Starter cartridge refill method

- 1) Make sure you're dealing with a starter cartridge: see photo on page 1.
- 2) Turn on melting tool and leave to warm up for 5 minutes (see page 6 for guidance on safe use of melting tool)
- 3) Melt hole in position shown.

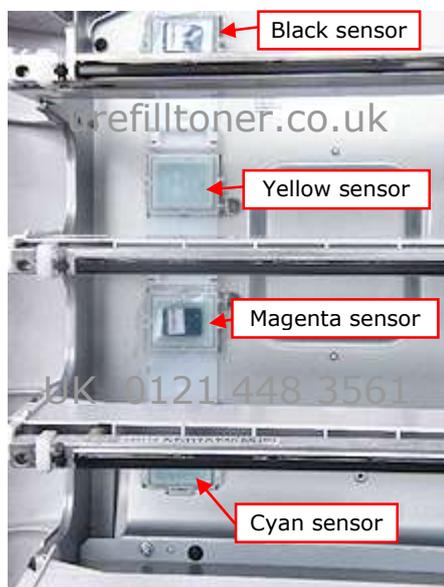


- 4) With cap still on, shake toner bottle vigorously for 10 seconds.
- 5) Uncap bottle and screw spout on. To avoid leakage of microfine toner, wrap any kind of tape around join between spout and bottle: selotape, brown parcel tape, gaffa tape etc.
- 6) Hold cartridge more or less upright with one hand. Use other hand for bottle.

- 7) Keeping bottle below horizontal, marry up to hole in vertical cartridge. Jam in and, keeping spout jammed in with distinct pressure, lean cartridge back to about 45 degree angle.



- 8) Wait for a count of 10 for toner to flow in.
- 9) Keeping spout in hole, rotate bottle down to below horizontal.
- 10) Disengage bottle from cartridge and take a look into refill hole to try and see rising toner level. **If compartment seems to be filling up, stop.**  
**Note: starter cartridges can only take about ¾ of the bottle in one go. To avoid spillage, mess and wastage, be sensitive to this.**  
Put the left-overs into the cartridge when it reaches 50% life on the current cycle.
- 11) If there's still space in the cartridge, hold finger firmly over end of spout and shake bottle again.
- 12) Repeat steps 6-10 until toner compartment is brimming.
- 13) Use alcohol swab to clean up flat surfaces around hole. The area must be completely clean and free of toner.
- 14) Seal the hole with a patch cut from duct tape or any strong flexible adhesive tape that's wide enough



- 15) On underside of printer lid, identify whitish sensor housing above empty space cartridge will occupy.

Note: order of sensors from bottom of lid when opened = C M Y K



- 16) Selotape chip directly onto the correct sensor for that colour.
- 17) Note: flat side of chip faces down into machine.
- 18) Re-install cartridge into machine as usual.





## Bought cartridge refill method

- 1) Make sure you're dealing with a bought cartridge rather than a starter cartridge: see photos on page 1.
- 2) Use 3mm screwdriver to prise out plug as shown.



- 3) With cap still on, shake toner bottle vigorously for 10 seconds.
- 4) Uncap bottle and screw spout on. To avoid leakage of microfine toner, wrap any kind of tape around join between spout and bottle: selotape, brown parcel tape, gaffa tape etc.
- 5) Hold cartridge more or less upright with one hand. Use other hand for bottle.
- 6) Keeping bottle below horizontal, marry up to hole. Up-end bottle to start toner flow.



- 7) Wait for a count of 10 for toner to flow in.
- 8) Keeping spout in hole, rotate bottle down to below horizontal. Disengage bottle from cartridge. Repeat steps 5 to 8 until there's no toner left.
- 9) Replace plug. Wipe away any stray toner from cartridge.
- 10) Remove chip cover as shown.



- 11) Fit replacement chip as shown.
- 12) Re-fit chip cover. If cover was damaged, consider helping it stay in position with a small amount of glue or tape. The important thing is that the chip be held in its slot.



## Empty waste at end of 5 refills (3 for starter cartridges)

### Emptying waste is messier than a refill

As these machines print, they produce waste toner. The waste toner is sneakily stored inside an empty chamber inside the toner cartridge. After about 5 refills of C710/C711 cartridges (3 for starter cartridges), the waste chamber will fill up and cause problems.

If you intend to empty the waste, we suggest **you take pre-emptive action:**

**Bought cartridges: empty waste after 5 refills**

**Starter cartridges: empty waste after 3 refills**

An alternative strategy, especially if you don't intend to empty the waste, is to wait until the machine refuses to print and gives an unusual message: usually "Toner sensor error". When that happens, change the offending cartridge whose waste is full.

OKI have been patchy about updating drivers and firmware, so we can't guarantee the messaging will be exactly as we've experienced. But suffice to say, if the machine refuses to print, apparently complaining about a cartridge that's had more than 3 refills, then suspect the waste.

We say "if" you want to empty the waste, because it's your call. Emptying the waste is messier than just refilling.

If you're up for it, though, here's how it's done:

1. Melt waste hole in place shown.



2. Shake waste toner straight into an outside bin.
3. Wipe stray toner from cartridge surface with absorbent paper.
4. Outside of cartridge can optionally be cleaned with vacuum cleaner fitted with the "hairy" attachment. However, only perform surface cleaning. Do not apply suction to the waste hole.
5. Use alcohol swab to clean and prepare flat surfaces around hole.
6. Seal the hole with a patch cut from duct tape or any strong flexible adhesive tape that's wide enough.
7. Occasionally check the cartridge to make sure the seal's holding. Tiny leaks can be sealed with bathroom sealant or rubber-based glue like Copydex. Note: it's harder to get a good seal on bought cartridges. Consider a blanking plug and silicone sealant approach if you're finding it's a bit messy. To get blanking plugs of just the right size, click "**Sundries**" in our manufacturer price list, then click through and order product code **MELTPLUG10**. They have to be plugged into the hole and then sealed in with bathroom sealant to be effective.

Note: plugs and sealant could also be used for sealing the refilling hole on the starter cartridges, however, most people find tape a lot easier.

### Limits to refilling a cartridge

C710/C711 toner cartridges are essentially a divided plastic box with some stirring mechanisms. We didn't experience any practical limit to the number of times they can be refilled during our testing. Although of course, there will be a practical limit somewhere along the line. And don't forget that waste will have to be emptied from the waste section as necessary to avoid waste overflow.

### Other things the machine uses

Besides toner cartridges, the machine also uses the following user-replaceable consumable parts. They have their own service life which isn't affected by whether or not you refill the toner cartridges. Your user guide has full information about them.

- Black drum kit (up to 20,000 pages)
- Cyan, magenta and yellow drum kits (up to 15,000 pages)
- Fuser Unit (up to 60,000 pages )
- Transfer belt (up to 60,000 pages )



## Drums take a beating

Although the drum units are quoted at 20K copies for black and 15K for CM and Y, don't be that surprised if you don't quite get that many copies without some kind of drum-related print problem.

In fact, because C710 toner cartridges are really glorified passive plastic boxes, pretty much any print problem has to be caused by a drum malfunction. They fall into 3 main types

- Repetitive spots and blotches
- Continuous vertical stripes (a presence of toner where you don't want it)
- Continuous striations (an absence of toner where you actually want it to be)

If a drum goes bad, there's not much option but to change it, but it isn't always obvious which of the 4 drums is the culprit.

To help narrow down print problems, download the swatch right from:

<http://urefilltoner.co.uk/downloads/cmykVerticalTest.pdf>

Identify the problem drum using following table.

Colours affected on swatch	Drum malfunctioning
Black only	Black
Blue only	Cyan
Blue and orange	Magenta
Yellow and orange	Yellow

The example shows a magenta drum causing striations. We know this is the magenta drum because it affects both blue and orange.

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





## Use and safety of the melting tool



The tool needs at least 5 minutes to reach an efficient melting temperature.

To melt a hole, apply a light force similar to pressing on paper with a ballpoint pen. Ease off the pressure as the tool sinks into the plastic.

During the first 6 minutes of the first ever use, smoke will come out of the heated part of the tool as manufacturing lubricants burn off. This is normal.

Use a screwdriver to push out the residual plastic plug while the tool is still hot.

Occasionally, the plastic plug falls inside the cartridge. Try and get it out using tweezers or pliers if you can. A piece of plastic this size

inside the toner compartment doesn't usually do any harm, but be aware that it's there and retire the cartridge if it shows signs of physically jamming.

### Important safety information

- To be used only by a competent, risk-aware adult.
- Use only in a well-ventilated situation. As with the combustion of any organic substance (such as petrol or tobacco) a cocktail of gases can be produced and some of these are harmful or at least irritant.
- All metal parts of the tool get dangerously hot. Never touch any metal part of the tool, including the steel shaft near the plastic handle.

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- When not in hand, the tool is designed to be rested at an angle created by the flange of the handle, keeping the hot parts suspended above your surface. But take care that the power cable doesn't force the handle to rise and the hot end of the tool to dip.
- Take care not to melt through the tool's own electric cable.

- Do not use the tool with the end-piece or blank filler tip removed.
- Turn off and unplug the tool as soon as you've melted your hole. Leave to cool at least 2 metres away from your toner pouring area.
- Do not leave on for more than 30 minutes at a time.
- After use, allow the tool to cool down naturally. Do not immerse in water.
- Take all precautions for the use of a powered hand tool. Use eye and hand protection.

## Assumption of risk notice

We ourselves have no hesitation in researching and refilling cartridges using the melting technique in a well-ventilated room. However, the company gives no warranties, neither explicit nor implicit, as to the safety of melting holes in toner cartridges or the use of the melting tool. Any activity or process has an element of risk. The onus is on you, the purchaser, to assess any possible risk, including the inaccuracy or incompleteness of currently available information. If you decide not to go ahead, return the product to us and we'll cheerfully refund your money. This offer is additional to your statutory rights.

©® Ownership of all intellectual property relating to the melting tool has been asserted and secured.

## Safety Data OKI C710 type toner

**Not to be used by children. Avoid inhalation of product. Avoid eye and skin contact. Do not ingest. Avoid sources of ignition while pouring and at all times.**

**Take maximum precaution when using a screwdriver as a lever: consider safety and protection of eyes and hands from sudden slippage or unexpected freeing of the tool.**

### 1 Identification of the substance and the company

Product name	OKI C710 type refill toner
Part no.	OKC710BOTB, OKC710BOTC, OKC710BOTM, OKC710BOTY
Supplier	U Refill Toner Ltd. Contact details as per page header

### 2 Hazards identification

Classification	Not believed to be hazardous according to OSHA CFR 1910.1200 or EU Directive 1999/45/EC, as amended.
Acute health effects	
Skin contact	Can cause skin irritation
Eye contact	May cause irritation
Inhalation	Irritation to respiratory tract if exposed to large amounts of toner dust
Ingestion	Unlikely when used as intended. Acute oral toxicity is believed to be low
Potential health effects	
Routes of exposure	Skin contact, eye contact and inhalation. Ingestion unlikely.
Chronic health effects	Prolonged inhalation of excessive amounts of any dust may cause lung damage
Carcinogenicity	Carbon black is classified by IARC as group 2B (possible human carcinogen). Carbon black in this preparation, due to its bound form, is not believed to present this risk.

### 3 First aid measures



Inhalation	Move person to fresh air. If breathing is difficult, obtain medical assistance
Eye contact	Flush with plenty of low pressure water for at least 15 minutes. Do not rub eyes. Remove contact lenses to ensure thorough flushing.
Skin	Wash with water, obtain medical attention if ill effects occur
Ingestion	Rinse out mouth with water. Drink one or two glasses of water. If large quantity swallowed seek medical advice

#### 4 Fire fighting measures

Hazardous combustion products	Carbon monoxide and carbon dioxide
Extinguishing media	Water, dry chemical, carbon dioxide or foam
Special fire fighting procedures	Avoid inhalation of smoke. A self contained breathing apparatus and suitable protective clothing should be worn.
Unusual fire & explosion hazards	Toner is a combustible powder; formation of an explosive dust-air mixture is possible. Avoid all ignition sources if toner has been dispersed in air.

#### 5 Accidental release measures

Spill/leak procedure	Sweep up or vacuum spilled toner and transfer into sealable waste container. Sweep slowly to minimize generation of dust. If vacuum is used, the motor must be rated as dust tight and safely applicable to the vacuuming of toner dust. Residue can be removed with soap and cold water. Garments may be washed or dry-cleaned after removal of loose toner.
Environmental precautions	Do not flush into surface water or sanitary sewer systems. Dispose of waste material in accordance with all applicable laws.

#### 6 Handling and storage

Handling	Keep containers closed when not in use. Handle and open containers with care. Use with adequate ventilation. Avoid inhalation of dust and contact with skin and eyes. Keep away from sources of heat, sparks and open flames.
Storage	Store at room temperature in the original container. Keep container tightly closed and dry. Do not store with strong oxidizers.

#### 7 Exposure controls and personal protection

UK exposure guidelines	WEL: 10mg/m <sup>3</sup> (inhalable dust), 3mg/m <sup>3</sup> (respirable dust)
Personal protective equipment	
Eye / face	Wear dust resistant safety goggles if there is danger of eye contact
Hands / skin	Wear protective gloves
Respiratory protection	Wear approved respirator for dust when exposure exceeds permissible limits
Additional measures	Use in a well ventilated area. Use engineering controls to reduce air contaminants to permissible limits. Wash hands after use.

#### 8 Toxicological information

Oral toxicity	Tests on toners have indicated there is no evidence of acute oral toxicity.
Inhalation toxicity	No data
Eye irritation	May cause irritation by mechanical abrasion. Not believed to be chemical irritant.
Chronic toxicity	No data
Carcinogenicity	Carbon black is classified as a group 2B by IARC, but carbon black is present only in bound form in this preparation.
Mutagenicity	Negative (estimated by evaluation of ingredients)
Reproductive toxicity	No data.

#### 9 Ecological information

Not tested for ecological effects
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#### 10 Disposal considerations

Collect into tightly sealed containers. Dispose of waste in accordance with all local laws. Do not throw in open fires in order to prevent risk of dust explosion.
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#### 11 Transport information

General	Not regulated
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#### 12 Regulatory information

TSCA	All chemical substances in this product comply with all applicable rules
EU	of chemical substances in this product contained is treated as a new chemical

**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



HP, 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. Why not send a link to [urefilltoner.co.uk](http://urefilltoner.co.uk) to some friends you know have printers?

The phrase "carbon footprint" hadn't been coined in 1992 when we started selling our trend-bucking "guerrilla re-cycling" products. Refilling with just toner **more or less halves CO<sup>2</sup>** compared with making the toner plus the whole structure of a cartridge to put it in\*.



We're asking for your support to create a kind of benign chain-reaction effect. Yes, we stand to make money from that, but we believe that the battle to reduce CO<sup>2</sup> output does have to be commercialised. That's to say, when the capacity of individuals to make voluntary self-sacrifice reaches a limit, what will take up the slack? In the same way that carbon big-foot companies need money to keep doing what they do, so does a carbon twinkle-toes.



Environmental organisations make us aware of a pyramid of priorities. **Re-use**, in the sense of directly using a resource again, is more beneficial than re-cycling (normally taken to imply an industrial process such as re-pulping paper fibre).

So, one last time for the planet, please advocate [urefilltoner.co.uk](http://urefilltoner.co.uk) if you feel our existence is preferable to our non-existence. Keep refilling in the free world.

\*Sources:

**Dr. M. Gell, "Carbon Footprints and Ecodesign of Toner Printer Cartridges"**, Xanfeon Energy & Environmental Services, UK, 2008. Dr. Gell calculates a 52% reduction in carbon footprint by refilling a cartridge 3 times and replacing the OPC drum once. We think the DIY refill case is even more favourable because the following carbon loads included in Dr. Gell's assumptions don't apply: manufacture/transport of replacement OPC drum, triple transport of empty cartridge to remanufacturing facility and energy consumed during remanufacturing at facility. In addition, the footprint of the delivery transport is smaller because toner weighs only a fraction of a whole cartridge.

**Centre For Remanufacturing & Reuse (commissioning body), "The Carbon Footprint of Remanufactured Versus New Mono-toner Printer Cartridges"**. The authors conclude that, based on their data, a remanufactured mono (i.e. black & white laser printer) cartridge has a "46% lower carbon footprint than a corresponding new cartridge".

**Berglind & Eriksson, "Life Cycle Assessment of Toner Cartridge HP C4127X"**, University of Kalmar, Sweden, 2002. The authors state (Abstract page I) that from the point of view of environmental load, "the re-use alternative is full measured two times better ...". Although they point out that the main environmental load is, in fact, associated with paper.

## 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 CO<sub>2</sub>
- ✓ defend your consumer choices and right to reuse



Original and largest selling  
do-it-yourself toner refill

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